

**ASSESSMENT ON CUSTOMER'S ACCESSIBILITY AND SATISFACTION ON
QUALITY WATER SUPPLY:
THE CASE OF MAGUGU WATER SUPPLY AUTHORITY**

**ASSESSMENT ON CUSTOMER'S ACCESSIBILITY AND SATISFACTION ON
QUALITY WATER SUPPLY:
THE CASE OF MAGUGU WATER SUPPLY AUTHORITY**

By

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**A Dissertation Submitted to the School of Business Administration for the Partial
Fulfillment of Master Degree in Business Administration (Corporate Management)
At Mzumbe University**

2015

CERTIFICATION

We, the undersigned, certify that we have read and hereby recommend for acceptance by the Mzumbe University, a dissertation entitled: ***Assessment on Customer's Accessibility and Satisfaction on Quality Water Supply in Babati District :The Case of Magugu Water Supply***, in partial Fulfillment of the Requirements for award of Master Degree in Business Administration (Corporate Management) of Mzumbe University

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I, **Teresia S. Iyo** declare that this dissertation is my original work and that it has not been presented and will not be presented to any university for a similar or any other degree award.

Signature -----

Date...../...../.....

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DEDICATION

This dissertation is dedicated to my beloved parents, my father Sixbert Iyo and my mother, Anastazia Marceli , also to Prophet TB Joshua and Apostle Mwingira through their Spiritual Mentoring and Teachings my God enlarge their territory

LIST OF ABBREVIATIONS

EU	European Union
GIZ	German Technical Cooperation
GOT	Government of Tanzania
JMP	Joint Monitoring Plan
LGA	Local Government Authority
LGRP	Local Government Reforms Program
MAWASA	Magugu Water Supply Authority
MDG	Millennium Development Goals
MSP	Magugu Strategy Plan
MOEVT	Ministry of Education and Vocational Training
MKUKUTA	Tanzanian National Strategy for Growth and Poverty
MOHSW	Ministry of Health and Social Welfare
MoWI	Ministry of Water and Irrigation
NGO	Non-Governmental Organization
PMO RALG	Prime Minister's Office Regional and Local Government
TAWASANET	Tanzania Water Sanitation Civil Society Network
UNDP	United Nations Development Program me
UNICEF	United Nations Children Fund
WB	World Bank
WPM	Water Point Mapping
WSDP	Water Sector Development Program
WHO	World Health Organization
IFPRI	International Food Policy Research Institute
ASWD	Asamara Water Supply Development

ABSTRACT

Water use needs to recognize the importance of the environment per se and its role in generating future economic output and services. Water insignificantly a valuable resource critical to sustainable economic, social and for environment protection. Regardless of such vital roles played by water in every field yet in Tanzania the overall access to water supply stands at 56.2% in the main land and 79.5% in Zanzibar furthermore the access to improved water in urban areas in Tanzania mainland is 80% and 47.9% in the rural areas. The main objective of this study therefore is to assess customer's accessibility and satisfaction on quality of water services provided by Magugu water supply (MAWASA) in Babati district, Manyara region.

This study employed descriptive cross sectional design as it allows the researcher to use various data collection methods' purposive , convenience and stratified sampling technique was used because it suits the purpose of the study which mainly focuses on the particular entity. Through this approach the researcher was able to collect reliable information with higher convenience from the key responsible individuals. Both primary and secondary data collection method were used; the researcher involved Questioner, Interview and observation method in Primary data and use of various documents books, articles and Internet sources as Secondary data. The sample size of the study was 151 respondents was extracted from population of 5920 using stratified, convenience and purposive sampling technique

The findings of this study shows that 66% of the customers have access to water services in magugu area and that 56% of the customers reported that they are satisfied with the quality of the water services they receives from MAWASA respectively. The study also meaningfully reflected the significance of using vibrant planning documents for instance the findings showed the organization through sharing its planning documents with stakeholders managed to secure 60% of its budget from the stakeholders and the remaining covered by the government department of water. However the findings of the study also reflected that the organization is in short of skilled personnel in most of its departments and incomplete infrastructures for water treatments plants, filtration systems and billing systems, situations which affects its

performance and trust to the customers. Conclusively MAWASA services to its customers are highly valued by the users as the services have currently bridged the long gap experienced by the community. The organization needs to act swiftly on the exposed gaps in terms of the quality of the human resources and the infrastructures as well as application of current technologies to improve accessibility and satisfaction of their customers significantly. The researcher recommends that more study should be conducted on National Water Management Policy and External and internal factors in water management

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CHAPTER ONE

1.0 Introduction

1.1 Background information

Water is a valuable resource, critical to economic development, sustainable. Water use needs to recognize the importance of the environment per se and its role in generating future economic output and services. (2013 Taylor & Francis). In 2000 it was estimated that one-sixth of humanity (1.1 billion people) lacked access to any form of improved water supply within 1 kilometer of their home (WHO and UNICEF, 2000).

Lack of access to safe and adequate water supplies contributes to ongoing poverty both through the economic costs of poor health and in the high proportion of household expenditure on water supplies in many poor communities, arising from the need to purchase water and/or time and energy expended in collection. Access to water services forms a key component in the UNDP Human Poverty Index for developing countries (UNDP, 1999, Guy Howard, 2003).

Many uses of water occur largely at the household (for instance drinking, eating and hand washing); others may occur away from the home (laundry and in some cases bathing). This therefore needs to be borne in mind when ensuring that adequate quantities of domestic supply are available for these purposes and in interpreting and applying minimum values (Guy Howard, 2003)

In Sub-Saharan Africa access to water supply and sanitation has improved, but the region lags behind all other developing regions: access to safe drinking water has increased from 49% in 1990 to 60% in 2008, while in the same time span the access to improved sanitation has only risen from 28% to 31% (en.wikipedia.org/..Water

Supply and Sanitation in Sub-Saharan. Africa).

In December 2009, Water Aid's East Africa region undertook a strategic review of the evolution of Water Aid's approaches to WPM in East Africa. This involved a review of literature, short country visits to Tanzania, Uganda and Ethiopia (where the author

is currently based), and telephone interviews with Kenyan stakeholders and international experts (Catherine walle march, 2010)

In Tanzania Water and sanitation policies and strategies are defined by Ministries at the national level; economic regulation of services provision is undertaken by a national authority and environmental regulation by a National Council; service provision is the responsibility of various local entities. In 1990, the Government prepared its first national water policy in response to a requirement of the ruling party's 1987-2002 Action Program me. This policy, was intended to help bring about equality and strengthen social and economic changes under the principles of socialism and self-reliance, giving priority to drought stricken areas (e.g. by considering the use of water from Lake Victoria) and emphasized the need to 'develop and strengthen local capability so as to avoid donor dependence' (Water Supply and Sanitation Data in Tanzania February, 2010)

The legal framework for water supply and sanitation is based on the Water Supply and Sanitation Act Nr. 12 enacted in May 2009. The Act outlines the responsibilities of government authorities involved in the water sector, establishes water supply and sanitation Authorities as commercial Entities and allows for their clustering where this leads to improved commercial viability. It also provides for the registration and operation of Community Owned Water Supply Organizations and regulates the appointment of board members. The Ministry of Water and Irrigation (MoWI) is the agency responsible for overall. l WSDP policy setting, co-ordination, monitoring, evaluation and regulating community water supplies (Water Supply and Sanitation Data in Tanzania February, 2010).

The promotion of hygiene and sanitation is in the hands of the Ministry of Health and Social Welfare. Decentralization in the Tanzanian water and sanitation sector has transferred Responsibilities for service provision to Local Government Authorities (LGAs). LGAs comprise 132 municipal, district and town councils: they are responsible for the procurement, financing, Management and monitoring of service providers in their administrative area. In 2009, the Ministry of Health and Social Welfare (MOHSW), MoWI, the Ministry of Education and Vocational Training

(MOEVT) and PMO-RALG signed a Memorandum on cooperation between Ministries (Water Supply and Sanitation Data in Tanzania February, 2010)

One of the Magugu Water Supply Strategy is to secure the continued supply of water for all lawful purposes by continuously treating the water and monitoring the quality of water supplied at such times and in such a manner as may be prescribed in the water quality standards or rules (MSP 2011-2015).

1.2 Statement of the Problem

In 2000 it was estimated that 1.1 billion people lacked access to any form of improved water supply within 1 kilometer of their home (WHO and UNICEF, 2000). Lack of access to safe and adequate water supplies contributes to ongoing poverty both through the economic costs of poor health and in the high proportion of house hold expenditure on water supplies in many poor communities, arising from the need to purchase water and/or time and energy expended in collection and remained key component in the UNDP Human Poverty Index for developing countries (UNDP, 1999, Guy Howard, 2003)

Sub-Saharan Africa is unlikely to meet the Millennium Development Goals (MDG) of halving the share of the population without access to safe drinking water and sanitation between 1990 and 2015. These trends in water supply and sanitation are directly reflected in health: the under-five child mortality is decreasing worldwide, but Sub-Saharan Africa shows the slowest pace of progress.en.wikipedia.org/. /Water Supply and Sanitation in Sub-Saharan. Africa.

In Uganda, the Ministry of Water and Environment was itself very pro-active and keen on using Water Point Mapping as a tool to improve targeting its interventions below the district level and particularly, it successfully support in testing and sustaining a Report regular updating mechanism in one of the districts, Masindi. (Catherine walle March, 2010)

In Tanzania, Water Aid's initiative, a substantial administrative area, 52 out of 133 rural districts, were mapped using broadly the same WPM methodology in 2009,to

feed into discussions at national sector review meetings, most notably through the 2008 and 2009 equity reports of TAWASANET, to which Water Aid provided very substantial inputs to help the Ministry of Water and Irrigation (Catherine walle march, 2010)

Regardless of the Government of Tanzania embarking on a major sector reform process since 2002 and in 2006 ambitious National Water Sector Development Strategy that promotes integrated water resources management and the development of urban and rural water supply was adopted but heavily depends on donors up to 88% of funds are from donors For example, a report by GIZ notes that "despite heavy investments brought in by the WB and the EU, (the utility serving Dar es Salaam) has remained one of the worst performing water entities in Tanzania. (GOT, 2005b: 2-3, (Water Supply and Sanitation Data in Tanzania February, 2010)

According to TDHS 2010 the findings explains that overall access to water supply stands at 56.2% in the main land and 79.5% in Zanzibar. Access to improved water in urban areas in Tanzania mainland is 80% and 47.9% in the rural areas (TDHS2010).

Magugu water Supply Authority as one of the rural Water Supply utility which receives Technical and Financial Support from Government and other stake holders To facilitate easy water services to community. One of Magugu strategic plan is to provide quality and consistency Water service. Through discussion and viewing the environment researcher develop big questions concerning Water services provided by MAWASA especially on color of Water which is not purely white and availability of water borne disease also frequent water cut off two to three days per week, also few hours water supply only four to five hours. Thus this study was conducted to assess customer's accessibility and satisfaction on the quality of the water services received through Magugu water supply.

1.3 Objectives of the Study

1.3.1 General Objectives

An objective of this study was to; Assess customer's accessibility and satisfaction on the quality of water supply services provided through Magugu water supply.

1.3.2 Specific Objectives

The specific objectives of the study were to;

- i. Assess the accessibility of the customers to quality water services in Magugu
- ii. Find out the percentage of the customers who are satisfied with the quality of water services provided by MAWASA
- iii. Assess the Accessibility of the customers to water services in Magugu
- iv. Find out the contribution of organizational Planning contribute to quality and accessibility to water service in MAWASA

1.4 Research Questions

- i. To what extent communities at Magugu have access to water services
- ii. Are the customers satisfied with the quality of the water supplied by MAWASA?
- iii. Are the costs/water charges set by MAWASA affordable to the customers?
- iv. Find out the influence of Organizational Planning in contributing to quality and accessibility to water services

1.5 Rationale of the Study

The findings of the study are expected to contribute new ideas on customer's accessibility and satisfaction on the quality of water supply services and necessary further improvement. The findings are also expected to help policy makers on the area of customer's accessibility and satisfaction on the quality of water supply services in the study area and the region at large. The study results furthermore are expected to

help decision makers to make appropriate conclusions basing on the updates provided by the study with regard to customer's accessibility and satisfaction on the quality of water supply services among target communities. The study results will further act as a reference for the future researchers on this area. This study was also conducted as the requirements of the University for the Completion of my Masters study.

1.6 Limitations of the study

The results of the study should be considered with the following limitations;

1.6.1 Time constraints; this study was conducted for three weeks and this limited the number of potential respondents. It is possible therefore, potential waves were not involved and information from those who did not participate might be different from those who provided the information as summarized in the next chapter. With this being the case therefore the results from this study should not be generalized as the coverage is just too small to represent the whole national picture on the question of access and satisfaction of the customer's with regards to quality water supply services through established water authorities.

