

EVALUATION ON THE IMPACTS OF ABOLITION OF PLASTIC BAGS IN MOSHI MUNICIPALITY, TANZANIA

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ABSTRACT: This dissertation set out to evaluates the impacts of abolition of plastic bags in Kilimanjaro, Tanzania. It aimed to determine the trend of plastic bags uses over the past five years, impacts for using plastic bags and evaluates intervention measures on the uses of plastic bags. The field survey that was conducted in two markets as Mbuyuni and Memorio. A total of sample of fifty people were random sampling drawn to respond to questionnaires while interview was used to collect information from market officer. Quantitative data from the questionnaire's was analyzed by using cross sectional and inferential statistics using Statistical Package of Social Science (SPSS) version 22 was used in analyzing data. The data obtained was presented in tables, frequency, percentages. Target population was market officer and all people in Moshi Municipal. Target population was market officers and all people in Moshi Municipal. The findings revealed that the people who are respond in practices the use of plastic bags has impacts to human life and environment to the large extent. At large extent plastic bags consumed every minute with low cost, Most of plastic bags are still end up in landfills or in the environment, Also the factors affecting the community through uses of plastic bags in Moshi districts includes as they are harmful to human heal and they pollutes water and soil

fertility. The study recommends that there should be the need of government through municipal council to take up role to make plastic bags or solid waste management system. Also requires having proper rules, regulations, policies which should be able to control and reduce solid waste generation, provide for guidance on collection, disposal and recycling. The market officers should make sure that all people who doing their economic activities around market areas act as leaders of environmental conservation. These methods are like to increase enough facilities and awareness to all people in abolition of plastic bags in their environment. The researcher suggests the following topics that there should be carried for further researcher to the evaluation of the impacts of abolition of plastic bags in Moshi Municipality.

CHAPTER ONE

1.1 Background of the Research Problem

Plastics bags increasingly popular for industrial and consumer's uses since their emergence in the 1940's. The volume of plastics manufactured each year continues to rise rapidly, with the quantity produced in the first decade of the 21century approaching the total produced during the entire prior. Today approximately 260 million ton of plastics bags are produced for various purpose worldwide on the annual basis. According to the single use of plastic bags (SUPS, 1970'S) produced the new single plastic bags which used mostly in United States (Atieno, 2017).

URT (2019), United Republic of Tanzania has announced the bans on plastics bags use from the first of June this year. In his speech during a budget session in the National parliament of Tanzania minister his Excellency Kassim Majaliwa announced that the last day to use plastics bags in our country will 31 May 2019 and from the first of June no one will be allowed to produce import, sell or use plastics bags .Plastics bags are numbered of polluter of the environment and silent killer of our natural environment and the resources that most people understand.

We are happy that Tanzania among of a very few African countries to ban the use of plastic bags and we was work hard toward supporting the government in the fighting against plastics pollution. Plastic which was introduced in Africa a generation ago

has been reported to pollute both the seas and land at an alarming rate. According to Eco Watch plastics bags affects all biological spectrum, including posing risks to human health and wild life, the accumulation of these products has led to increasing amounts of environmental pollution around the world including Africa. About 90 percent of all trash floating on the ocean's surface is believed to be emanating from plastics bag (UNEP, 2018).

UN Environmental programmed (UNEP) half of all plastics produced are designed to be used just once and then discarded, resulting in mass amounts of chemically laden debris landing in oceans and littering land scopes. Tanzania has made an important move towards keeping Kilimanjaro majestic slopes use plastics bags on the mountains for climbers and use plastics on the mountain for climbers and use plastics bags on the mountain .The bans covers all plastics bags including garbage bags and shopping bags .Any transparent bags used to store liquids, cosmetics, toiletries during the flight should be left on the dumped areas. Problems with plastics bags are persist for a long time.

According to the major assessment by the United Nations Environment Programed (UNEP) noted that plastics marine debris dispelled almost anywhere poses a global pollution problem due to its portability in oceans currents and long life span. Plastics have been reported to negatively impact between 180 and 660 species of animals including birds, fish, turtles and mammals with a portion of these plastics bags. Marine animals confused plastics bags with foods which can lead to blocked digestives tracks and eventual death. Plastics bags bans have been designed in the various ways taking into account (Miller, 2016).

1.2 Statement of the Research Problem

Plastics bags are used for containing and transporting goods such as foods, produce, powders, ice, magazine, waste and chemicals. Plastics bags are the problems to the community because they can cause damage directly or indirectly ways as cause health problems to the users both animals and human beings. There are many environmental impacts from uses of plastics bags in the community mostly in Moshi district. Due to longtime to decompose in our environment it may destruct the soil,

habitats of other animals like wild life and cause disease such as cancer to human being. Plastic bags are a serious problem around the world for destroying environment. It creates wastages problems, if plastic bags are not safe for the environment being misused. They are not easy to recycle. They may cause several health hazards. And there are so many things that can go against the plastics bags. The benefits of plastic bags can't be overlooked just because they are environmental threat. They are cheaper than paper or cloth packaging. As a piece of plastic bags was cost small amount of money. Also plastic bags consume less solid waste than paper bag. Plastic bag are durable and water proof. They are less vulnerable to tearing and are resistant to many chemicals. Plastic bags when it comes to protect the contents from rain or water.

To other side plastic bags have negative impacts as they do not only pollute our water but also our land. Plastic bags are usually light weight and as they can travel very long distances by either water/ wind blows these litter get caught up in between trees and fences. Also plastic bags are harmful to wild life and marine life. Birds, animals were affected when they consume these plastic materials that their digestive system gets congested leading to the development of health infections and death when there is suffocation (Killerkott, 2015).

