



**Leadership Challenges in House Hold Solid Waste Management**

**Problems, In The Case of Selected Kebeles of Jimma Town**

*A Thesis Submitted to Jimma University, Business and Economics Collage,*

*in Partial Fulfillment of the Requirement for the Award of*

*Masters Degree in public management (MPM)*

**BY: ZAKIR A/DURA**

**UNDER GUIDANCE**

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**SEPTEMBER, 2018**

**JIMMA, ETHIOPIA**



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**Declaration**

I declare that the thesis entitled: “leadership Challenges in Managing house hold solid waste problems : In the case of some Selected Kebeles of Jimmaa Town Administration)” has been carried out by me under the guidance and supervision of Mokonnen Bogale(PhD) and Mr. Belay Chekol. The thesis is original and it has not been submitted for the award of degree of Masters at any university or institutions.

Researchers Name

Date

Signature

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## **Certificate**

*This is to certify that the thesis entitled: “leadership Challenges in Managing house hold solid waste problems : In the case of some Selected Kebeles of Jimma Town Administration)” submitted to Jimma University for the award of the Degree of Master of public management (MPM) and is a record of valuable research work carried out by Mr. Zakir A/Dura, under our guidance and supervision*

*Therefore, we hereby declare that no part of this thesis has been submitted to any other university or institutions for the award of any degree of Masters.*

*Name of Main Advisor*

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**Approval sheet of thesis**

As members of the Examining Board of the Final Open Defense, we certify that we have read and evaluated the thesis prepared by Zakir A/Dura, entitled “leadership Challenges in Managing house hold solid waste problems : In the case of some Selected Kebeles of Jimma Town Administration)” and recommend that it be accepted as fulfilling the thesis requirements for the award of the degree in Master of public management.

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## **Abstract**

*The aim of the study was to assess leadership challenges in managing household solid waste in selected Kebeles of Jimma town administration, to achieve this objective, descriptive survey design was used which were supplemented by both quantitative and qualitative data. The study was carried out in Jimma town Administration; Sampling Techniques of the study was non Probability and Probability (Sampling Specifically Simple Random Sampling). The method of data collection was through Survey Method and the tools are Questioners, Key Informant Interview, Focus Group Interview and Document Analysis. The data `obtained through questionnaire was analyzed quantitatively using descriptive statistical were used to analyze using SPSS, while data obtained through interview were analyzed qualitatively through narration. The major findings revealed that Jimma town administration community have poor level of knowledge ,negative attitude as well as poor practice of solid waste management, The chief leadership challenges in solid waste management's are lack of Motivating followers, Awareness Creation, Monitoring and Evaluation, Leading a team, Stakeholder Participation, Leader's skill and ability to provide direction about sustainable solid waste management and use waste as a resource, sharing a vision of solid waste management for the Residents. The role of leadership in solid waste management revealed that Low Leadership Commitment, weak mobilization of stakeholders, insufficient budget and resources, lack of sufficient skilled human resource, poor practice of solid waste management, attitudinal problem of the residents and the causes of poor solid waste disposal are attitude of households towards solid waste, lack sufficient money for the promotion of waste reduction, recycling and recovery programs. The Multi correlation analysis shows the relationship between financial, social, technical and institutional factors and effective solid waste management observed strong positive relationship and the results of regression analysis observed financial, social, technical and institutional factors have a significant positive effect on effective solid waste management. The overall recommendation of the study Jimma town administration should develop and design workshops and training on the way of effective solid waste management and the approach it shape or change the*

*Attitude of house hold on solid waste management, The Jimma town administration and private firms should ensure better waste management through waste reduction, reuse, and recycling of compost waste and government should support micro enterprise those collecting wastes through pilot projects, funding training, and technical assistance information exchange follow up support and monitoring.*

**Keyword:** *leadership, Solid Waste, waste management, role of leadership, causes of solid waste management*

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# **CHAPTER ONE**

## **INTRODUCTION**

### **1.1 Background of the Study**

Managing solid waste is one of the most difficult tasks; it has become a big challenge facing most countries of the world. It is a burning issue for both developed and developing countries. The problem is more severe in urban areas than rural ones because a high concentration of population in urban centers leads to a substantial amount of waste generated, This is especially significant for cities in the developing world, where population and economies are rapidly expanding while the infrastructure necessary to manage the ensuing problems is inadequate , Zerbock ( 2003).