1.6.2 Financial Constraints; Funds meant for the studies were inadequate to target a larger Sample anticipated. Besides some of the participants wanted to be paid an Interview allowance. To encounter this problem they had to cover a small sample to represent the population

1.6.3 Lack of response: The difficulties has been faced on collecting for other respondents not responding well and positively other seems not to understand anything, also the respondents in the Offices seems to be very busy and not have enough time to respond

1.6.4 Weather: This study was conducted during a time of rain so this has lead to difficulties in data collection activity were sometimes researcher have to stop due to heavy rain

1.7 Organization of the study

The paper is organized in chapters. Each chapter has got independent topics and sub-topics. The study has tried to organize them as follows.

a) Chapter one: this chapter encompasses introduction, background of the study which illustrates the prevailing general conditions regarding the subject matter under study, statement of the problem, major and specific objectives, and research questions, significance/Rationale of the study limitations of the study and organization of the paper.

b) Chapter two: conceptual frame works, Theoretical and empirical investigations and experiences from other study done by others.

c) Chapter three: deals with the methodology of the paper in which area description, sampling techniques, sampling size and analytical tools has been stated.

d) Chapter four: the main body of the study assessed on accessibility and satisfaction on quality water supply by Magugu Water authority. Where analysis was conducted by using (SPSS version 20) software on data collected, and the result obtained were analyzed then discussion on finding was done by interpreting the result more

f) Chapter Five: this chapter comprises summary, conclusion, recommendation and policy implications followed by References, and Annexes (questionnaire parts).

CHAPTER TWO

LITERATURE REVIEW

In order to get a Wider Picture about the topic the review of both theory and empirical study was conducted in order to have a wider knowledge and to know what they found in relation to this topic on accessibility and satisfaction on quality water services

2.0 Definitions of the Terms

Water is a precious natural resource, vital to sustain life, for economic and social development and for environment protection. Research works conducted in many developing countries have shown the interdependence between water availability and economic development and the link between water and poverty. Target ten of the Millennium Development Goals – ‘Halve by 2015 the proportion of people without sustainable access to safe drinking water and basic sanitation’ – is an evidence of this growing concern.

Access to safe drinking water can be a matter of life and death, depending on how it occurs and how it is managed. It can be an instrument for poverty alleviation lifting people out of the difficulties of having to live without access to safe water and sanitation, while at the same time bringing prosperity to all. However, when it is inadequate in either quantity or quality, it can be a limiting factor in prosperity and economic development. Access to adequate water and sanitation is low in many countries in Africa resulting high incidence of communicable diseases that reduce vitality and economic productivity of the increasing population.

The definition of Customer Satisfaction commonly used in services management literature is based on the comparison standards model, which posits that customers hold pre-consumption product/service standards, observe product/service performance, compare performance with their standards, and form confirmation or disconfirmation perceptions.

The comparison standards model holds that Customer Satisfaction is related to both the direction and the size of the disconfirmation, with three possible outcomes. Confirmation will lead to moderate satisfaction, positive disconfirmation will lead to high satisfaction, and negative disconfirmation will lead to dissatisfaction (Churchill and Surprenant, 1982; Iacobucci, Ostam, Braig, and Bezjian-Avery, 1996; Oliver, 1980; Walker, 1995). Previous research carried out in various service settings has shown that Customer Satisfaction is a strong predictor of Service Loyalty.

Sub-Saharan Africa population is projected to be more than double by 2050, growing faster than the world population. The region's population is expected to grow from 840 million in 2010 to 1.3 billion in 2030, and further to 1.7 billion in 2050. The region will be responsible for about 30 percent (or 468 million) of the global population growth between 2010 and 2030, and for about 53 percent (or 445 million) between 2030 and 2050. Most of the population growth of Sub-Saharan Africa will take place in cities which will make the water supply crisis more critical.

Literature review are divided into two theoretical Literature review this is literature review which explain about accessibility of Quality services and customer satisfaction while empirical literature review is the study done by others related to this study

2.1 Theoretical Literature Review

This is reviewing theory and concepts relating to the topic on a study through books and other literature

2.1.1 The understanding of water rights in Palestine

Taylor & Francis(2000) explains about human rights to water puts needs of water first, by promotes human centered water resources development based on coherent frame work of binding legal norms any government accountability. It aims to empower individuals to achieve their full potential and the freedom that takes up opportunities in using water.

The right to drinking water is defined as the right of every individual to have access to the amount of water required to meet basic needs particularly in arid and semi- arid

regions, access to sufficient water regarding quality, quantity and affordability is vital for economic development. In Palestine people often lack access to an adequate supply of water and sanitation. With an average population growth of 3.55 in Palestine and insufficient sanitation, fresh water resources in Palestine are affected by increasing pollution and over-use, resulting in a growing scarcity in quality and quantity of water

2.1.2 The evaluation criteria of the UN concept

The UN as an International agency set the criteria based on water supply as follow Availability (Sufficient and continuous water supply), Water quality (Developing National water standards), accessibility (accessible to every human being), Physical accessibility (safe physical reach) and Economic accessibility (Affordable for all) below are the criteria

a) Availability

Regarding physical access the Comment states that a water supply is sufficient and continuous for personal and domestic uses, such as drinking, personal sanitation, washing of clothes, food preparation, personal and household hygiene if it follows at least the basic access define in the WHO guidelines. It needs to be taken into account the some individuals and groups may also require additional water due to health, climate and work conditions (Taylor & Francis group, 2008)

b) Water quality

Water is often also scarce in quality. The water supplied must be safe regarding quality for domestic use aspects as well. The committee refers to the WHO Guidelines for drinking water quality which are meant to guide governments to develop national water quality standards to be fulfill all human being needs (Taylor & Francis, 2008)

c) Accessibility

With regard to the comments, water and water facilities and services must be accessible to every human being .it identifies four overlapping dimensions (Taylor & Francis group, 2008)

d) Physical accessibility

Water and adequate water facilities and services, must be within safe physical reach for all section of population. Sufficient, safe and acceptable water must accessible within, or in immediate vicinity, of each house hold, educational institution and work place. All water facilities and services must be of sufficient quality, culturally appropriate and sensitive to gender, life-cycle and privacy requirements. Physical security should be threatened during access to Water facilities and services (Taylor & Francis group, 2008)

WHO Guidelines for water availability mentioned above serve as the guiding document in assessing that criterion as well (Taylor & Francis group, 2008)

e) Economic accessibility

Water and water facilities and services, must be affordable for all. The direct and indirect costs and charges associated with securing water must affordable, and must not compromise or threaten the realization of other covenant rights (Taylor & Francis group, 2008)

Water and water facilities and services must be accessible to all, including the most vulnerable or marginalized sections of the population, in law and in fact, without discrimination on any of the prohibited groups (Taylor & Francis group, 2008)

Government is obligated to take steps to remove any de facto discrimination that could impede enjoyment or exercise the right to water. They have to give special attention to those individuals and groups who have rationally faced difficulties in exerting the right water.eg women, Children, minority groups, indigenous people, refugees, asylum seekers, internally displaced persons, prisoners and detainee (Taylor & Francis group, 2008)

2.1.3 An analysis of Service Quality, Customer satisfaction, and customer loyal

Yi-Chin lin(2008) explain service quality is the consistent degree of customer satisfaction overall assessment to a service they receive service quality as to meet and exceed customers 'expectation on products and services is the key for business to attract customer and maintain long-term customer relations. It can also improve efficiency and avoid unnecessary waste. Service quality includes attitude of service provider, service providers' consideration, service content, empathy, service speed, and sincerity of problem solving, listening skills and responsibility

2.1.4 The modal of Satisfaction on quality service

In this model they created the organizational gap one to five and ten changed factors. They suggested five gaps in service quality and these five gaps are the reasons that providers cannot satisfy customer's needs and expectations. The distance of five gaps needs to be closed in order to improve service quality. The first four gaps are the major barriers service providers have (Yi-Chin liu 2008)

2.1.4.1 The following are the explanation to this model

a) Gap one: Gap between Customer expectation and management perception gap. The cause of this gap is management's ignorance to customer expectation. As a result a result, they cannot satisfy customers' needs by (Yi-Chin liu 2008)

b) Gap two; Management's projected customer expectation and actual service gap. This gap is caused by limitation of management resources, negligence and unstable Market by (Yi-Chin liu 2008)

c) Gap three: Service quality standards and real service gap. This is caused when service providers do not meet the standards of management. Even though management has a set of standards of service providers to follow, they may not be able to meet the standards (Yi-Chin liu 2008)

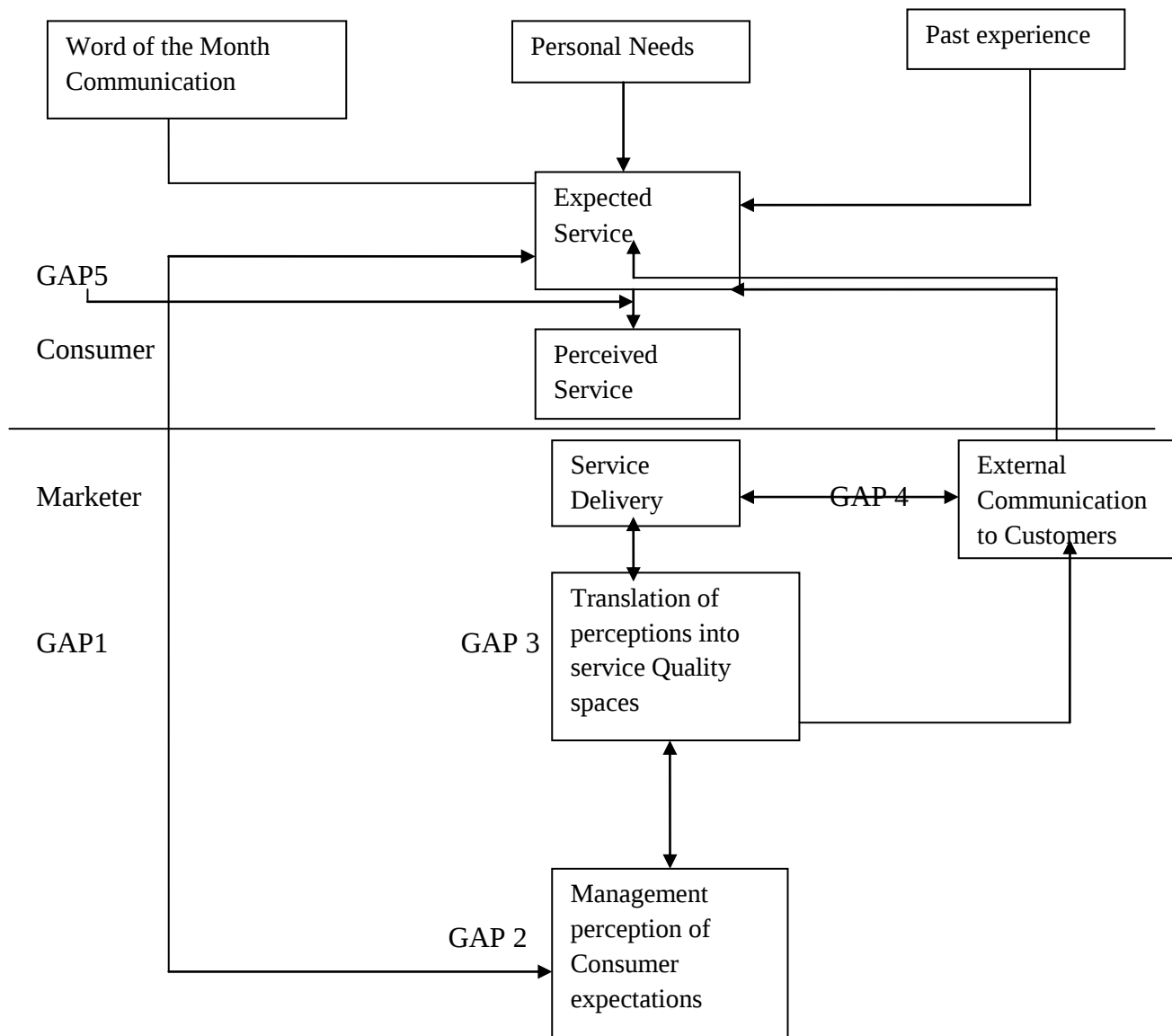
d) Gap four: Service delivery and external communication gap. This gap is caused when management uses false advertisement or makes void promises will raise customer expectation. When their expectation is not meet, negative feelings grow

e) Gap five: Expected service and actual service gap. This gap when customer's pre-service expectation differs from real experience. If the real experience is better than the pre-service expectation, customer is satisfied. If the real expectation is worse than their expectation, customers are not satisfied. However, word-of-mouth, personal needs and past experience will also influence their expectation (Yi-Chin liu 2008)

The above model showed customers are ultimate assessors of service quality. The reasons why customers are not satisfied with service depend on the knowledge of service provider, customer expectation, and service delivery.