Geyer (2017), Abolition of the plastic bags is mostly a good way of reducing the pollution from plastic bags in Moshi District because those alternative bags sold at high cost compared to plastic bags which was cheap on form of cost to consumers. Due to the abolition of the plastics bags not all people could manage to purchase the cost and quality. The problem is when you keep heavy things to the new bags inside they burst due to the materials which were producing it.

According to the law of the country for a person who goes against with the use of new bags instead of plastics one there are punishment to them but many people faces the problem as they do not have enough money to buy because they sold at high amount of money even though there are other plastics bags which used for taking away perishable goods which also pollutes the environment like those plastics bags. There are few scientific explanation explanations and studies have been conducted in this district focusing on understanding social and economic vulnerability of climate

change affecting less developed. This study is going to evaluating the impacts of plastic bags in Moshi district (URT, 2019).

1.3 Main Objective

The main objective of the study is to evaluate the impacts of abolition of plastics bags in Moshi district in Tanzania.

1.4 Specific Objectives

- i. To assess the trend of plastics bags over the past five years in Moshi district.
- ii. To assess the factors affecting the community through uses of plastics bags in Moshi district.
- iii. To assess the measures used to conserves the environment after abolition of plastics bags in Moshi District.

1.5 Research Questions

- i. What are the trends of plastics bags over the past five years in Moshi district?
- ii. What are the factor affecting the community through uses of plastics bags in Moshi district?
- iii. What measures used to conserves environment after abolition of plastic bags in Moshi district?

1.6 Significances of the Study

The research intends to looks on the relation between the outcomes of the plastics bags with the abolition of plastics bags in Moshi Districts. This may help the scholars whose dealing with reaches about plastics bags to get more information about the management of the environmental conservation through the abolition of plastic bags. Also to know that those measures which were taken by the government as does it managed to the community in order for them to sustains with their daily life after abolition of plastics bags. Furthermore, the research intends to help district and community to understand the response of managing their environment and other

resources after the process of abolition of plastics bags and that solution may create awareness to all people in the community.

1.7 A Conceptual Framework

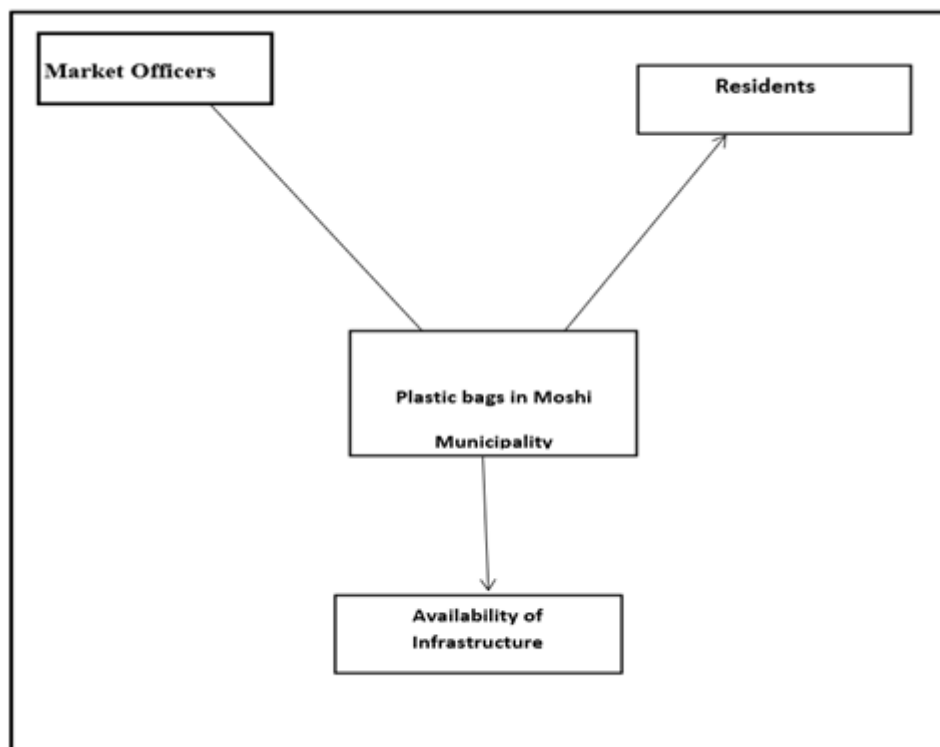


Fig 1.1: Conceptual Framework

Source: Researcher (2025)

This is the diagrammatic representation of theoretical framework showing relationship between respondents, market officer's answers and the availability of infrastructure for disposing plastic bags. Also respondents on answering the questions on how they were affected by using plastic bags and what measures used to evaluate uses of plastic bags in Moshi Municipal.

1.8 Operational Definition of Key Terms

MO Market Officers

UNEP United Nations Environment Program

SUPG Single Use Plastic Bags

SSPP Statistical Package of Social Science

URT United Republic of Tanzania

LITERATURE REVIEW

2.0 Introduction

This section consists of both theoretical and empirical review of the previous studies. The review of literature is done for the aim of ascertaining what has been researched by other scholars and identify the knowledge gap which is going to be covered by the presented in this chapter.

2.1 Definition of Key Concept

2.2 Plastic Bags

Plastic bags are made of crude oil, which is made into a hard or a soft material. Plastic bags have only existed for one generation. In this short time, their extreme conveniences have made them widespread all aspects of the life, making them the synonym of waste. However, their decomposition is a very full of long process, in fact, they never fully decompose in the sea water. Plastic bags can be classified into three groups according to decomposition (Nilsson et al, 2016).