This implies that urbanization and improving living standards in the cities has led to an increase in the quantity and complexity of generating waste UNDP (2004). Urban areas in different parts of the world are producing huge amounts of solid waste. According to UN Habitat (2012), the total amount of wastes produced by the cities of the world exceeded 720 billion tons. This large amount of solid waste generated has posed an imminent threat to the surrounding environment. Owing to social, technical, institutional and financial constraints to effectively manage the waste, the challenge is more serious in developing countries, like Africa (UNDP, 2004; as cited in Genet, 2016).

Solid waste management is becoming a big concern for cities administration task in developing countries. This is mainly due to the magnitude of rapid urbanization and increasing population growth; which in turn has greatly accelerated municipal solid waste generation rate in the urban environment (Hayal, 2014). According to World Bank (2012), every year developing nations spend nearly \$46 billion on managing their municipal solid waste. These investments could exceed \$150 billion per year by 2025. Solid waste management (SWM) in Africa is often weak due to lack of appropriate planning, inadequate governance, poor technology, weak enforcement of existing legislation and lack of economic incentives (UNEP, 2005). This impacts environment and public health.

The widespread dumping of wastes in unmarked sites together with poor waste management practices aggravate the problems of cities in the African countries UNESCO (2009). Most cities of Sub-Saharan Africa does not have an effective and efficient system for managing waste to which lack of effective leadership plays a significant adverse role UN-Habitat(2009). As a result, many households in Sub-Saharan Africa suffer from the prevalence of pathogens resulting from poor management of solid wastes. As one of the sub-Saharan African country, urban areas in Ethiopia have been also challenged by the rapid increase of solid waste Solomon (2006).

Ethiopia is facing rapid urbanization per annum, leading to overcrowding and the development of slums and informal settlements with poor waste management practices. Solid waste management is growing beyond the capacity of the municipal leaders. The serious deficiencies in solid waste management in most urban areas have been created dangerous health and environmental problems (Tewodros, 2011). Different approaches are used by countries to manage solid waste in order to prevent its impacts on the environment and health. Until recently, solid waste management (SWM) services in Ethiopia were mainly the responsibilities of municipalities, which results in inadequate service provision reflected by lack of proper collection, poor sanitary facilities, improper planning and co-ordination ( Tadesse, 2013).

Waste management is a current, complex subject. Almost all human activities create waste; especially since the Industrial revolution in the mid-18th century, the amount of waste created increased dramatically around the world. Not only has it increased in amount but also in type and toxicity. Waste management is an issue to most countries around the world. The waste management in a given country is directly related to the economic, social and political status of the country. The challenge of the management is tougher for middle and lower income countries. According to the World Bank (2016), Ethiopia is a low income Sub-Saharan country with \$550 GDP per capita with a population of 97.1 million.

The Ethiopian government has formulated a number of policies, strategies, and laws that are designed to support sustainable development. A proper solid waste management, the legal framework is also laid down to prevent adverse effects and enhance the benefits resulting from solid waste. However, the country's actual practice of solid waste management is generally poor until now (Joya,2007). Solid waste management's are also municipal problems because of overcrowded population and lack of awareness which given by the leaderships of different level and concerned body of jimma town and legal backgrounds of the government which make by the town councils.