2.1.4. Concept modal of service quality

Figure 1The modal of Satisfaction on quality service



Source: A parasuraman Valarie A zeithamal and Leornard L. Berry A model of service quality 1985

2.1.5 Managing service quality

Another way for a service firm to succeed is by delivering consistently higher-quality service than of its competitors and by exceeding customer's expectations. These expectations are formed by the firm's past experience, word of mouth, and advertising. After receiving service, customer compare the perceived service with the expected service .If perceived service falls below the expected service, customers lose interest in the provider. If the perceived service meets or exceeds their expectations, they are apt to use the provider again by (Philip kottler, 2000)

2.1.6 Satisfying Customer Complaints

Studies to Customer dissatisfaction shown that although customers are dissatisfied with their purchases about 25% of the time, only about 5% complain. The other 95% either feel that complaining is not worth the effort, or that they don't know how or to whom to complain. Only about half a satisfactory problem resolution. Yet the need to resolve a customer problem in a satisfactory manner is critical. On average dissatisfied Customer gripes to 11 people. If each of them tells other people, the number of people exposed to bad word of mouth may grow exponentially (Philip kottler, 2000)

Nonetheless, customers whose complaints are satisfactory resolved often become more company-loyal than customers who were never dissatisfied. About 34 percent of customers who register major complaints will buy again from the company if their complaint is resolved, and this number rises to 52% (Major complaints and 95 %(minor complaints) will buy again from the Company (Philip kottler, 2000)

2.1.7 Satisfying Both Employees and Customers

Excellently managed service companies believe that employee's relations will affect Customer relations. In these firms, management carries out internal marketing and provides employees support and rewards for good performance. In addition, management regularly audits employee's job satisfaction. (Philip kottler, 2000)

2.1.8 Customer Service

Sales and service companies rely on a new customers and repeat business to expand profits of their business. Optimally they hope each new customer will stay on board. The way to ensure repeated business is through better customer service (www.allbusiness.com)

How you treat your customers is virtually important to the success of your business. And repeat business happens when Customers are satisfied with initial transaction, including the level of service price, price and follow-up, such as refunds and guarantee. Part of customer's satisfaction drivers from confidence in then the supplier. As products become more technologically evolved, customers look to sales and service people to more knowledgeable in the products they sell. (www.allbusiness.com)

Because of this, good customer service continues to be essential aspects of a successful business (www.allbusiness.com)

2.1.8.1. The following are five customers' pitfalls to service

a) Incompetence: If sales service staff does not have adequate training and expertise, they may give out antiquated correct information. Most customers are relaying on sales and service staff to know the products, including specifications and performance (www.allbusiness.com)

b) Disorganization: Messiness and sloppiness are signs of disorganization .When customers service personnel can't find anything don't know anything is constant state of chaos; it is poor reflection on your business. Customers like to feel that sales and service employees are in control of the situation. A seemingly organized business reassures the customer that you cannot do the job and provide the sales service necessary. Providing organized customer service makes customers want to come back. Many computer programs are available to help you better organize your company's customer service (www.allbusiness.com)

c) Unprofessional manner: Language, dress, and basic manners can be important to many of your customers. Many businesses have an expected decorum that you should at least recognize. Of course, bankers dress one way and fitness trainers another's; the idea is to dress the part and make your customers feel comfortable and confidence in your ability to meet their sales and service needs. Customer service personnel need to be trained in how to handle customers in a professional manner; one makes the customer's interaction with your company a positive experience. (www.allbusiness.com)

a) Lack of standard policy: Your policy toward your customers should spell out and consistently followed. Customers do not like it when one salesperson tell them one thing and another salesperson tells them something completely different. Any discount, return policies, and guarantees should be spelled out in writing to customers as well as reinforced by your Customer service employees on time. (www.allbusiness.com)

b) Delays and unreliability: When deliveries, appointment, and repairs are always late it erodes your customer's satisfaction and confidence. When Customers can't rely on you to get a product or service to them in a timely manner it is bound to discourage them and stop them from coming back. (www.allbusiness.com)

2.2 Empirical Literature Review

In this part the researcher reviewed different studies done by others researchers at the past time on the same topics that are relating to the researcher's topic. The aim of this was to expand knowledge on the study

2.2.1 Assessment on the Water Supply Service and Customer Satisfaction

Gidena Abebe(2011) found out that the gap between the customer's expectation and the service level is high for some and moderate for majority of the attributes and the cause of dissatisfaction is also differs between different areas and different customer groups.

The main reasons for dissatisfaction are the density of network coverage is low in the low income areas or slum settlements and almost no network in the pre-urban settlements.. In addition, satisfaction levels for technical attributes (such as supply reliability, pressure and quality) are generally lower than customer service related attributes, implying that the scope for improvement lies in addressing the technical quality dimensions of the service

2.2.2 Assessment of level and quality of water supply service delivery for development of decision support tools

Kahsay N. zeraebruk (2014) find out that the quality of water supply service delivery was generally unsatisfactory. This was mainly attributed to inadequate and non-equitable water distribution system, unreliable supply due the rationing system, and poor management of water delivery services by ASWD. It was concluded that the quality of service delivery by ASWD in Asmara and surrounding villages fell far short of residents' expectations and the level of dissatisfaction was as high as 60%. The study recommended that for effective service delivery Administration of Maekel Zone (Central Region) and AWSWD should adopt management strategies through performance evaluation and procedures to effectively reduce leakage losses. The current water supply should be increased to improve both the level and coverage of water services through rehabilitation of the treatment plants, pumping stations, and the distribution network.

The research is carried out in the case of Mekelle City. Both primary and secondary data sources were used to compile this research. A total of 268 customers were taken randomly from the 'Kedamay-weyane', 'Hawelti' and 'Semen' sub-cities. The three sub-cities were taken as a stratum and samples were taken based on proportional sampling method and simple random sampling technique. Descriptive and inferential statistical tools have been employed to compile the results. The analysis and presentation of the study is both quantitative and qualitative

Finally the respondents were asked to provide their opinion on the overall level of satisfaction with all the services provided by AWSO, as a public utility company for both water and sanitation, and the results showed that only 40% of the households are satisfied and 60% are not satisfied with the services rendered by AWSO

2.2.3 Paying for water services effects of house hold characteristics

Kayaga,S.,Calert,J., & Samson, K.,(2003) find out that for a given level of satisfaction, female heads of households are more likely to pay for their water bills, than men. As already stated in the section on conceptual framework, in most households in Uganda, women have the responsibility for provision of basic necessities that require water, such as preparation of food and general hygiene in the home. It is not surprising; therefore, that women are keener on payment of water bills, so that provision of water services is not interrupted. The role of level of education of the head of the household on the satisfaction/loyalty relationship was confirmed, as hypothesized in the conceptual framework. It appears that education improves the awareness of decision-makers in the home, such that they attach more value to a better quality water source. This is probably because more educated respondents attach a higher opportunity cost for time spent collecting water from other sources, hence freeing more time to engaging more valuable tasks. Furthermore, compared to the poorly educated people, those with higher education are more likely to appreciate the unique nature of potable water in terms of economic, social and environmental externalities.

Kayaga,S.,Calert,J., & Samson, K.,(2003) the results of this study also show that heads of households who are engaged in formal employment, have a higher willingness to pay for water bills, than heads of households engaged in informal employment. These moderator effects may partly be explained by the fact that people employed in formal employment get monthly wages/salaries at the end of the month, which period coincides with the billing cycle of households the water utility. On the other hand, people engaged in informal employment get their wages in discrete portions almost on a daily basis.

When the water bills are delivered at the end of the month, these are most likely to have spent all the money on other necessities of life, and may not pay the bills in time. Perhaps utilities could learn a lesson from this finding, and tailor the bill payment

Methods to the needs and means of the heterogeneous clientele. Consistent with the discussion on the conceptual framework, ownership status of the house being occupied has significant moderator effects on the satisfaction/loyalty relationship. Since water service Connections in Uganda are registered in the name of the landlords, the water bills are also dispatched in the names of landlords. Change of occupancy is a common occurrence for tenants in urban areas of Uganda. The results of this study show that for a given satisfaction level; families staying in houses owned by the household have a higher willingness to pay for water bills, than those staying in rented premises. Since households that stay in rented premises do not enter into legal contracts with the water utility, they have a lower willingness to pay for water bills, as they feel no legal obligation to the water utility.

Kayaga,S.,Calert,J., & Samson, K.,(2003)The findings of this study show that estimated income levels moderate the satisfaction/loyalty relationship. As hypothesized in the conceptual Framework, households with a higher estimated income have a higher Willingness to pay than those households with a lower estimated. Not only do families with a higher income have a higher income affordability to pay, but are also those households most likely living in family-owned premises, as well as to have heads of families who are highly educated. Correlation analysis of obtained data support the relationship of household income with the level of education of the head of household ($\rho = 0.24$, $p < 0.01$); and with ownership status of the premises ($\rho = 0.20$, $p < 0.01$).

Calert, T. (2003) the results of this research shows that ‘household size’, ‘type of premises (whether shared or not)’, and ‘use of alternative sources of water’ did not have statistically significant moderator effects. These results may have been affected by biases in data collection.

For the household size, a number of African cultures consider it to be taboo to ‘count’ the number of children in a home. Consequently, some respondents may have falsified

the household size intentionally another cause of inaccuracies in the size of household could be under declaration of the numbers, just in case the water utility needs to use flat tariff rate based on household size, as in the case of a meter failure. For the type of premises, respondents may not want to tell the truth if families are sharing the same building, as it is considered socially demeaning.

In the case of alternative water sources, inaccuracies may have been introduced by the confusion about the conceptual definition of ‘alternative water sources’. According to the results, 253 respondents (48%) reportedly use alternative sources. However, of that number, 168 respondents use either “a utility tap elsewhere”, “water vendors “and/or “tanker water”, sources which are, to a great extent, mere service options of the utility water supply. It would seem that most consumers use alternative service options as a coping strategy in the event of non-availability of piped water in the home, for one reason or another. The reasons for non-availability of tap water in the home could be either disconnection due to non-payment, or water supply shortage. Other economic reasons, which are particularly applicable to households using off-plot utility water taps, could be either (i) owner of private connections opting for cheaper water services at public tap in certain circumstances; or (ii) customers who opt for services which are perceived as ‘free’, such as illegal connections, or connections paid for by government institutions, which have limited accountability.

Using regression techniques, it was established that the following attributes of the household head moderated the satisfaction/loyalty relationship: gender, occupation and level of education. Other significant factors were household income, and property tenure status. These results could be used to make water Utilities customer-focused.

2.2.4 Economic approaches to water management

James Horne (2012) argued that the use of economic approaches to implementing water policy in Australia is increasing the efficiency of water use, and thus providing a fillip sustainability and economic growth. Other countries could look carefully at each of these mechanisms to ascertain its relevance to their own circumstances.

The challenge for Australian water policy is to put together a holistic and durable framework consistent with its overall economic policies. This framework has consistently sought to build governance and regulatory arrangements that allow markets to operate effectively to promote economic activity and sustainability. Other countries may see merit in closely examining the underlying principles of the role of the market in revealing water values, and the role of good regulations in ensuring that economic approaches achieve the desired outcomes.

2.2.5 Access to improved water source and satisfaction with services

IFPRI (2009) suggest that access to an improved water source significantly raised household satisfaction with both quality and availability of water. However, the effect of the improved water source on users' satisfaction was slightly lower for water availability than for water quality.

Increased access to clean water is an integral part of Ethiopia's economic development and poverty reduction policy. Recent official figures (MoFED 2008) indicate increased clean water coverage in the country. Despite the increased support provided to the sector, there are millions of people still depending on unsafe drinking water sources, especially in the rural areas of the country. Furthermore, coverage rates alone may understate the problem if poor satisfaction with the water quality and availability points to serious deficiencies in these aspects of water supply. In this regard, a recent survey (WSP 2004 cited in UNDP 2006) indicates that improved water infrastructure in rural Ethiopia is not functioning properly due to maintenance problems, suggesting that uncertainty regarding water availability remains a persistent challenge for the local population.

The empirical data for this paper were collected as part of a larger study of agricultural and rural public services by EEA (Ethiopian Economics Association) and IFPRI (International Food Policy Research Institute) in Ethiopia (EEA/IFPRI 2009). A multistage sampling procedure was used for the selection of observation units. First, eight districts were purposively chosen from seven administrative regions (two districts from Amhara and one each from Afar, Benishangul Gumuz, Gambella, Oromia, SNNPR

2.2.6 Customer-oriented reforms in urban public water supply in Uganda

The argument that performance in service delivery should be measured by how well users are satisfied, and not only by the hard-to-measure collective public values, has been embraced by public water utility managers. Those utilities that do not have efficient and responsive customer services are argued to be poor performers that do not deserve support as they are unlikely to cope with changing service delivery demands. For instance, several pro-reform commentators have argued that by putting service users in the “driving seat”, the latter are likely to obtain responsive operational and delivery decisions from service providers (Osborne & Gaebler, 1993; Kotler & Armstrong, 2010; Blanchard et al, 2005; Drucker et al, 2008). It is in this context that customer-responsive reforms inspired by New Public Management (NPM) have gained support as strategies for improving performance in sectors such as urban public water supply.