In its scope of plastic bags includes planning, administrative, financial and legal functions in the process of solving problems arising from plastic bags. The solutions might include complex inter disciplinary relations among fields such as public health, city and regional planning, political sciences geography, sociology, economics communication and conservation, demography and material sciences (Geyer et al., 2017).

2.3 Review of Related Theories

2.3.1 Nudge Theory

Nudge theory is credited mainly to American academics Richard H Thaler and Cass R Sun stein. They built much of their theory on the 'heuristics' work of Israeli-American psychologists Daniel Kahneman and Amos Tversky, which first emerged in the 1970s in psychological journals. The name and concept of 'Nudge' or Nudge theory were popularized by the 2008 book, 'Nudge Improving Decisions about Health, Wealth, and Happiness, which became a major international best seller.

Nudge theory seeks to improve understanding and management of the heuristic influences on human behavior which is central to changing people. Central to behavior, is decision-making, from the choices available. Nudge theory is mainly concerned with the design of choices, which influences the decisions we make. Nudge theory proposes that the designing of choices should be based on how people actually think and decide (instinctively and rather irrationally), rather than how leaders and authorities traditionally (and typically incorrectly) believe people think and decide (logically and rationally).

In this respect, among others, Nudge theory is a radically different and more sophisticated approach to achieving change in people than traditional methods of direct instruction, enforcement, and punishment.

The use of Nudge theory is based on indirect encouragement and enablement. It avoids direct instruction or enforcement. Nudge theory accepts that people have certain attitudes, knowledge; capabilities and allows for these factors (whereas autocratic methods ignore them). Nudge theory is based on understanding and allowing for the reality of situations and human tendencies (unlike traditional forcible instruction, which often ignores or discounts the reality of situations and people). Fundamentally (and properly, according to its origins) Nudge theory operates by designing choices for people which encourage positive helpful decisions; for the people choosing, and ideally for the wider interests of society and environment. Nudge theory offers a wonderful methodology for identifying, analyzing and re-shaping existing choices and influences that people are given by governments, corporations, and other authorities. Given that so many of these choices and influences are extremely unhelpful for people, this is a major area of opportunity for the development and use of Nudge theory, even if it were not envisaged as such by its creators

2.3.1.1 Strength of the Theory

The advantage of this theory is flexible and modern change management concept for understanding of how people think, make decisions, and behave helping people improve their thinking and decision, managing change of all sorts and identifying existing unhelpful influences on people (Deun, 2018).

2.3.1.2 Weakness of the Theory

The theory it gives individual a chance to make decision that sometimes one may use a chance given to pollute the environment. The theory explains the issue of thinking rational while others do not think rational.

2.3.1.3 Institutional Economic Theory

Institution economic theory is described by North (1990) as the role of institutions set up by Municipalities to manage solid waste systems present in their respective areas. The theory was pioneered by North (1990). North observed institutions from an economic point of view that they were the rules of the game in a society. There are human devised constraints that shape human interaction. The theory is based on the conception that individuals are socially constructed identities. The theory fundamentally challenged the neo-classical theory which assumes that the political, economic and social surroundings is composed of groups of independent individuals, each practicing their own preference in order to get hold of material fulfillment.

The theory further advocates the ways of seeing and knowing the environment and ways of acting in it are understood or constructed in political, economic and social relations with others. In the course of life, people are continuously involved in reflecting and actively setting out to transform their conditions of life. With respect to this, therefore, the theory tries to assess the understanding that no institution that can exist on its entirely but through interaction with others.

Together with standard constraints of economics they define the choice set and therefore determine transaction and production costs and hence the profitability and feasibility of engaging in economic activity.

2.3.1.4 Strength of the Theory

The theory draws attention to different aspects of life which expand the problem area and the theoretical framework useful. It may help formulated on the basis of sociology and political science, regarding political strategies of political and economic institutions or attributes of social structure (Prochniak et al., 2016).

2.3.1.5 Weakness of the Theory

These issues are not taken into consideration in the countries of the developed market economy. It is based on static changes to explain differences between countries based on their different economic changes from their institutional economy (Whitley, 2013).

2.4 General Linear Model

Provides a general framework for a large set of models whose common goals are to explain or predict quantitative dependent variables by a set of independent variables that can be categorical or quantitative. The general linear model encompasses techniques such as f-test, t- test, simple and multiple linear progression, analysis of variance and covariance analysis. General linear model is adequate only for fixed effects models in order to take into account random effect models as they needs to be extended and becomes the mixed effect model (Neil,2010).

2.4.1Strength of the Model

The linear model gives assumptions made when using F-test as the response variables are continuous also follow the normal probability distribution with mean equal to zero. General linear model provides easily calculated relatives to use as a rate classification system (Dunn, 2018).

2.4.2 Weakness of the Model

There are few limitations when using these tests. Sample size may range from a few to several hundred. If data are discrete with at least five unique values you can assume that you have met the continuous variables assumptions. Restriction is that the data comes from a random sample of the population (Smyth, 2018).

2.5 Empirical Review

Eco (2010), conducted a study about solid waste management in Canada to help individuals build meaningful environmental careers, provide employers with resources to find and keep the best environmental practices and informs educators and governments of employment trends to ensure the ongoing

prosperity of this growing abolition of plastic bags. Experience from this finding has shown that waste management is a source of employment whereby a number of people can be employed. Moshi Municipality for example, has employed some cleaners whose responsibility is to make sure that the principles of the waste hierarchy which include waste minimization re-use and recycling is supported to reduce disposal at landfill.

The argument was developed that Municipalities should determine the suitable programs for their specific circumstances. The Integrated Waste Management Plan can evaluate and recommend the most appropriate systems for each municipality.