There are a number of factors that responsible for the problems of poor performance, including financial, institutional and social constraints. Among these, lack of effective leadership is the one which is often neglected. Therefore, this thesis exerted much effort to study the role of leadership problem for the successful management of solid waste in Ethiopia, undertaking Jimma town as a case. It attempt to identify the major leadership challenges that hinder municipal leaders from playing their proper role and specify the strategies indispensable for sustainable solid waste management and make the town clear ,sustainable and proper living conditions for the residents .

## **1.2 Statement of the Problem**

One of the most daunting challenges of urban centers in developing countries like Ethiopia is proper waste management challenge (Nigatu, 2011).As like to the other towns of Ethiopia, solid waste management is also a big challenge facing Jimma town. Regardless of its age old urban history, the town's waste disposal practice is still inappropriate and inadequate and also local. There is no appropriate waste management system for the town at present. Waste is mostly dumped at environmentally sensitive locations like Road, Drainage and Resident area which posing environmental and become health impacts.

Similar to most towns in the country, settlement expansion and an increase in population are observed in the town. There has been a high population growth in Jimma. The population size of the town which was 120,960 in 2009 is estimated to be 192, 847 in 2017, showing an annual average growth rate of about 8

percent (CSA, 2016). Recognized to government policies, rural-urban migrations, and activities of NGOs and religious organizations, the city has also shown a rapid expansion and socioeconomic development. These two factors contributed a lot to the increasing volumes of solid waste in the town.

A studies that have been conducted on the municipal solid waste management in Jimma town shown that solid waste management is not carried out in a sufficient and proper manner. Provision of solid waste collection and disposal service by the municipal government is very poor and improper; an additional study by Tadesse (2004) revealed that the town is capable of collecting only 43% the waste generated in the town. The poor collection service together with the lack of put to one side spaces for waste disposal has encouraged dumping of waste in the Street, Waterway, Market and Resident area or any vacant lots. In some cases, a huge amount of solid waste is found to Blocking Roads and Drainages.

This absolutely has a hazardous effect on public health and the environment in addition to the air pollution, spoiling the beauty of the town. The environmental and sanitary conditions of the town are so poor that peoples are suffering from living in such conditions. The steady growth of solid waste has become a major challenge that the leaders of the Jimma town administration.

The function of public leadership in sustainable management of solid waste is of great significance. Effective leadership is indispensable to provide a strategic direction for sustainable management, alien the available resources towards realizing the vision and bring about commitment to effectively implement the vision. Although there have been studies conducted on the management of solid waste in the country, almost none has given attention to the role of leadership in strategically solving the problem. The challenges faced by municipal leaders and the strategies necessary to adopt have not been discussed adequately in the studies.

This study, therefore, sought to investigate the question why the leadership of the city fails to sustainably manage solid waste, and what are the strategies they have to develop and implement so as to solve the problem sustainably in an integrated manner. It tries to address the problem of solid waste management, focusing on leadership challenges and strategies.

### **1.3 Research Questions**

In order to meet the objectives, the following research questions were formulated:

- What are the Attitudes, Knowledge, Practice and Awareness of residents of the Jimma town towards solid waste management?
- What are the major challenges of leadership that hinder effective solid waste management in Jimma town administration?
- What are the existing roles of leadership in solid waste management?
- What are the major problems caused by poor waste collection and managements?

### **1.4 Objectives of the Study**

#### **1.4.1. General Objective**

The general objective of the study is to assess leadership challenges in managing household solid waste in selected Kebeles of Jimma town administration.

#### **1.4.2. Specific Objective**

- To identify the knowledge's, attitudes, and practice of households toward solid waste management.
- To identify leadership challenges in solid waste management in Jimma town administration.
- To explain the role of leadership in solid waste management in the study area.
- To examine the major problems causes for poor solid waste management in Jimma town administration.