2.2.7 Water supply and sanitation in Tanzania

Access to water and sanitation remains low in Tanzania. Determining data on access is particularly difficult because different definitions and sources are used, which results in significant Discrepancies. According to a report, household surveys regularly return lower rural water supply Coverage than estimates by the Ministry of Water and Irrigation (which are collected by district Water engineers and urban water and sanitation authorities). For urban areas, survey data are consistently higher because they also include households that are not connected to the formal water Supply network and access water from neighbors, protected wells or boreholes. Slightly more than half the population of Tanzania is estimated to have access to

an improved water source, with stark differences between urban areas (about 79% in 2010) and rural areas (about 44% in 2010).[2]In rural areas, access is defined as meaning that households have to travel less than one kilometer to a protected drinking water source in the dry season. Trends in access to water supply are difficult to discern due to conflicting and unreliable data. However, it seems that access increased during the 1990s, particularly in rural areas, but stagnated during the 2000s. According to

data from the Household Budget Surveys 2000/2001 and 2007 access to an improved water source in mainland Tanzania even decreased from 55% in 2000 to 52% in 2007 [1] Using a narrow definition, in 2007 around 34% of households had access to piped water, as opposed to 40% in 2000. However, using a broader definition of access that also includes Standpipes and protected springs, there has been a slight increase in the proportion of households reporting a drinking water source within one kilometer. [1] Estimates from the Joint Monitoring Programme for Water Supply and Sanitation (JMP) show a different trend. They show a slight Decline in access from 55% in 1990 to 53% in 2010. According to these figures, access in rural areas stagnated, while in urban areas it decreased from 94% to 79% over the same period. The JMP estimates rely on extrapolations using, among others, data from the Household Budget Survey 2000/2001 and 2007, the Census of 2002 and the Demographic and Health Surveys of 1999, 2005 and 2010

2.2.8 Domestic water quantity service level and health

As of 2000 it was estimated that one-sixth of humanity (1.1 billion people) lacked access to any form of improved water supply within 1 kilometer of their home (WHO and UNICEF, 2000). Lack of access to safe and adequate water supplies contributes to ongoing poverty both through the economic costs of poor health and in the high proportion of household expenditure on water supplies in many poor communities, arising from the need to purchase water and/or time and energy expended in collection. Access to water services forms a key component in the UNDP Human Poverty Index for developing countries (UNDP, 1999).

The importance of adequate water quantity for human health has been recognized for many years and there has been an extensive debate about the relative importance of water quantity, water quality, sanitation and hygiene in protecting and improving health (Cairncross, 1990; Esrey et al., 1985; Esrey et al., 1991). Despite this debate, international guidelines or norms for minimum water quantities that domestic water supplies should provide remain largely lacking. For instance, whilst the Millennium Declaration Goals include a target to 'halve the proportion of people who are unable to reach or to afford safe drinking water by 2015' (UN, 2000) it does not specify in what

quantity such water should be supplied. The WHO/UNICEF Joint Monitoring Programme, which produces the Global Assessment of Water Supply and Sanitation data, describe reasonable access as being 'the availability of at least 20 liters per person per day from a source within one kilometer of the users dwelling'(WHO and UNICEF, 2000). However, it should be noted that this definition relates to primarily to access and should not necessarily be taken as evidence that 20litres per capita per day is recommended quantity of water for domestic use.

(www.unep.org/.../vitalwater/arti...United Nations environment programme)

Norms for quantities of water to be supplied have been proposed for certain specific conditions. For instance the SPHERE project sets out 15 liters of water used per capita per day as being a key indicator in meeting minimum standards for disaster relief (SPHERE, 1998). In their guidance manual prepared for the Department for International Development(UK), WELL (1998) suggested that a minimum criterion for water supply should be 20litres per capita per day, whilst noting the importance of reducing distance and encouraging House hold connection. A similar figure has been suggested by other researchers (Carter et al., 1997). Gleick (1996) suggested that the international community adopt a figure of 50litresper capita per day as a basic water requirement for domestic water supply. Many uses of water occur largely at the household (for instance drinking, eating and hand washing); others may occur away from the home (laundry and in some cases bathing). This therefore needs to be borne in mind when ensuring that adequate quantities of domestic supply are available for these purposes and in interpreting and applying minimum values. (www.unep.org/.../vitalwater/arti...United Nations environment programme)

2.2.9 Inequity in access to clean water and sanitation

The supply of safe drinking water and the provision of sanitation are management issues that raise concerns about inequitable service provision, particularly in developing countries. Although several successful initiatives have been launched to supply safe drinking water to urban populations, efforts still fall short of the required targets for sustainable development. In developing countries water delivery systems are plagued by leakages, illegal connections and vandalism, while precious water

resources are squandered through greed and mismanagement. The World Bank recently estimated that US\$600 billion is required to repair and improve the world's water delivery systems (UNCSD, 1999).(www.unep.org/.../vitalwater/arti...United Nations environment program me)

During the 1990s, the greatest reduction in per capita water supply was in Africa (by 2.8 times), Asia (by 2 times), and Latin America and the Caribbean (by 1.7 times), while water supplies available to European populations for that period decreased by 16% (WHO/UNICEF, 2000). The lack of access to safe drinking water and sanitation is directly related to poverty, and, in many cases, to the inability of governments to finance satisfactory water and sanitation systems. The direct and indirect human costs of these failings are enormous, including widespread health problems, excessive use of labour (particularly for women, who are forced to travel long distances to obtain water for their families), and severe limitations for economic development (Gleick, 1995). Improved water and sanitation facilities, on the other hand, bring valuable benefits for both social and economic development and poverty alleviation (WHO/UNICEF 2000).

Water Supply Highlights from the Global Water Supply and Sanitation Assessment 2000:(www.unep.org/.../vitalwater/arti...United Nations environment program me)

- ▶ The percentage of people served with some form of improved water supply rose from 79% (4.1 billion people) in 1990 to 82% (4.9 billion) in 2000. Between 1990 and 2000, approximately 816 million additional people gained access to water supplies - an improvement of 3%.
- ▶ Two out of every five Africans lack access to an improved water supply. Throughout Africa, rural water services lag far behind urban services.
- ▶ During the 1990s, rural water supply percentage coverage increased, while urban coverage decreased - although the number of people who lack access to water supplies remained about the same.
- ▶ In Africa, Asia, Latin America and the Caribbean, nearly 1 billion people in rural areas have no access to improved water supplies.

- To achieve the 2015 targets in Africa, Asia, Latin America and the Caribbean, water supplies will have to reach an additional 1.5 billion people.

Sanitation Highlights from the Global Water Supply and Sanitation Assessment 2000:

- The proportion of people with access to excreta disposal facilities increased from 55% (2.9 billion people) in 1990 to 60% (3.6 billion) in 2000. Between 1990 and 2000, approximately 747 million additional people gained access to sanitation facilities - although the number of people who lack access to sanitation services remained roughly the same.
- At the beginning of 2000, two-fifths of the world's population (2.4 billion people) lacked access to improved sanitation facilities. The majority of these people live in Asia and Africa, where fewer than half of all Asians have access to improved sanitation.
- Sanitation coverage in rural areas is less than half that in urban locations, even though 80% of those lacking adequate sanitation (2 billion people) live in rural areas - some 1.3 billion in China and India alone.
- In Africa, Asia, Latin America and the Caribbean, nearly 2 billion people in rural areas have no access to improved sanitation facilities.
- To achieve 2015 sanitation targets in Africa, Asia, Latin America and the Caribbean, an additional 2.2 billion people will have to be provided with sanitation facilities.
- Polluted water is estimated to affect the health of more than 1.2 billion people, and to contribute to the death of an average 15 million children every year. In 1994, WHO estimated the number of people without access to clean drinking water at 1.3 billion? By 2000, nearly 1.2 billion people lacked access to clean water, while 2.4 billion lacked access to adequate sanitation services.

2.2.10 Strategic Review of Water Aid's Water Point Mapping in East Africa Based on a review of Ethiopia, Tanzania, Kenya, and Uganda

In December 2009, Water Aid's East Africa region undertook a strategic review of the evolution of Water Aid's approaches to WPM in East Africa. This involved a review of literature, short country visits to Tanzania, Uganda and Ethiopia (where the author is currently based), and telephone interviews with Kenyan stakeholders and international experts. (Catherine walle,2010)

The review focuses on the 'policy space' determining the prospects for WPM in each country, as well as the evolving 'activity space' for country programme, taking account of the activities and approaches of other sector stakeholders. This analysis provides the basis for strategic recommendations regarding Water Aid's future strategies and comparative advantage vis-à-vis other agencies, and identification of entry points for future engagement at country and regional levels.(Catherine walle,2010)

Progress with WPM to date Water Aid's country programmes are at different stages of WPM. In Tanzania, based on Water Aid's initiative, a substantial administrative area, 52 out of 133 rural districts, were mapped using broadly the same WPM methodology in 2009. Water Aid used evidence from WPM to feed into discussions at national sector review meetings, most notably through the 2008 and 2009 equity reports of TAWASANET, to which Water Aid provided very substantial inputs. By 2008, Water Aid was successful in getting rural WPM accepted as a useful monitoring tool with other NGOs and development partners and, most importantly, with the Ministry of Water and Irrigation. (Catherine walle,2010)

In Uganda, the Ministry of Water and Environment was itself very pro-active and keen on using Water Point Mapping as a tool to improve targeting its interventions below the district level. Water Aid in Uganda's achievement in rural Water Point Mapping consisted of its on-the-ground experience with the implementation of the tool and, particularly, its successful support in testing and sustaining a regular updating mechanism in one of the districts, Masindi. The Directorate of Water Development, which spearheaded the national water supply survey in 2010, therefore saw Water Aid

as a partner who can help it to overcome bottlenecks with the use and updating of Water Point Mapping information. (Catherine walle, 2010)

In Ethiopia, Water Aid's strategic engagement with Water Point Mapping was more recent. It established a task Force in mid-2009, which conceptualized WPM as part of its wider engagement with supporting Sector monitoring. At the time of this review, Water Aid's WPM was not yet established as a tool to inform planning at the woreda level. In the Ministry of Water Resources, the development of an MIS was underway in early 2010, possibly including geo-referenced data. In Kenya, Water Aid's policy engagement only started in 2009 and it was therefore too early to identify any particular achievements based on Water Aid-supported activities.(Catherine Walle,2010)

Also water and sanitation sector was transferred to Local Government Authorities (LGAs), and they are responsible for the procurement, financing, Management and monitoring of service providers in their administrative area as per signed memorandum on water management (Catherine walle,2010)

2.2.11 Ensuring accessibility, service delivery and citizen partnership

Hilda Moraa, Alberto Otieno.,& Anne Salim(1972) found out that Ministry of Water and irrigation in Kenya has set several institution such as water resources Management Authority. Water and Sewerage Services Policy among others to streamline its operation in the area of the service delivery in the water sector. Some of the duties of the Water Resource Management Authority include to ensure National and equitable allocation of the Water Resources, water quality monitoring, testing and surveillance to ensure compliance with drinking water standards and other standards and other standards for various for various water uses and effluent discharge into public sewers and the environment and mapping and publishing of key water catchment areas. Ground water resources and flood prone area.

2.3 Identified Research Gap

Based on the empirical review and literature from early studying; The finding of this study is quite different from other study done previously, the study done by Water

Water supply and sanitation data in Tanzania February (2010) is that only 44% of population in rural area have access to water services, while in this study 56% of population in magugu area which is rural areas have access to water supply services so this is something new knowledge compared to previous one

Also the same study done by Water Supply and sanitation data in Tanzania , (2010) found out that households have to travel less than one kilometer to have protected drinking water which is still a long distance compared to this study which shows 69% of population use less than hour to access water services

The study done by zeraebrak N. Kahsay(2010) in Eritrea found out that the Customers that are dissatisfied with Asamara water supply and sewerage department (AWS D) is 56% while in this study the customers that are satisfied with MAWASA water services are 56% that means this result are opposite to each other and this shows the gap

In a study done by IFPRI (2009) a multistage sampling procedure was used for the selection of observation units. First, eight districts were purposively chosen from seven administrative regions

Kayaga,S.,Calert,J., & Samson, K.,(2003) used regression techniques, it was established that the following attributes of the household head moderated the satisfaction/loyalty relationship: gender, occupation and level of education.

While in this study both Probability and non-probability sampling technique were used these are Systematic stratified sampling technique, Purposive approach using judgmental technique by simply handpicking the respondents and Convenience sampling technique using snowball. The gap here is that this study used more than one technique while above study used only one Technique

2.4 Conceptual Frame Work

2.4.1 Dependent variable

The dependent variable for this study focus on the customer's accessibility and satisfaction on quality water supply services by MAWASA.