Table 2.1 Empirical Review Summaries

Authors	Years	Theme	Weakness	Relevance
Waqas et al.,	2016	Human activities fulfills the demands	Waste was not the major problem when the human population was low	Increasing of plastic bags was caused by human population and their demands
Taylor et al.,	2016	Plastic bags have negative impacts to the environment	He does not show alternative ways of solving problems of using plastic bags	Paper bags requires more energy to produce than plastics bags
Ellen Mac Arthus Foundation	2016	Improving waste management systems to handle bio based plastics	The growing interest in the plastics types of questions increasingly pertinent	Plastic bags should be abolished to reduce environmental pollution
Andrady	2015	Plastic bags	Plastic pollution	Plastic pollution

		protect food and help reduce food waste and insulate electrical cables for maximum efficiency	is now found in every corner of the world	is one of the greatest environmental challenges of our time
Hardesty	2017	Before instituting a ban on plastic bags, we must examine why a ban is necessary and the negative impacts they have on marine ecosystems	About 6-17million on tons of plastic enters the oceans every year	Species have been known to interact with these plastics, including plastic bags and have linked to having effects on vertebrates
Li et al.,	2017	Plastic bags have come to occupy in daily life. Although plastic bags were originally unpopular when they were introduced	There is agreement within the field that cultural norms present a major obstacle to banning plastic bags	The alternatives include paper and biodegradable bags, although negative environmental impacts are still associated with their usage
Moharan et al.,	2014	The largest proportion of plastic may be due to their cheap price, easy availability and	They pollutes the environment at large amount due to its cost	Plastic bags are mostly pollutes the environment

		light weight		
EPA	2017	Provide a guidebook on how to ban disposable plastic bags in universities	This article believe that plastic bags ban would be effective at school	Amount of plastic bags produces overall impact on the planet not only on school and universities
UNEP	2018	Support countries and cities in setting plastic reduction target, explores ways to change the design, production, consumption, and disposal of plastic bags	Absences of special rules and regulations on how to protects environment	Plastic bags should be abolished on our environment for sustainable development
Circular Plastic Alliance	2019	Gather stakeholder organizations along the plastics value chain to promote voluntary action on the circular economy	Plastic and micro plastic pollution and develop circular economy	Alternatives plastic bags has not sustained to the requirements of the people to fulfills their demands

2.7 Research Gap

From the two concepts, theoretical review and empirical review the literatures have not specifically shown how the governments play their role in ensuring effectiveness of solid waste management. It does not show clearly the solution applied to minimize the impacts of the challenges towards the effectiveness of solid waste management systems in many urban areas in African countries including Tanzania as well as steps taken for the law breakers and environmental litters. Now using Moshi Municipal Council as the case study, the researchers study is to assess the effectiveness of solid waste management systems in Local Government Authorities. However, with the roles of Local Government Authority at hand the researcher also got to know challenges which impact on the effectiveness of the solid waste management systems in the municipality and thus the researcher was in a good position to finish what other researchers failed to exhaust. Plastic bags are most part of solid wastes in our communities.

RESEARCH METHODOLOGY

3:1 Introduction

This chapter presents the methods and techniques used in this study. The chapter describes the research approach, research design, study area, strategy and inquiry limitation of the study sampling techniques, data collection techniques, data processing and analysis, presentation of the findings.

3:2 Research Design

It is an arrangement of the condition for the collection and analysis of data in manner that aim combine relevance to research conducted (Kothari, 2009). It consists of blue print of the collection of measurement and analysis of data. The research design of this study was descriptive designed because the research intends to describe by relating the abolition of plastic bags and evaluation with its impacts. In this design survey method was used because the participants answered questions administered through interviews or questionnaires. After participants answer the questions, researcher describes the response given in order to show the relation (Jackson, 2009).

3:3 Description of the Study Area

URT (2015), The study is conducted in Moshi Urban District which is found in Kilimanjaro region of Tanzania. The regional capital of Moshi was located in Moshi Urban District. The district was bordered to the north by the Moshi Rural District, to the east by the Mwanga District and to the south and west by the Manyara region.

3:3:1 Location of the Study Area

Moshi is a municipality and the capital of Kilimanjaro region in the north east Tanzania. Acts of 2017, the municipality had an estimated population of 201,150 and population density of 30,409 persons per kilometers (23square) and was the smallest municipality in Tanzania by area. The study was be conducted Moshi Municipality in two markets which are Mbuyuni and Memorio markets from Central Business District (URT, 2017).