#### **1.5. Significance of the Study**

The finding of the study was having both theoretical and practical implications for the future study on leadership challenges in managing house hold solid waste in the country. Theoretically, the study is expected to contribute for the improvement of knowledge about Leadership Challenges in managing house hold solid waste. Suggestion from the study will also show the way to policy makers' new

direction in formulation and implementation and other policies that might improve leadership challenges in managing house hold solid waste. The lessons may also have practical significance by provided that insights to policy makers concerned with leadership challenges in managing house hold solid waste.

In addition, the study benefits Jimma town leaders; it helps to understand leadership challenges in managing house hold solid waste by suggesting recommendations. It's also serving as stepping stone for the future researchers. Finally it is envisaged that the study will add new knowledge to the existing literature on leadership challenges in managing house hold solid waste. It was also expected to enable scholars and policy-makers to design more progressive leadership programmers and policies aimed at ensuring leadership challenges in managing house hold solid waste. The result of this study is expected to have contributes the efforts being made by the administration of Jimma town in overcoming leadership challenges of solid waste management. Thus, the study is expected to provide policy makers with some policy options for integrated urban solid waste management. Second, the study may also be helpful in conducting similar researches in other urban areas of the country.

#### **1.6, The scope of the study**

The research mainly concentrates on the leadership challenges in managing house hold solid waste in Jimma town administration. The research mainly concentrates on the discussion relating to challenges in managing solid waste in Jimma city administration. The study area is conduct at only in Jimma town administration. The study was based on a sample of 200 H.H. using descriptive and inferential survey. Methodologically the study used survey method and design of the research is descriptive method. The study area was ( 3) Three Kebeles conduct at only in Jimma town administration. The researcher was selected the study area for a number of reasons. First, Jimma town administration is a good representative for the study due to Jimma town is the largest city in south west region of Ethiopia. Second, the researcher is well aware of the problem in the town (lived and worked in the town in some organization of Jimma town administration); other reason is that the researcher understands the native language that helps to get pertinent information, additionally to save researcher money and time. Finally Jimma is easily accessible to the center of the country due to Jimma closely located to Addis Ababa.



## 1.7, Limitation of the Study

It is obvious that research work can't be totally free from limitation. It indeed has certain shortcomings. Due to time and budget constraints, the study is conducted to taking only three kebeles of Jimma town as cases. As a result, the conclusions drawn from this study may not be applicable to the town as a whole over all kebeles of the towns. It cannot also reflect the situations in other urban areas. Such problems as unwillingness of some respondents to give relevant information, lack of organized secondary data, and lack of adequate prior research on the specified issue may also undermine the quality of the research output. Hence this situation may cause delayed responses which can affect the research schedule. Scarcity of resources including time and budget will also affect the researcher in the attempt to collect the data necessary for the study. However, an attempt has been made to minimize the effects of the above mentioned problems and researchers has been solved the above mentioned problems so that they cannot have serious implications on the result of the study.

## 1.8 Definition of key terms

**Integrated Solid Waste Management:** is the process of solid waste management that incorporates all steps from generation through to disposal (UNDP 2009)

**Landfill:** A site where solid waste is disposed.

**Leader:** - is an individual who establishes direction for a working group.

**Leadership;** -is the process of making sense of what people doing together so that people will understand and be committed. (Drathandplus 1994)

**Solid waste management:** -is the systematic control of generation, collection, storage, transport, source separation, processing, treatment, recovery, and disposal of solid waste.

**Reduce** means reducing waste by not producing it. It is the design, manufacture and reuse of materials so as to minimize the quantity toxicity of waste produced.

**Reuse** means the use of a product more than once in its original form, for the same or a new purpose (Ibid).

**Recycle** is a process that involves collecting, reprocessing, and recovering certain waste materials (example glass, metal, plastic and paper) to make new products, which may or may not be similar to the original product (United State EPA, 2002).

**Composting is** the process of converting biodegradable organic waste into fertilizer. This method has a double advantage for safe disposal of solid waste and recovery of organic materials.