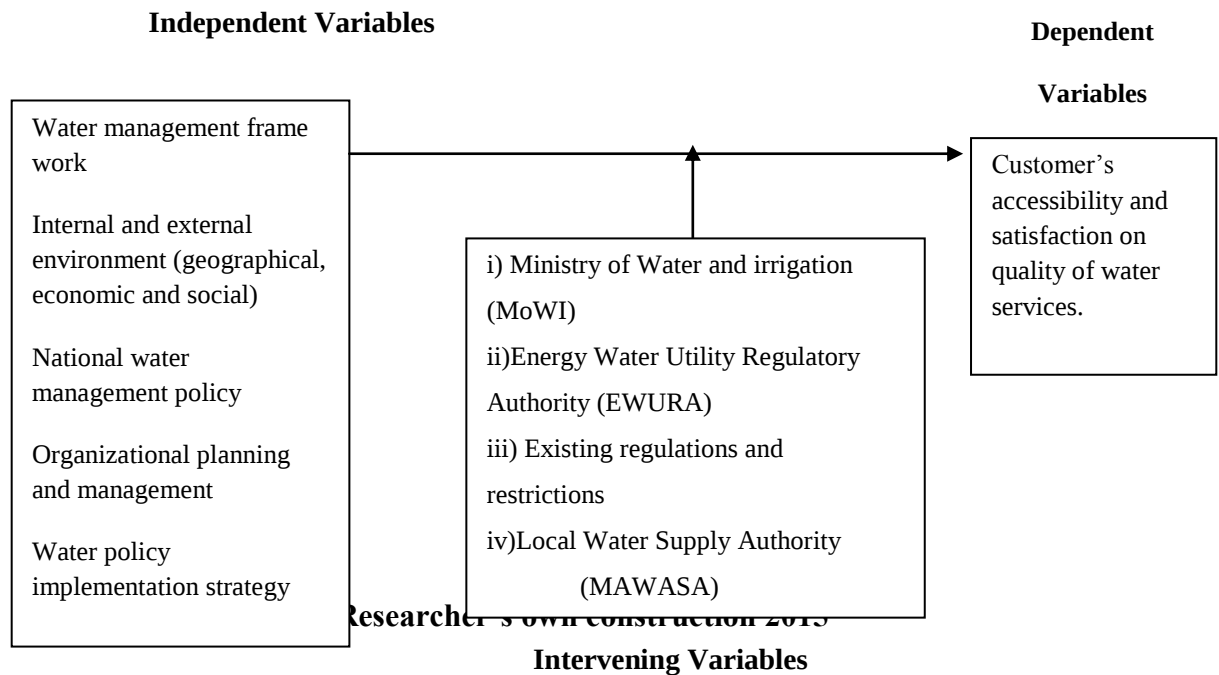
2.4.2 Independent variables

This is the one that causes changes and will include Water management frame work. Internal and external environment (geographical, economic and social), National water management policy, Organizational planning and management and Water policy implementation strategy

2.4.3 Intervening variables

These are national levels policies either by the Ministry of Water and Irrigation with the mandate on all health matters or the organization itself when it change any approach in its operation the original challenge might also need a new way of addressing. Also contributions from other ministries such as; Ministry of Education and Vocational Training, Ministry of Finance and Ministry of Health and Social welfare.

Figure 2: Relationship between dependent variable and independent variable.



CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction

Research methodology is a way to systematically solve the research problem. It may be understood as science of studying how research is done scientifically. The various steps that are generally adopted by a researcher in studying his research problem along with the logic there on them (Kothari: 2003). This chapter provides detailed explanation concerning the area upon which the study was being conducted, thresholds and instruments which the researcher used for data analysis and presentation.

3.1 Description of the Study Area

The research activity was conducted at Magugu in Babati District Council in Manyara region. The area of the study has been selected for the study because Magugu is currently running a program on water supply. Additionally it is one of the areas mainly hit by drought, the researcher conducted the study over there to also learn other sources of water apart from MAWASA that serve communities in Magugu respectively

3.2 Research Design

According to Kothari (2004), research design is the arrangement of conditions for collection, analysis and presentation of data in sequential frameworks to reach the intended end. Thus research design consists of the area of study; type of data required (secondary and primary), sample frame (target population) and sample size, sampling techniques, method of data collection and data analysis procedures. This study employed cross sectional design which is mainly descriptive in nature.

3.3 Target Population and Sample Size

3.3.1 Target population

Population refers to a large group of people possessing one or more characteristics in common on which a research study focuses (Creswell 1994). The target population is the group of subjects from whom the researcher draw conclusion about the research topic (Kothari 2004). Target population of this study are made up of different specialist in Magugu Community these are management of the agency, customers using water from MAWASA, surrounding communities, District water authority, Health department Education department and Finance department from Babati local district council

3.3.2 Sample size

A sample is a small group of subjects drawn from the population in which the researcher is interested in gaining information and drawing conclusions about the universe (Kothari 2004). Moreover it enables the researcher to achieve objectives with reduced resources (Bernard 1995)

In this study researcher used Stratified, Purposive and convenience sampling technique selecting the sample size of 150 respondents made up of different specialist around Magugu Community which are used to collect information .The distribution of sample was as indicated in table below

Table no 1 Distribution of Respondents

S/n	Category	Population	Sample size	%Achieved	Method employed
1	Management of the Agency	4	4	100	Purposive
2	Mawasa Customers	Infinite	110	100	Stratified sampling
3	Community around	Infinite	21	100	Convenience
4	District Water Engineering	12	3	100	Purposive
5	District Health Department	15	2	100	Purposive
6	Finance Department	20	3	100	Purposive
7	Educational department	60	8	100	Purposive

3.4. Sampling Technique/Procedure

The research employed both Probability and non-probability sampling technique where Purposive, Convenience and Stratified sampling where used

3.4.1 Stratified sampling

If a population from which a sample is to be drawn does not constitute a homogenous group, stratified sampling technique is generally applied in order to obtain a representative sample. Under stratified sampling the population is divided into several sub-populations that are individually more homogenous than total population (the different sub-population are called strata) and then we select items from each stratum to constitute a sample (Kothari 2004)

In this study method of proportion allocation are used to allocate the sample size for MAWASA Customers which is 110 where different strata under which the sizes of the samples from different strata are kept proportional to the sizes of the strata.

There were three strata under MAWASA customers which are commercial, domestic and water point

Where by

N^1 =Domestic population with 750 customers

N^2 =Water point population with 4,800 Customers

N^3 =Commercial population with of 330 customers

According to (Kothari, 2004) the number of element selected from stratum is

$$N = n.P$$

Where by

P_i = represents the proportion of population included in stratum

n =represents the total sample size which is the total of $n^1, +n^2+n^3$

n = Represents sample size

To calculate the proportion of population included in each stratum

$$n^1 = 110(750/5880)$$

$$n^1 = 14$$

$$n^2 = 110(4800/5880)$$

$$n^2 = 90$$

$$n^3 = 110(330/5880)$$

$$n^3 = 6$$

Thus using the proportional allocation, the sample size for MAWASA Customers are Domestic 14, Water Point 90 and Commercial 6 respectively which is proportion to the size of the strata 750:4800:330. Therefore, the sample size (n) on the basis of the computation as indicated above was 110.

3.4.2 Convenience Sampling

This are sampling technique were subject are selected because of their convenient accessibility and proximity to the researcher (Msabila and Nalaila 2013)

With convenience sampling, the samples are selected because they are accessible to the researcher. Subjects are chosen simply because they are easy to recruit. This technique is considered easiest, cheapest and least time consuming

In this study this technique are used to allocate the sample size of 20 people which are Community around this technique is used because of the easiest and their accessibility because their just around

3.4.3 Purposive Sampling

The process involves nothing but purposely handpicking individuals from Population based on the authorities or the researcher's knowledge and judgment about the population (Msabila and Nalaila 2013)

This technique where used in this study by picking the number of sample size from Local district council and MAWASA Management which is total of 20 people this is due to researcher's knowledge about the population

3.5 Units of Inquiry and Information Obtained

Table 2 Shows unit of inquiry and information obtained

Unit of inquiry	Information Obtained
Magugu Management Team	- Water Policy application by Magugu - Water Standard -External and Internal factors
Babati District Council	-Support from Local district to Magugu Water supply services through its Departments Water District Engineer, Finance Department, Health Department and Educational department
Magugu Customers and Community around	-Service Quality -Customer Satisfaction -Service accessibility -Information about cost of service

3.6 Data collection methods

In the research work done, the sources of data was include both secondary and primary

3.6.1 Primary Data

Primary data was collected from the respondents using self-administered questionnaires and interviews. The data was obtained from the field for the purposes of answering research questions/specific objectives

3.6.1.1 Questionnaire

This refers to collection of data through questionnaires sent (usually by post) to a person concerned with a request to answer the questions and return the questionnaire. A questionnaire consists of questions printed in a definite order. (Kothari: 2004). The self-administered questionnaire were developed and distributed to 150 respective respondents including senior level, heads of units and other operational staff in all departments within MAWASA. Questionnaires consist of mainly open ended

questions which enabled the researcher to maintain comparability among the respondents.

3.6.1.2 Interview

Interview refers to data collection technique that involves oral questioning of respondents either individual or in group (Kothari 2002). This method was used by the researcher as it gives chances to communicate face to face with respondents and provides chances to clarify issues. Both structured and unstructured interview were applied to top management and senior officers who deal directly with water supply activities at MAWASA and vicinity populations.

3.6.1.3 Observation

This is a data collection method where by the information is sought by way of investigator's direct observation without asking from the respondent. For instance, in this study, the investigator instead of asking them herself looked at the sources of water and learns whether they have sufficient access and fully satisfied with the services (Kothari: 2004). The researcher conducted this through viewing environment of service (field observation) which is the place in which the study took place.

3.6.2 Secondary Data

Secondary data are those which have already been collected by someone else and which have already been passed through the statistical methods (Kothari 2004). For this research work, secondary data used included various publications, technical journals, books, magazines, newspapers, action plans and reports related to the field of risk management.

3.7. Data Analysis Methods

Descriptive analysis was conducted basing on the information that we recollected from primary sources. Since the researcher uses open ended questions and structured interviews. All the responses were then coded well and grouped under specific objectives it addresses. Data was analyzed using SPSS. The data was then subjected to

(SPSS version 20) program before carrying out an analysis, data accuracy was checked through double entry to the system and all got cleaned after entry to the computer. The information was then synthesized for developing meaningful document through analysis of the data. The analysis of data was aimed at organizing them in the way that they was provide answers related to the research questions and explain the current situation on the customer's accessibility and satisfaction on quality water services provided by the specific government agency.

3.8 Data Validity and Reliability

Validity explains the accuracy and truth of the data in research, while reliability means that if the research is repeated by the respondents or independent observers with the same methods, they will acquire the same results or data (Kothari 2004). For the purpose of achieving validity and reliability, the questionnaires were designed in such a way that they capture relevant information for the research objectives

In this study the supervisor helped the researcher to ensure the validity of the questionnaire and the response to the objectives of the study to measure what it should measure. The content validity was found by considering the number of items declared relevant divided by total number of items presented. The face validity was assured by logically consistent questions to guarantee relevance.

In ensuring the reliability the researcher ensured that external sources of variation such as boredom, fatigue, etc., are minimized to larger extent possible.

The researcher carefully designed directions for measurement with no variation from group to group, by using trained and motivated persons to conduct the research and also by broadening the sample of items used. This improved equivalent aspect

CHAPTER FOUR

RESULTS AND DISCUSSION

4.0 Introduction

This chapter is all about analyzing and discussing all the data that are obtained through field interview questioner and observation using descriptive statistics. The data are obtained from field interview and questioner from different respondents through questions that are designed by a researcher according to specific objectives, the discussion concern all finding results starting from social demographic, also the cross tabulation result to see the influence of Independent variable to dependent variable. After discussing all the finding then the Major findings are summarized in general

4.1. Social -Demographic Characteristics of the Study Respondents

Table 3 Shows age Distribution of the study respondents according to their age group

Age Distribution	Frequency	Percent
11-20	6	4
21-30	46	30
31-40	51	34
41-50	26	17
51-60	13	9
61-70	9	6
Total	151	100

Source: Field Data 2015

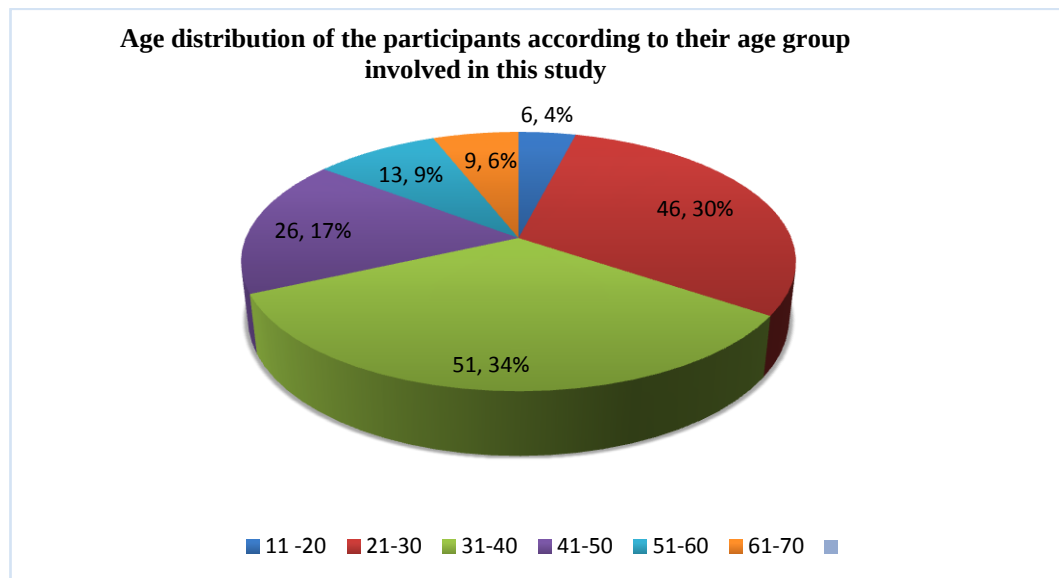


Figure 3 shows the age distribution of the study respondents

Source: Field Data 2015

Table 3 and Figure 3 above shows the social demographic characteristics of the study respondents. The total of 151 respondents participated in the study. This is 101% achievement of the expected sample, which were 150 participants. Of the 151 participants males covers 48 % (73) and females constitute 52 % (78) respectively. The age of the respondents varied from 18 to 67 years with the mean age of 25 years. More than 50 of the study participants (34%) lie between 11-30 years, mostly young in average lies at 26 years, (51%) of all participants' lies between the ages of 31-50 years old, the rest were adults aged 51-70 years (15%) of the total participants. From this age distribution it's evident that most of the participants who participated in this study are at the productive age limits (15 -64) years.