Map of Moshi Rural District

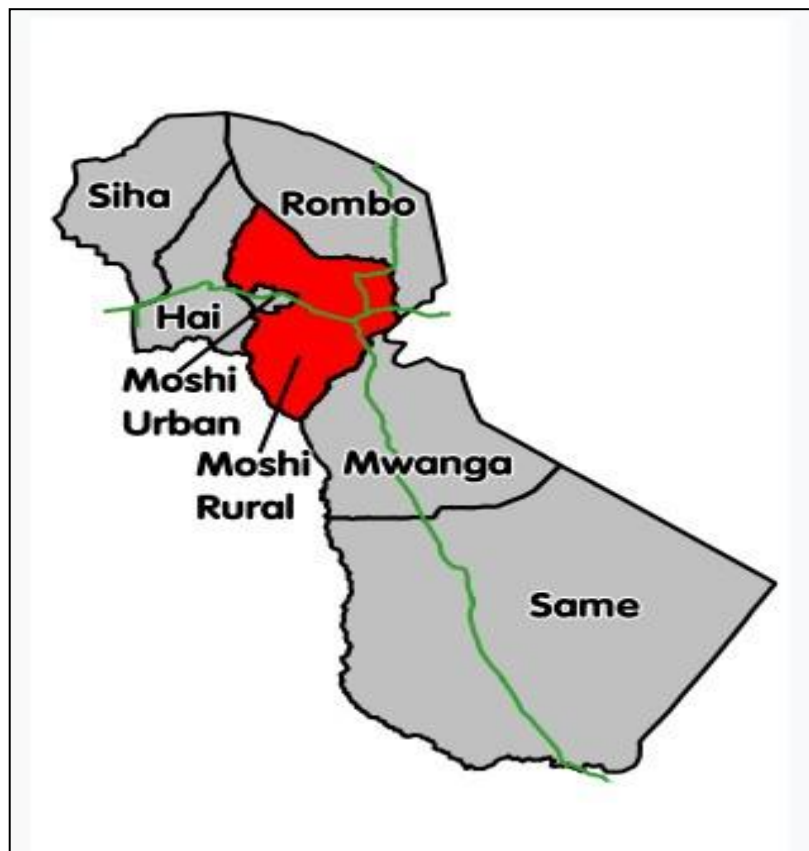


Fig 3:1 Map Showing Location of Studying Area

Source: Modified and Adapted (Ogulo, 2025)

3:3:2 Demographic Characteristic

According to 2012 census report, the district has got population of 184,292 people, of which 89,174 were Male and 95118 Female. The average household's size is 4.0 due to the census of 2012. It has population density of 30,409 people per square kilometer (URT, 2017).

3:3:3 Climate of Study Area

Anthony (2016), Moshi district has tropical climate. In winter, there was much less rainfall than in the summer. This location was classified by Koppen and Geiger. In Moshi average annual temperature was 23.4⁰C. About 856mm of precipitation fall annually. The driest month was August, with 14 mm of rainfall. Most precipitation falls in April, with an average of 282mm. The warmest month of the year was February with an average temperature of 25.5⁰C. In July the average temperature was 20.7⁰C. It was the lowest average temperature of the whole year.

3:4 Sample and Sample Size

Ariyaratne (2017), A sample is defined as a part of a statistical population whose properties are studied to gain information about the whole. When dealing with people, it can be defined as set of responding selected from a large population for the purpose of survey. The sampling frame of this study was considered of total number 184,292 households of the population census (2012).

3.4.1 Residents

Snow ball sampling technique was used to select 25 residents who were participated in the study. Residents were categorized according to their gender. Researcher randomly selected women and men for each market that makes total of 20 respondents including market officers from both markets.

3:4:1 Sample Size of the Selected Area

Moshi Urban District was administratively divided into 21 wards but the sample size researcher selected two markets from Bondeni ward which was represented the whole districts. Mbuyuni and Memorio were the sample size of the area .In these

markets the participants were 25 people from each market whose were responsible for responding to the questions on impacts of plastic bags including market officers (URT, 2015).

3:4:2 Sampling Procedures

In this 50 participants were involved to form the sample size from markets. The Markets Officers were selected purposively as they were the one responsible for evaluating the impacts of plastic bags issues in their areas. Other participants were selected purposively as they were snow ball random sampling was used to selected residents. This technique was used to avoid bias in obtaining participants and it was suitable for large numbers. It was used but it does not depend much upon the existence of detailed information about the universe for its effectiveness (Ariyaratne, 2017).

3.5 Description of Data Collection Instruments

Data collection instruments are instruments used in collecting, analyzing and interpreting data Researcher employed questionnaires and interview schedule to collect data from the field where by questionnaires were given to residents respondents including market officers.

3.5.1 Questionnaires for Residents

Ogula (2015), Questionnaire is the research instrument consisting of series of questions to be answered. These questioners consist of both open and closed ended questions, in close ended questions residents are supposed to provide short answers while in open ended questions residents were supposed to provide long answers regarding the questions. Questionnaires were used for answering which were the assessments on the trend of plastic bags over the past five years and factors affecting the community through uses of plastic bags in Moshi district.

3.5.3 Interview for Market Officer

This is research instrument in which conversation is held by two or more people. The interview was used to gather data from Market Officers so as to uncover information

which was not exposed by questionnaires methods, it sake the objectivity and clarification of responses from respondents. Conversation were developed by a researcher and provides in depth data keep respondents more than flexible through explaining on the measures used to conserves environment after abolition of plastic bags in Moshi district (Laughing, 2015).

3.6 Validity and Reliability of Instruments

3.6.1 Validity

Validity is the correctness of the finding. Researcher gave instruments to supervisor and two research experts at Mbuyuni and Memorio. The experts checked the relevance and adequacy of the tools in addressing research questions; also they checked the language error and other modifications for the research improvement before data collection.

3.6.2 Reliability

Reliability is the consistency of result collected by instruments. The reliability of research instruments were determined by using t-Test because the research to assessed the degree to which the data gathered are consistent from one group to another.

3.7 Description of Data Collection Procedure

The researcher asked permission letter from researcher coordinator indicating the purpose of the study. Then direct to the field area. The researcher distributed the questionnaires to be filled and then collected them after being filled. The same process were done to MOs, researcher used interview.

3.8 Description of Data Analysis Procedure

The data analysis procedures in this study take into account the research problem study objectives and data collection techniques to be used. The descriptive statistics such as table, frequency percentages and graphs were used to organize in a meaningful manner with what data obtained from the sample tell us about the target population.

3.9 Ethical Considerations in Research

Ethical considerations in research are critical ethics, norms and standards for conduct research that distinguish between right and wrong. In this study the researcher protected the rights of respondents in all stages of the research. The voluntary participation ensured by researcher, the respondents were informed about the purpose of the study. Researchers also maintain confidentiality and secret about information provided by the respondents.