**Combustion:** Combustion is the controlled burning of waste in a designated facility to reduce its volume and, in some cases, to generate electricity

**Disposal Site:** According to united state EPA (2002) disposal site is a site used for the accumulation of waste with the purpose of disposing or treatment of such waste.

**Waste Prevention:** Waste prevention-often called source reduction-means reducing waste by not producing it. Examples of waste prevention would include purchasing durable, long-lasting goods and seeking products and packaging that are as free of toxic substances as possible.

### **1.9, Organization of the Study**

The paper is organized in five parts. Chapter one is about introduction of the study which contains background of the study, statement of the problem, objective of the study, significance of the study, scope and definition of key variables; chapter two is about review of related literature those are theoretically, empirically and conceptual frame work; chapter three is about research methodology of the study and chapter four was about data analysis and interpretation. Finally, Chapter five was dealt with summary, conclusion, recommendations, limitation of the study and further research.

## **CHAPTER TWO**

### **REVIEW OF RELATED LITERATURE**

#### **Introduction**

This chapter presents review of the related literatures that the study considered. The chapter is divided in to three. The first part presents the theoretical literatures that are related to management were be dealt and ,the second part of the study presents the empirical studies conducted in the area of solid waste management in the situation of different countries and the third one contextual frame work on factors affecting municipal leader ship challenge and problems of solid waste management.

#### **2.1 Theoretical review**

##### **2.1.1 Concept of Waste**

According to Pongrácz (2009), the definition of waste depends on the type or category of waste under consideration; some of the dominant types of waste include municipal household solid waste, hazardous waste and electronic waste. According to Macmillan English dictionary (2007) defines waste as ‘useless materials, substances or parts that are left after you use something’. Waste ‘degrades our climate, modifies our environment as well as create unsuitable situation’. Solid wastes are all those wastes that are useless, unwanted and cast off materials arising from production and consumption or from human and animal activities.

United States Environmental Protection Agency defines municipal solid waste (MSW) ‘as trash or garbage consists of everyday items we use and then throw away, such as product packaging, grass clippings, furniture, clothing, bottles, Tires ,food scraps, newspapers, appliances, paint, Plastic water bottles , plastic bags and batteries’. Many of these items come from homes, schools, hospitals, and businesses areas. Similarly, Cointreau (1982) defined municipal solid waste as ‘non-air and sewage emission created within and disposed of by a municipality (local government), including household garbage, commercial refuse, construction and demolition debris, dead animals and abandoned vehicles Taiwo, (2011).

Mainly it is composed of municipal solid waste (MSW), hazardous waste, plastic waste and E-waste. MSW also called as trash or garbage which is mainly composed of everyday items that are discarded by the public. Again MSW is of two types, biodegradable or recyclable and non biodegradable. The non biodegradable is more harmful in nature as it can't be degraded.

Generally speaking, waste generated from industrial sector ,commercial, domestic, institutional and municipal services are included in municipal solid waste, although the definitions of solid waste given by different authors and countries vary, (Agarwal et al.,2005; 73).

### **2.1.2 Theories of Waste Management**

Theory of Waste Management is a unified body of knowledge about waste and waste management, and it is founded on the expectation that waste management is to prevent waste to cause harm to human health and the environment. Waste management theories are to be constructed under the paradigm of industrial ecology, as industrial ecology is equally adaptable to incorporate waste minimization and/or resource use optimization goals and values (E.P.A, 1980). It is also based on the expectation that waste management is important in preventing the effects of waste to human being and environment at large.

### **2.1.3. Solid Waste Management**

Conventional solid waste management consisted of collection, followed by transportation, and disposal. However, this approach has not been able to cope with the challenges of rapid urbanization and waste evolution. Therefore, it is important to have other innovative technique. The innovative techniques should be able to regulate waste generation, recovering materials for recycling, producing energy as well as reducing hazardous effects for more safe and efficient disposal (Penjor, 2007). According to Anschutz (2001) noted that to properly manage the increasing waste, integrated system is a must. Integrated waste management system is a system which uses a range of inter-related collection and treatment options, at different habitat scales (be it household, neighborhood or city) which involves government and all as outlined in (World Bank, 1999).