The study shows higher achievement of 101% than expected achievement, where researcher expected sample of 150 but the actual sample was 151 this is success in data collection activity done by researcher. Also the findings shows the 51% of respondents who attended this study their age range from 31 to 50 this shows that the questionnaire and Interview are attended by reasonable age of making decisions and this actually lead to quality information

Not only that but also the percent of Women are 52% while of men are 48% this shows that Women are more involved in Water Issues than Men.

4.1.1 Level of Education of the Participants

Table 4 Shows level of Education of Study Respondents

Level of Education	Frequency	Percent
Primary Education	83	55
Secondary Education	29	19
NA	2	1
Diploma	26	17
Degree	11	7
Total	151	100

Source; Field Data 2015

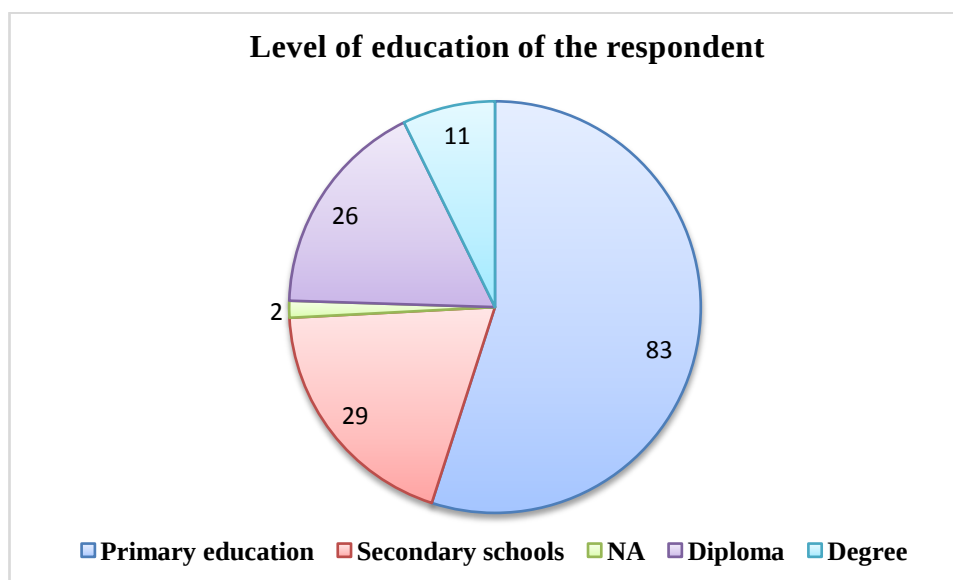


Figure 4 Shows the Level of Education of the Study Respondents

Source: Field Data 2015

The figure 4 and table 4 above shows level of education of the participants. About 19 % completed secondary education, 55% completed primary school and 17 % were Diploma graduates, 7% of the respondents were degree holders/ University level education, and the remaining 2% reported never go to school.

This study attended by participants which have educational level of secondary to University 43% Primary education 55% and only 2% with no any education level this is good coverage because 98% of respondents at list went to school though with different level because the study was done in rural area where some time people hardly go to school. So this makes easy in all process of collecting data because they are able to understand and answer the questions as required.

4.1.2 Marital Status and Occupations of the Participants

Table 5 Shows marital Status of the respondents

Marital status	Frequency	Percent
Married	109	72
Single	40	27
NA	2	1.3
Total	151	100

Source: Field Data 2015

Table 5 above shows marital Status of the respondents. About 109(72%) of the participants were married 40(27%) were single and only2% was a priest. Farmers constituted half 76 (50%) of the respondents involved in this study as the major occupation of the reached population, the next occupation was teachers 26 (17%), 19(13%) were petty businessmen; the remaining 20% was made up of the employed staffs from various departments within MAWASA and Babati District respectively

4.1.3 Duration of working for the participants

Table 6 Shows duration of working for Participants

Years	Frequency	Percent
Less than three years	4	3
Three years	7	5
Four years	5	3
Five years	1	1
Above five years	8	5
Above ten years	4	3
Above twenty years	7	5
Above thirty years	9	6
NA	106	70
Total	151	100

Source: Field Data (2015)

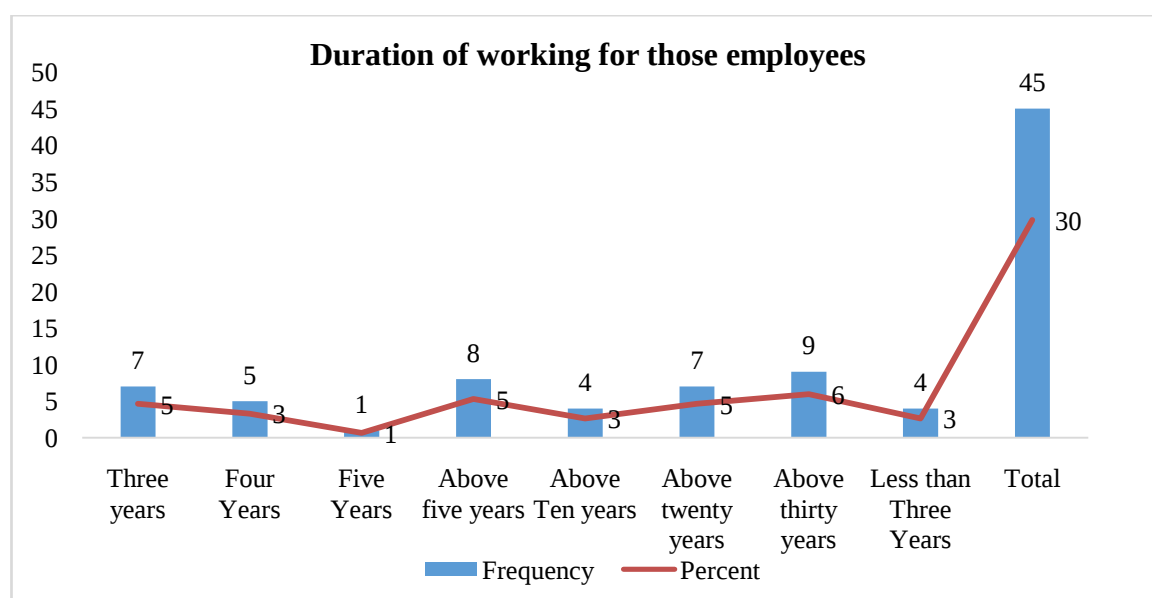


Figure 5 showing the duration of working for employed staffs

Source: Field Data 2015

The table 6 and figure 5 above shows the duration of working for employees. On the duration of working with MAWASA or other offices about 9 (6%) of the respondents reported that they have been working with the particular organization or institution for over thirty years. The rest of the employees are below five years up to one as well. However this question was not directed to the farmers and others petty business categories and priest. The researcher was much interested to understand how long those staying the offices throughout making the decisions for the implementation of the developmental processes.

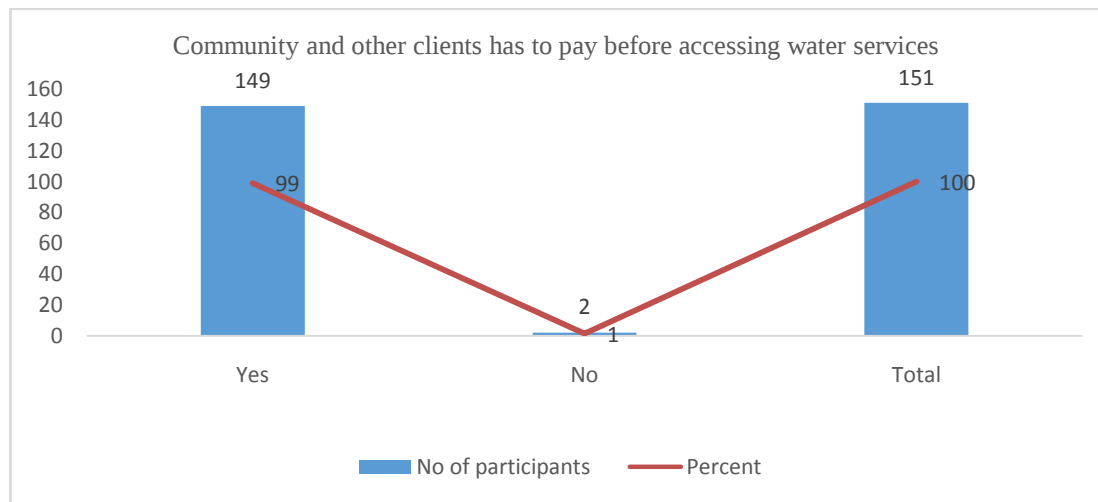
4.2 Result and Discussion by Specific Objectives

4.2.1 Objective one was on the accessibility of the customers to water services in Magugu

Table 7 Shows community and other Clients receives service after paying some amount of money

Respond	Frequency	Percent
Yes	149	99
No	2	1
Total	151	100

Source: Data Field



Source: Field Data 2015

Figure 6 showing that community and other clients has to pay first before accessing MAWASA services

The table 7 and figure 6 above shows the percentage of customers that has to pay first before accessing the services. The participants when asked whether they are MAWASA clients, about 87% of them responded yes, they are MAWASA clients; only few were using water services from either individual's wells or rivers. MAWASA was reported as the main source of water service in the area. Then researcher wanted to understand the time spend for Customers to access water service. About 84(56%) of the participants mentioned that it took them less than 30 minutes, while 17(13%) reported that it took them 30 minutes, the other 5(3%) reported considerably 1 and 2 hours. Only 2 participants reported that it took them more than two hours.

On the major means used to fetch water, 101(67%) participants responded that they normally use a bucket which can either be handhold or carried on head. Others reported that they use simtank, and gallons where by the former are sometimes carried through use of oxen chariot or bicycle or motorcycle respectively.

The researcher further thrown a sensitive question, do the community and other clients required to pay any amount of money before accessing water services from MAWASA, as their reaction to this question about 149(99%) of all participants

responded yes, they have to pay first before accessing the services. Only the few individuals who are using water from the river responded no.

Also the researcher wanted to know who set those amounts to be paid for water services, 96% of the respondents mentioned that MAWASA set those costs basing on their own decisions of running the services. The remaining 4% reported that individuals with wells set it as well. When asked whether they are happy with such costs, 108(72%) of the participants responded yes while the remaining 43(28%) responded no accordingly. Then the researcher probe more for all the responses given by the participants, for instance for those 43(28%) who mentioned that they are not happy with the services, the researcher wanted to hear from them what are the reasons; about (36% of them mentioned that the services are not constant, frequently

cut off and returns late, 11% of them mentioned that water pipes burst most of the time, 5% of the respondents mentioned that the costs for the service is too high while 9% of them concluded that they are not happy because the water are very dirty yet we pay the costs as they set.

For those 108 who mentioned that they are happy with the services, their responses to support their answer were as follows; 56(33%) mentioned that the water flows frequently compare to the past periods where in most of the time no services but now the services reaches them most of the time. The other 11(6%) of the respondents reported that they are happy since they are paying the right costs for the services they are receiving.

4.2.1.1 Discussion on literature review

This result is similar with the result obtained by IFPRI (2009) who did the same study on access to improved water source and satisfaction with services where the study suggest that access to an improved water source significantly raised household satisfaction with both quality and availability of water. However, the effect of the improved water source on users' satisfaction was slightly lower for water availability than for water quality.