DATA PRESENTATION, INTERPRETATION AND DISCUSSIONS

4.1 Introduction

The main objective on the field area was to collect the data based on the evaluation of the impacts of abolition of plastic bags in Moshi District. This chapter presents the finding obtained from the research area as well as the chapter consists of four parts, first shows the demographic characteristics of the respondents which include sex distribution, age distribution and marital status. The second part include the trend of plastic bags, the third part include the factors affecting the community through uses of plastic bags and the fourth part include measures used to conserves environment after abolition of plastic bags.

4.2 Demographic Information of Respondents

Demographic information sought in this study includes gender, age, and marital status, and occupation, names of markets and level of education of the respondents.

4.2.1 Gender

The study involves the relationship between males and female who were asked to give out information about their gender. All gender (male and female) were involved in order to get accuracy and reliable data from the respondents. The study involves the sample of 50 respondents and their responses are summarized in the table below.

Table 4.1 Gender of respondents in form of percentage

Gender	Frequency	%
Male	30	60
Female	20	40
Total	50	100

Source: Field Data (2026)

Findings in table 4.1 indicate that 60% (30) respondents who participated in giving information to the researcher were male and 40% (20) respondents who provided information regarding to this study were female. The finding reveals Hattori (2016) that the percentage of male respondents is larger than that of female respondents. This can be due to few number of females are engaged in markets activities.

4.2.2 Age of Respondents

The study involves the information of respondents with the different ages from younger up to elders for the purposes of getting data.

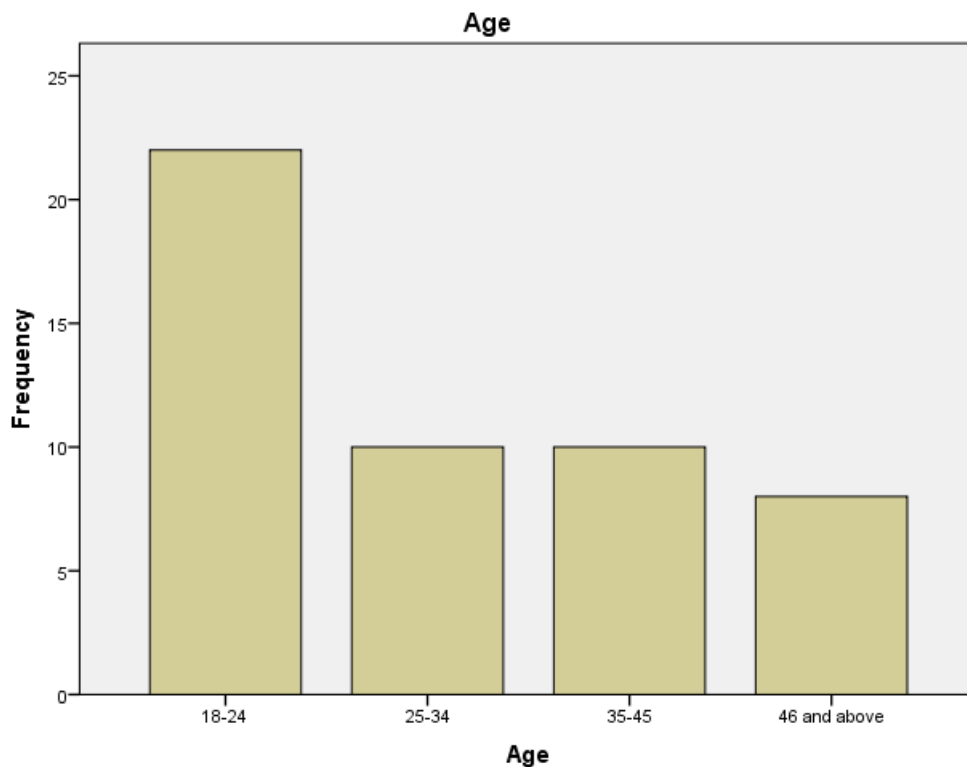


Fig.4.1. Frequency of Respondents against their Ages

Source: Field data (2026)

The ranges of ages among the respondents were between 18-24 years, 25-34 years 35-45 and 46 and above. Respondent were asked to give out information about their age and their responses are summarized in bar graph. According to the research conducted by Buddhika (2017) the findings reveal that the younger people from 18-24 years have engaged in market activities than other ages.

4.2.3 Marital Status of the Respondents

The study involved respondents with differences marital status. Respondent were asked to give out information about their marital status and their responses are summarized in the table

Table 4.3 Marital status of the Respondents

Marital	Frequency	Percentages
Single	28	56
Marriage	16	32
Widow	6	12
Total	50	100

Source: Field data (2026)

Findings in table 4.1.2 indicates that 56% (28) respondents who participated in giving information to the researcher were single, 32% (16) respondents who provided information regarding to this study were married, 12% (6) respondents who provided information regarding to this study were widow. According to research conducted by Ogula (2015) the finding reveals that the percentage of single respondents is larger than that of married and widow.

4.2.4 Occupation

The study involved respondents with differences occupation. Respondent were asked to give out information about their occupation and their responses are summarized in the table 4.1

Table 4.4 Occupation of Respondents

Occupation	Frequency	Percentage
Farmer	11	22
Pastoralist	9	18
Teachers	12	24
Others	18	36
Total	50	100

Source: Field data (2026)

Findings in table 4.1.3 indicates that 22% (11)respondents who participated in giving information to the researcher were farmers, 18% (9) respondents who provided information regarding to this study were pastoralist,24% (12) respondents who provided information regarding to this study were teachers, 36% (18) respondents who provided information regarding to this study were in other category. According to the research conducted by Geyer (2017) the finding reveals that the percentage of other categories respondents is larger than that of farmers, pastoralist and teacher.

4.2.5 Name of Market

The information was corrected from the respondents. Respondent were asked to give out information about the name of their working market as summarized in the table below and bar graph.

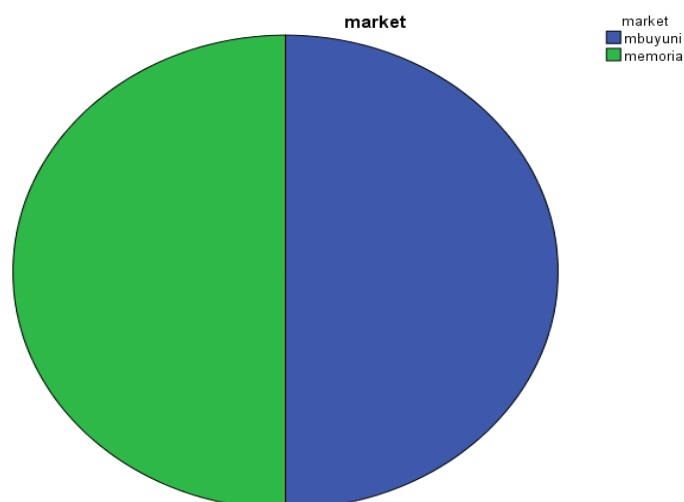


Fig 4.2 Market in form of Percentages

Source: Field data (2026)

Findings in table 4.1.3 indicates that 50% (25) respondents who participated in giving information to the researcher were from Mbuyuni market, while 50% (25) respondents who provided information regarding to this study were from Memorio market The finding reveals that the percentage of the respondents from both markets were the same.

4.2.6 Level of Education

The study involved respondents with differences educational levels. Respondent were asked to give out information about their educational level and their responses are summarized in the graph below

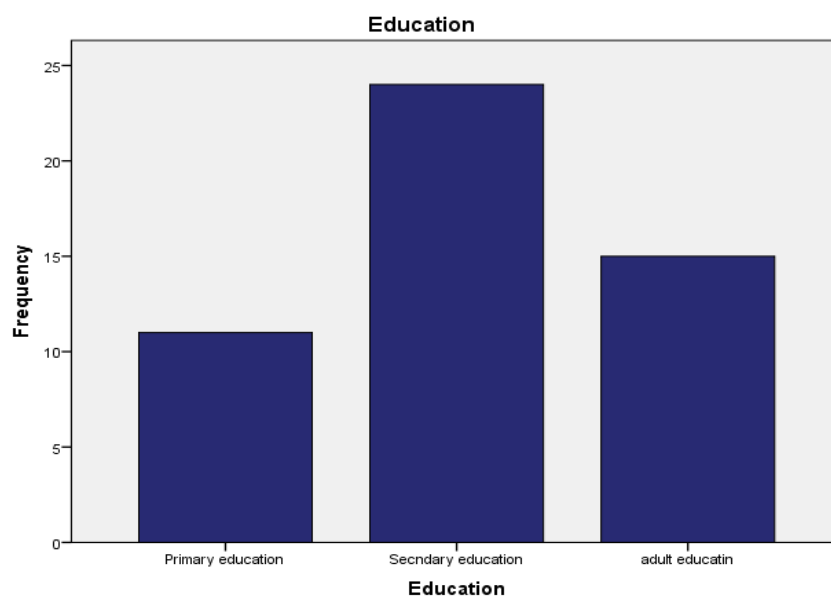


Figure 4.3 Frequencies of Respondents against their Education Level

Source: Field data (2026)

Findings in figure 4.4 indicates that 22% (11) respondents who participated in giving information to the researcher were from primary education, while 48% (24) respondents who provided information regarding to this study were from secondary education and 30% (15) respondents who provide. According to the research conducted by Garcia (2016) the findings revealed that most of respondents were educated with middle level of education.

Information regarding to this study were from adult education. The finding reveals that the percentages of the respondents from secondary were greater than primary and adult education.

4.3 Findings in Respect Research Questions

4.3.1 Trends of Plastic Bags over the Past Five Years in Moshi District

Table 4.7 Trends of Plastic Bags over the Past Five Years

ITEM	SA %	A %	N %	D %	SD %
Worldwide plastic bags are consumed every minutes with low cost	58	34	6	2	0
Plastic bags are cheap to produce but very expensive to clean from the environment	58	26	16	0	0
Future generations will suffer from the pollution caused by plastics bags ,without getting any benefit	52	32	10	6	0
Most of plastic bags are still end up in landfills or in the environment	44	38	10	4	4
Innovators are developing bio plastic bags which are made from plant crops instead of fossil fuels to creates environmentally friendly	46	36	14	2	2
Other innovators are searching for ways of recycling and introducing alternative plastic bags for future environment	48	38	6	6	2

Source: Field data (2026)

Key: A=Agree, SA=Strongly Agree, D=Disagree, SD=Strongly Disagree, N=neutral

Finding in table 4.7 Indicates that 92% of the participant agree that worldwide plastic bags are consumed every minutes with low cost while 2% of the participant disagree that worldwide plastic bags are consumed every minutes with low cost and 6% of the participant they are neutral either agree or disagree. Therefore 92%of the respondents they show extent to which plastic bags are consumed every minute with low cost worldwide.

Finding in the table indicate that 84% of the respondents agree that plastic bags are cheap to produce but very expensive to clean from the environment while 16% of the respondents they don't understand either plastic bags are cheap to produce but very expensive to clean from the environment or not and 0% show no response.