Increased access to clean water is an integral part of Ethiopia's economic development and poverty reduction policy. Recent official figures (MoFED 2008) indicate increased clean water coverage in the country. Despite the increased support provided to the sector, there are millions of people still depending on unsafe drinking water sources, especially in the rural areas of the country. Furthermore, coverage rates alone may understate the problem if poor satisfaction with the water quality and availability points to serious deficiencies in these aspects of water supply

4.2.2 Objective two; the customers who are satisfied with the quality of water services provided by Magugu water supply

Table 8 Shows the Customers Satisfied with MAWASA Services they receive

Customers Satisfied	Frequency	Percent
Yes	85	56
No	66	44
Total	151	100

Source: Field Data

The table 8 Clients satisfaction on the MAWASA services they receive. The participants were asked whether they are satisfied with the services provided by MAWASA to them, 85(56%) of all the participants responded that they are satisfied as the services meet their requirements on the other hand 66(44%) of them as in figure and table 4.3 below reported that they are not satisfied as the services are not of the standards they wanted and also the cost is higher compared to the quality of the services received.

The researcher further wanted to understand participant's perception on the MAWASA service providers; about 42% of the clients responded that the services are very good and advised that they should keep on improving their services, 26% of the respondents reported that the services providers are very responsive once you report the problem they act on it as they receives the concerns.

The 6% of the participants reported that they are very positive once you submit the request it took short time to be worked on. On the other hand the other participants

presented negative perceptions, for instance 12% of the participants reported that MAWASA water technicians are very slow and not cooperative when we report to them a burst of the pipes or other damages, the other 11% of the participants also mentioned that they provides substandard services, which doesn't have quality and also mentioned that they need to be more skilled or go for more studies to be able to meet the required standards

In fact only 23% of respondents respondent differently and negatively that their not satisfied with the services and their perception about service provider is not very good since they are not able to provide quality services, the technical personnel are very slow to attend any problem on time, and they commented that no Standard at all because of very low skilled personnel

Different from that comment 77% of respondent are satisfied with the Service provided by MAWASA with positive perception that the services is good they should keep it up , they respond to Customers complaints on time

4.2.2.1 Discussion on literature review

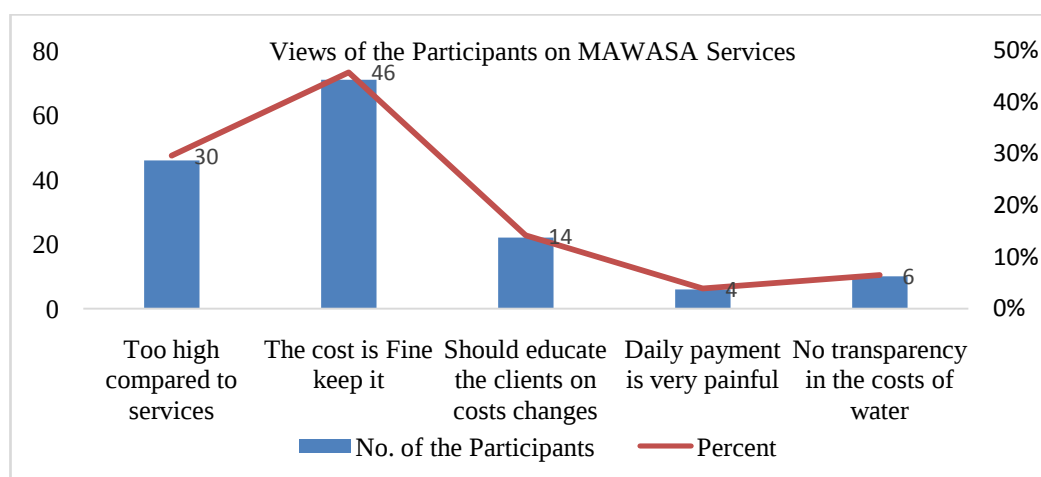
This result is similar with the result obtained by Kahsay N. zeraebruk(2014) who did the same study on assessment of the level and quality of water supply service delivery, the study find out that the quality of Water services provided by Asamara water department is unsatisfactory due to lack of enough treatment plants, pumping stations, and distribution network which is similar with the reasons of dissatisfaction that was given in this study.

4.2.3 Objective three; the views of the customer's on water charges by MAWASA

Table 9 showing the views of the customers on MAWASA water charges

Views	Frequency	Percent
Too high	56	28
The cost is fair	71	46
No transparency in cost formulation	22	14
Daily payment is more pain fall	6	4
No transparency in cost of water	10	7
Total	151	100

Source: Field Data



Source; Field Data 2015

Figure 7 showing the views of the customers on MAWASA water charges

The table 9 and figure 7 above shows the views of customers on MAWASA services. With regard to this the Participants provided various ideas, 46% of them positively reported that the cost is fine and should be kept or continue, 14% of the respondents also advised that MAWASA needs to educate the customers or its clients before introduction of any changes which needs clients actions. On the other hand 30% of the participants reported that the costs of water services is too high compared to the services provided, the other 6% of the participants reported that the procedures are not transparent, they are not clear on how those rates are being reached. Lastly the 4% of

them responded that the daily charges are very painful as there is no ability of having money every day, it should have been only monthly charges.

It seems that MAWASA cost in water charges are reasonable, indeed customers do not have problem in that because only 30% of MAWASA Customers are not very happy with the charges and their big concern is transparency on the process of formulating water charges, they need to be involved enough. While 46% are happy and commented that the cost is fair and they should **keep it up**

4.2.3.1 Discussion on literature review

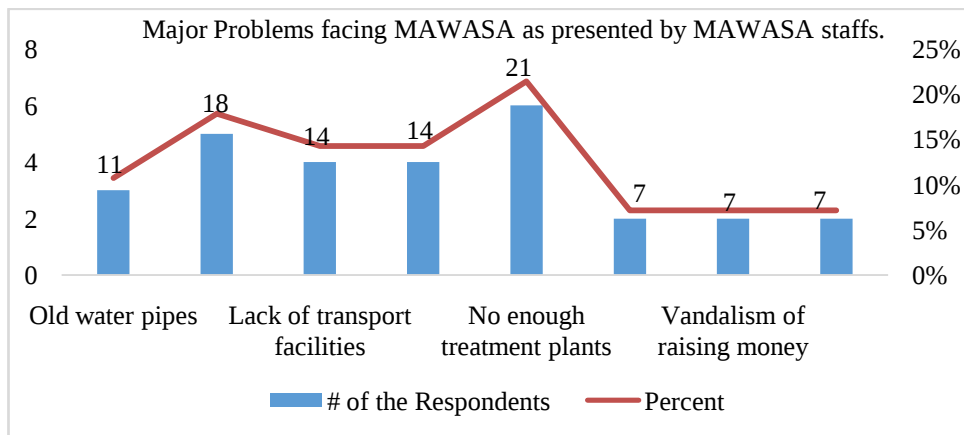
This result is similar with result obtained by Kayaga ,S., Carlert,J., & Samson ,K., (2003)who did the same study on paying for services where the study find out that the head of house hold are engaged in formal education formal employment have a high willingness to pay for water services also it appears that education improves the awareness of decision-making in the home, such that they attach better more value to a better quality water services. The result relate with the finding obtained in this study where 30% of customers are not satisfied with cost of services relating to services that is provided and 46% are satisfied with the cost that means their education level helps them have understanding on quality and value of services that they pay

4.2.4 Objective four; Organizational planning contributions on the quality and accessibility to water service in MAWASA

Table 10 Shows barrier that are faced by MAWASA in improving the quality of their services

Problems faced by MAWASA	Frequency	Percent
. Old water pipes	45	10
Lack of transport facilities	4	14
No enough treatment plants	44	21
Vandalism of raising money	2	7.1
NA	56	47
Total	97	100

Source: Field Data



Source: Field Data 2015

Figure 8 Barriers faced by MAWASA management in improving the quality of their services

Table 10 and figure 8 above shows barriers faced by MAWASA Management in improving the quality of their services. MAWASA has been implementing water services program me to the target community and other clients for the past five years. This implementation was done under the very tough environment as nothing of the facilities was there before.

The MAWASA management team before including themselves to planning of their activities listed some main problems which affected their performances for instance 21% of them consider lack of water treatment plants as the serious problem, 18% of them reported that lack of skilled personnel, another 14% of the management team reported that lack of transport facilities, the other 14% of them reported lack of storage tanks affects the constant supply of the services to the customers, 11% of the management team mentioned that most of the water pipes are too old hence frequent busting and others reported 7% of the management team mentioned illegal activities of damaging the facilities, 7% of them also reported about low knowledge on national water policy among the staffs and lastly 7% of the management team underlined that the MAWASA services covers only small area as shown in figure and table below

The researcher finally wanted to understand to what extent the set planning documents such as business plan, strategy plan, assets managements plan and market plans contributes directly to the success of MAWASA project. The beautiful thing reported by the organization management team and general staffs is that the documents were the products of the joint effort among all MAWASA workers. All the staffs during the study respondent that these documents are the integral resources in the success of the their organization because as we made them available the organization was capable to secure 60% of its budget from the stakeholders(World Vision, Doricas International and Water Aids) and a remaining 40% was from the government through the department of water.

Government and stakeholders both were interested to go through the planning documents and having reading them they further commit themselves to ensure that the will continue working with them, especially water networks expansion and the funding services. Moreover the district water department committed itself that the organization's staffs will receive all the necessary technical and capacity building supports. Also the department provides some budgets for supporting MAWASA as well as supplying them national water policy along which all their works are linked to it to avoid any parallel implementation or duplication of the efforts, as well as to share grounds which needs collective actions to double performances.

Almost 100% of the interviewed members of the staffs responded that the presence of the four main planning documents acted as the guiding tools for the organization's activities implementations among which improvement of the services was highlighted. For instance the main documents cut across all areas but all in all Quality of the services is the overall goal, to improve this organization has indicated in its planning documents to invite Water Standard Agency to conduct

Water testing exercises at various MAWASA services points to ensure that all her customers receive high quality services.

Those four documents clearly indicate the goals and targets of the organization, hence simplifies the operational processes as every step are documented and has budget indicated to it as well the responsible staff to execute them within the agreed time

frame. Also the extra budgets for conducting evaluation by external consultancy firms on the resources used by the organization in running water related services

MAWASA Management team commented that, Organizational Planning are very important tools that helps them to ensure the accessibility of quality water provision, by accessing Fund from different stake holders for building one Water Storage Tank, though their planning documents still needs to be improved especially Business Plan and Strategic plan are not in a good standard as they can limit their Implementation and performance in providing quality services

Indeed their different challenges that MAWAS Management are facing in providing this Water Services and most of problems are beyond their ability because they need larger Financial Capacity to invest them they only depend on Government Support and other stake holder, these problem are Old infrastructures, Lack of water treatment Plants, lack of Water Purification systems, Lack of enough Water storage Tanks, low network coverage and illegal activities which is causing NRV (Non-revenue water)

4.2.4.1 Discussion on literature review

This result is similar with result obtained by Hilda Moraa, Alberto Otieno.,& Anne Salim(1972) who did the same study on ensuring accessibility ,service delivery and citizen participation the study found out that Ministry of Water and irrigation in Kenya has set several institution such as water resources Management Authority. Water and Sewerage Services Policy among others to streamline its operation in the area of the service delivery in the water sector. Some of the duties of the Water Resource Management Authority include to ensure National and equitable allocation of the Water Resources, water quality monitoring, testing and surveillance to ensure compliance with drinking water standards and other standards and other standards for various for various water uses and effluent discharge into public sewers and the environment and mapping and publishing of key water catchment areas. Ground water resources and flood prone areas. This study is similar with current study done where planning is the key tool to ensure the delivery of water services with required standards

4.2.5 Association between the customer's accessibility on MAWASA Services and independent variables such age, sex, marital status, educational level and duration of working in the same organization or institutions.

Table 11 Association between community and other client's accessibility and independent variables

Independent Variables	Does community and other clients access water services after paying certain amount of money			Chi – Square test and 95% CI
	Yes	No	NA	
Age	129	2	20	45.997 (0.000.000)
Sex	129	2	20	10.790 (0.001-0.003)
Marital status	129	2	20	1.157 (0.82- 0. 85)
Occupation	133	2	14	86.083 (0.049 – 0.058)
Level of education of the respondent	126	2	20	63.899(0.000-0.0006)

Source: Field Data 201

The table 11 above shows association between community and other client's accessibility and independent variables. Having learning all those responses the researcher was further interested to know the underlying factors that have caused the study participants though using the same services but yet provided varied reasons or views which to some degree for questions posed to them for issues that were related to MAWASA Services. To find out that the researcher cross tabled some independent variables with the dependent variables (accessibility and satisfaction) and found the following results using Chi – Square tests

The participant's responses were more likely to be changing as their age advances towards as far as the accessibility to quality water services provided by MAWASA is concerned than their counterparts, and the difference was statistically significant (25.664 (0.004 - 0.015)). The findings on the accessibility to water services provided by MAWASA also reflected that women are more likely to access water services than men as shown by statistical significance (10.790 (0.001-0.003)). The results of the findings also showed that being married or single doesn't have any influence of the accessibility to water services. So this also shows water is a universal service that needs to be accessed by all individuals accordingly without respect to such status.