Also 84% respondents show that future generations will suffer from the pollution caused by plastics bags, without getting any benefits while 6% disagree with the statement and 10% respondents they are neutral.

Out of 50 respondents who were asked whether plastic bags are still end up in landfills or in the environment, 82% respondents agree that plastic bags are still end up in landfills or in the environment while 8% disagree that plastic bags are still end up in landfills or in the environment and 10% there are neutral either agree or disagree or not

In the findings 82% indicates that innovators are developing bio plastic bags which are made from plant crops instead of fossil fuels to creates environmentally friendly while 4% they disagree that innovators are developing bio plastic bags which are made from plant crops instead of fossil fuels to creates environmentally friendly and the remaining 14% they either agree or disagree

In the same findings 86% they agree that other innovators are searching for ways of recycling and introducing alternative plastic bags for future environment but only 8% respondents they disagree with asked question while 6% they are neutral with the statement. According to Moharan et al., (2014) the largest proportion of plastics may be due to the cheap price, easy availability and light weight. This means bags should be abolished to reduce environmental pollution.

4.3.2 The Factors Affecting the Community through Uses of Plastic Bags in Moshi District

Table 4.8 Factors Affecting the Community through Uses of Plastic Bags

ITEM	SA %	A %	N %	D %	SD %
Plastic bags are harmful to human health	62	30	6	2	0
They are made from non-renewable sources and on this account, highly contribute to climate change	28	52	16	4	0
They pollutes water and land(soil) as affect soil fertility	50	28	14	2	4
Plastic bags are poisons our food chain	30	36	30	0	4
Not easy to recycle	44	30	10	12	4
They are harmful to wild life and marine life	46	34	16	4	0

Source: Field data (2026)

Key: A=Agree, SA=Strongly Agree, D=Disagree, SD=Strongly Disagree, N=neutral

Results in table 4.8 about factors affecting the community through uses of plastic bags in Moshi district show that 92% of the respondents' shows that plastic bags are harmful to human health, in the same findings 2% show that plastic bags are not harmful to human health this means they disagree with the statement.

Also 80% shows plastic bags are made from non-renewable sources and on this account, highly contribute to climate change while 4% they oppose the statement and 16% are either agree or disagree, this means are neutral.

Also 78% of the respondents agree that plastic bags pollute water and land (soil) as affect soil fertility. And 6% they disagree that plastic bags do not pollutes water and land (soil) as affect soil fertility. While 14% of the respondent they are neutral

In the same study 66% agree that plastic bags poison our food chain, while 4% they oppose the statement where suggest that plastic bags are not poisons to our food chain, and 30% they either agree or disagree (neutral).

Also the study indicate 74% agree that plastic bags are not easy to recycle, while 16% of the participant they show that plastic bags are easy to be recycled, but in the same study 10% they are neutral.

Also 80% agree to the statement that plastic are harmful to wild life and marine life, but in the same field 4% respondent disagree and 16% they are neutral. According to the study conducted by UNEP (2018) the study show that plastic bags consume less energy and water in their production cycle and generate less sold waste than paper bags as difficult to cycle.

4.1.3 Measures Used to Conserves Environment after Abolition of Plastic Bags in Moshi District

Table 4.9 Measures Used to Conserves Environment after Abolition of Plastic Bags

ITEM	SA %	A %	N %	D %	SD %
Promoting environment friendly sustainable alternatives to plastic bags such as jutes, paper bags	50	44	6	0	0
Educating the people regarding harmful effects of plastic bags in its form is the best way to overcome	58	34	6	2	0

Introducing legislation requiring the food packaging industry to use bio degradable and compostable materials for packaging purposes	38	44	12	6	0
Policy implementation on abolition of plastic bags in the community	40	40	14	4	2
Government as well as non-government organizations should arranged conferences on medias to high light and seek solutions to the negative impacts of plastic bags	36	34	24	2	4
Recycling of solid wastes for the purposes of conserving environment from extreme plastic bags in the community	44	40	10	0	2

Source: Field data (2026)

Key: A=Agree, SA=Strongly Agree, D=Disagree, SD=Strongly Disagree, N=neutral

Table 4.9 indicate that 94% of the respondents agree that promoting environment friendly sustainable alternatives to plastic bags such as jutes, paper bags is the one way used to conserves environment after abolition of plastic bags in Moshi district while 6% are either agree or not.

Educating the people regarding harmful effects of plastic bags in its form is the best way to overcome the problem, in the finding 92% agree with the statement while 2% disagree and 4% they were seems to be neutral

Also 82% of the respondents agree that introducing legislation requiring the food packaging industry to use bio degradable and compostable materials for packaging purposes it is a solution while 6% disagree means they don't see if it is a way of conserving environment and 12% they either agree or disagree

On the policy implementation on abolition of plastic bags in the community 80% they agreed with the statement that it could help in conserving the environment, while 6% they don't suggest the method to be as the solution in conserving environment and the remaining 14% are neutral

Bases on the finding 70% of the respondents they agree that government as well as non-government organizations should arrange conferences on medias to high light and seek solutions to the negative impacts of plastic bags, and only 6% they didn't see if could important way of conserving environment, while 24 they were neutral with the statement.

Recycling of solid wastes for the purposes of conserving environment from extreme plastic bags in the community, only 84% they agreed to be one of the solution while 2% they disagreed that recycling of solid wastes for the purposes of conserving environment from extreme plastic bags in the community it is a way of conserving the environment and only 14% they were neutral.

Circular Plastic Alliance (2009) conducted a study and saw that to gather stakeholder organization along the plastics value chain to promote voluntary action on the circular economy.

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