Also the results of the findings shows that type of occupation of an individual influences more likely his/her responses on the accessibility to MAWASA services (86.083 (0.049 – 0.058), this is statistically significant and backed as well by the details of the views of the participants where by 66% of the customers reported that they have access and the remaining part 30% of them mentioned the access is difficult for them due to high cost of the services, this is directly related to their occupation. Lastly the researcher conducted a chi square test on the association between accessibility and level of education of the respondent, the results reflected that level of education is more likely to influence the decisions of the individual in accessing water from the sources like MAWASA services, this is also statistically significant as shown by the chi – square test figures 63.899(0.000-0.0006) this results is also supported by the findings on the level of education on the access to water services by MAWASA, those which didn't access any formal education were the one who reported differently.

4.2.6 Association between the customer's satisfactions on MAWASA Services and independent variables such age, sex, marital status, educational level and duration of working in the same organization or institutions

Table 12 Association between community and other clients' satisfactions and independent variables

Independent Variables	If you are satisfied with MAWASA services			Total	Chi – Square test and 95% CI
	Yes	No	NA		
Age	65	66	20	151	49.701(0.000-0.000)
Sex	65	66	20	151	9.452(0.008 – 0.011)
Marital status	65	66	15	146	4.051(0.391- 0.411)
Occupation	66	63	0	129	104.806(0.000 -0.000)
Level of education of the respondent	65	63	20	148	69.146(0.000-0.000)
The duration of working	9	16	20	45	26.614(0.011-0.02)

Source; Field Data 2015

The responses from the participant's shows that their age affects their responses, those with age between 61-70 years responded to be more likely satisfied than those with

age between 41-50 years whereby none of them reported satisfied with the services, and the difference was statistically significant 49.701(0.000-0.000). The findings on satisfaction of water services when tested against sex reflected that women (49%) are more likely to report being satisfied provided that there is constant access to water services than men (37%) as shown by statistical significance (9.452(0.009). Also the results of the findings shows that type of occupation of the participants was found directly affecting the response of each participant on the aspect of satisfactions to MAWASA services. For instance 53% of all peasants who are 50% of all respondents were found more likely to report satisfied with the services, on the other among 26 teachers only 3(12%) reported that they are satisfied with the services (104.806(0.000 -0.000), this is statistically significant and backed as well by the details of the views of the participants where by 56%) of all the participants responded that they are satisfied as the services meet their requirements.

Lastly the researcher conducted a chi square test on the association between satisfactions and level of education of the respondent, the results reflected that the high the level of education of education of an individual the less more likely satisfied with water service from MAWASA, for instance none of the degree holders reports get satisfied but 54% of those with primary education responded that they are satisfied. This is also statistically significant as shown by the chi – square test figures (69.146(0.000-0.000), this results is also supported by the findings on the level of education on their satisfactions to water services provided by MAWASA, those with Primary level are the one who thought satisfied with the services but the counterparts reflected that they were less satisfied as they were able to analyze other factors such as the quality of the services and availability of water throughout the time determined their responses on this aspect.

Indeed the result of finding shows that is statistically significant the Age, sex, educational level, and occupation has influence on depended variable Customer accessibility and satisfaction on Mawasa Services

Sex: Result shows that independent variable sex has greater influence on dependent variable in this study that women are more likely to accesses water services than men

with statistical significant of (10.790(0.001-0.003) using chi-square test. That means in any issue concerning water when you involve women can respond better than men.

Age: Also age is one of the independent variable that influence change in dependent variable as the age of respondents advances their likely to influence the accessibility to quality of water services by statistical significance of (25.664(0.0049-0.015) using Chi-square test as shown below

Educational level: Educational level is one of very important Independent variable that influences the decision capacity to accessibility on MAWASA services with statistical significance of 63.083(0.000-0.0006) that means reasoning capacity determine understanding capacity on quality, satisfaction and accessibility on MAWASA water service.

4.3 Discussion Summary of Major Findings

The major finding shows the Market dominance by MAWASA in a area, where there is no any other competitor where 87% of respondents are the customers of Magugu water supply. One of MAWASA strategic plan is to provide consistent and quality water services but the study shows that there is failure in implementation of this strategic plan because of some percent of dissatisfaction (44%) where customers complain about frequent cut off of Water services, Poor infrastructure, consistency leaks and burst of Water pipes also water is very dirty which is very risk for health issues.

Study also find out 56% of customers are satisfied with services because they compared the last time where there is no water supply agency in a area and not easy to access water service, it seems there opinion care most about availability they don't talk much about quality yet there are happy to see Water even though is for few hours. These finding shows that the coverage of service area is not enough and hence unsatisfactory, this may lead MAWASA to lose its competitive advantage if some people or Company discovers such Market opportunity of providing the same service. One of the biggest finding is about what is not known as per problem statement thus the study focuses on accessing the accessibility and satisfaction on quality services;

yes according to this study there is accessibility on water services but not satisfactory due to poor quality water, since Water standard test was not conducted

Figure 9: shows one of the big pipe leakages happened at Water source due to Old and poor infrastructure

Figure 9: also shows the Quality of Water supplied by MAWASA since there is no filtration system or treatment plant this Water flows directly for consumption without passing any purification or treatment system



Source Data; Field source

Figure 10: shows Pipes destruction through illegal activities



Source Data; Field source

CHAPTER FIVE

CONCLUSION AND RECOMMENDATIONS

5.1 Conclusion

The findings of this study reflected that Magugu and surrounding villages are located in the Semi-arid areas geographically whereby there is no permanent huge rivers, even the small streams existing around the small swamps are far from the majorities residences, therefore the introduction of MAWASA project the MAWASA services to its customers is highly valued by the users as the services has currently bridged the long gap experienced by the community whereby they had to fetch the services very far from their residences. The study has also managed to really expose the avenues which can be used for further improvements to improve access to improved quality water services not just normal access to water points.

The study also highly displayed that the satisfaction is still low with the services, it should be raised at least to 80%, and the questioned aspect was the quality of the services in relation to costs for accessing water services. The findings leads to the following recommendations by the researcher which if implemented will enhance MAWASA services to meet the expected standards for both areas of accessibility and satisfaction of the services by its customers accordingly.

5.2 Recommendations

The researcher after receiving the responses of the participants on their views towards the water services they access and its quality. The researcher thought that there is a need of providing some advises or recommendations to MAWASA management team to improve their services to meet the required standards. The following are recommendations or suggestions pressed by the researcher to keep MAWASA remain trusted higher quality service provider in the area respectively:

- i. The researcher recommends that MAWASA should conduct water standard test to ensure on quality water and health safety

- ii. The researcher recommends that the management should ensure supply of clean and safe water throughout the time through installation of filtration water systems and treatment plants at the sources, since throughout the exercise she found most of the clients complain on dirty water especially during raining seasons.
- iii. Also researcher recommended that MAWASA should increase Corporate Social responsibility activities to community around in order to reduce number of illegal activities
- iv. The researcher also recommends that MAWASA should have to develop enough skills on how to write Fund proposal to different stake holders since 60% of the total budget depend on external funding and also should insist on government support to improve infrastructure in order to avoid the risk of providing unsatisfactory and low quality service
- v. Another recommendation is that MAWASA should not be reluctant because of its market dominance but there should be an effort of improving all the systems including infrastructure like to have enough water storage tanks and enough Customer care and Marketing skills
- vi. Furthermore the researcher recommend to MAWASA management to install billing system, installations of financial systems/software's and use accurate meters at all water distribution points to drawing attention and trust by the customers than the current situation where by the customers are not trusting those meters used.
- vii. In line with the above recommendation the researcher also recommend to the organization to review the costs set for accessing water services especially the connection fees which majority earmarked as not related to the services requested and like highlighted it as enclosed with seeds of corruption
- viii. Since water is a very crucial service the organization has to employ skilled professionals to provide high quality services to its customers.
- ix. More significantly MAWASA team needs to have well improved leaderships to oversee the services provision, put in place work plans and committees which will enhance the services implemented well as its quality as per national standards and policy respectively

- x. Also researcher recommends that more study should be conducted on National Water Management Policy and External and internal factors in water management

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APPENDIXES

QUESTIONEER DESIGNED FOR MAWASA CUSTOMERS

1. Who is the main supplier of Water services in Magugu Area?

- a).....
- b).....
- c).....
- d).....

2. As MAWASA Customers what times do you spend to access water service?

- a) Less than 30 minutes
- b) 30 minutes
- c) 45 minutes
- d) One Hour
- e) Two hours
- f) More than two hours

3) Did Customers and Community around access water after paying some amount of Money

1. YES

2. NO

☐

4) If their paying some amount of money who is in charge of setting Price

- a).....
- b).....

5). Are they happy and accept the amount of money they pay when they fetch water?

1. YES

2. NO

☐

6) As a Customer are you happy with water services provided by MAWASA

1. YES

2. NO

☐

7) If YES or NO explain the reasons

a).....

b).....

c).....

d).....

8) What are your views on service provider?

a).....

b).....

c).....

d).....

9) Is the amount of money that are paid determine accessibility of water services

1. YES

2. NO

☐

12) What do you think MAWASA needs to do in order to continue provision of high quality Water Services?

a).....

b).....

c).....

d).....

13) What are your views on the users of service?

- a).....
- b).....
- c).....

QUESTIONEER DESIGNED FOR LOCAL DISTRICT COUNCIL

A. Assess the Accessibility of the customers to Quality Water services in Magugu

Respondent noAgeSex.....

Marital Status Occupation.....

Education BackgroundWorking years.....

1. Is there any Support from District Water Engineering (DWE?) and Finance
Department,

1. YES

☐

2. NO

2. If YES what is the Support from District Water Engineering?(DUWE) and Finance
Department

a)

b)

c).....

d).....

3. is there any relationship between District Health Department and Magugu Water
Supply

1. YES

☐

2. NO

4. What is the rule of Local District Health Department to ensure the Quality Water
Supply for MAWASA?

a)

b)

c).....

d).....

e).....

5. What do you think MAWASA needs to do in order to continue provision of high quality Water services?

- a)
- b)
- c).....
- d).....

6. is there any relationship between District Health Department and Magugu Water Supply

1. YES

2. NO

☐

7. What is the rule of Local District Health Department to ensure the Quality Water Supply for MAWASA?

- a)
- b)
- c).....
- d).....
- e).....

8. Is there any Positive or Negative Impact on Water Accessibility in local District Educational Department a case of Magugu Area?

YES

NO

☐

9. How does Educational Department affected by accessibility of Quality Water Supply in Magugu area

- a)
- b)
- c).....
- d).....

10. What do you think MAWASA needs to do in order to continue provision of high quality services?

- a)
- b)
- c)
- d)
- e).....
- f).....

Questioner designed for MAWASA Management

Respondent No Age

Sex.....Marital status Job.....

Occupation..... Education Background

..... Years

1. Is there any Contribution from Babati local District Council to ensure accessibility of Water Services in MAWASA?

1. YES

2. NO

☐

2. Is there any Contributions from other stakeholders for sound accessibility to Quality Water (MAWASA)?

1. YES

2. NO

☐

3. If YES who are them and type of contribution or Support

a)

b).....

c).....

d).....

4. Does MAWASA follow the national water supply Policy?

1. YES

2. NO

☐

5. Is there any internal policy or protocol or guidelines which have been developed by MAWASA authority to simplify implementation processes?

1 YES

2 NO

☐

6. Is there any testing done by Water Standard agency to qualify on Water Standard provided by MAWASA?

1. YES

2. NO

☐

7. If YES does MAWASA Water qualify the Standard?

1. YES

2. NO

☐

8. Are all Key MAWASA Staffs do participate in Organizational Planning?

1. YES

2. NO

☐

9. Is there any Plan already in place for MAWASA?

1. YES

2. NO

☐

10. If YES what are them

a).....

b).....

c).....

d).....

11. Do you think is Budget properly allocated to run the whole Water Program me?

1. YES

2. NO

☐

12. What is the percentage of external funding in your total Budget?

.....

.....

13. Does the amount of money paid determine accessibility to quality water supply?

1. YES

2. NO

☐

14. Are the clients also happy with the cost charged for the water services?

1. YES

2. NO

☐

15. Do they earn services related to their money? (Value for money)

1. YES

2. NO

☐

16. Are the charges on monthly basis or daily or both?

1. Daily

2. Monthly

3. Both

☐

17. Is there any Pricing System for MAWASA?

1. YES

2. NO

☐

18) If YES explains in brief how the system functions/works?

.....

.....

19) What are the challenges you're facing as MAWASA which hinder the provision of Quality Water Supply in Magugu

- a)
- b)
- c).....
- d)

20) What are your suggestions on the users of the services?

- a).....
- b)
- c).....
- d)

21) What are your views on the costs charged per services?

- a).....
- b).....
- c).....

22) What are your views on the current policy as MAWASA with regards to the services provided to your clients?

- a).....
- b).....
- c).....
- d).....