Hierarchy of waste management is one of the most effective solid waste management approaches. It is also known as the 3Rs (Reduce, Reuse, and Recycle). It is ‘the order of priority of actions to be taken to reduce the amount of waste generated, and to improve overall waste management processes and programs’ (Conserve Energy Future, NA). In general, this concept suggests that there is a preferred order of waste management that should be followed us all. The aim of the waste hierarchy is to extract the maximum practical benefits from products and reduce the amount of waste that is disposed of (Zhu, 2008)

As Moeller (2005) explained, waste minimization is a process of reducing waste produce by individuals, communities and companies, which reduces the impact of chemical wastes on the environment to the greatest extent Household level of proper segregation of waste. The detail meaning of the 3R’s and other related concepts are given below:

**Reduce** means reducing waste by not producing it. It is the design, manufacture and reuse of materials so as to minimize the quantity toxicity of waste produced. Reduce the quantities of waste being generated, is important to bring waste growth rates under control (Conserve Energy Future, NA).

**Reuse** means the use of a product more than once in its original form, for the same or a new purpose (Ibid).

**Recycle** is a process that involves collecting, reprocessing, and recovering certain waste materials (example glass, metal, plastic and paper) to make new products, which may or may not be similar to the original product (United State EPA, 2002).Recycling conserves natural resources by reducing the need for new material and it helps to conserve energy, reduce pollution, conserve land, and to save money (Encarta Dictionary, 2009).

**Composting is** the process of converting biodegradable organic waste into fertilizer. This method has a double advantage for safe disposal of solid waste and recovery of organic materials. Organic materials often comprise a large portion of the solid waste stream (FDRE Health Extension).

**Combustion:** Combustion is the controlled burning of waste in a designated facility to reduce its volume and, in some cases, to generate electricity. Combustion is an ISWM option for wastes that cannot be recycled or composted, and is sometimes selected by communities where landfill space is limited. While the combustion process can generate toxic air emissions, these can be controlled by installing control equipment such as acid gas scrubbers and fabric filters in combustors. Combustion of solid waste can help reduce amount of waste going to landfills. It also can reduce reliance on coal, one of the fossil fuels that produce greenhouse gases when burned.

**Disposal Site:** According to united state EPA (2002) disposal site is a site used for the accumulation of waste with the purpose of disposing or treatment of such waste. Inappropriate disposal of solid waste can be manifested by contamination of surface and ground water through leach, soil contamination through direct waste contact, air pollution by burning of wastes.

**Land filling:** Properly designed, constructed, and managed landfills provide a safe alternative to uncontrolled dumping. For example, to protect groundwater from the liquid that collects in landfills (leachate), a properly designed landfill has an earthen or synthetic liner. Landfill operators can also recover this methane-thereby reducing emission-and generate electricity from the captured gas.

**Waste Prevention:** Waste prevention-often called source reduction-means reducing waste by not producing it. Examples of waste prevention would include purchasing durable, long-lasting goods and seeking products and packaging that are as free of toxic substances as possible. Because waste prevention actually avoids waste generation, it is the preferred waste management activity. Overall, waste prevention conserves resources, protects the environment, and prevents the formation of greenhouse gases.

#### **2.1.4. Environmental Social Justice Theory and Municipal Solid Waste Management**

According to Tilly (2004) pointed out that Solid waste management without taking into consideration the environment social justice will be resulted in injustice. According to Miller (1999) and Nancarrow (2001) people want to share collective benefits like natural resource,

and collective burden such as pollution but, practically most vulnerable groups of society receive fewer benefits and bear more burdens.

This is injustice; For Miller (1999) social injustice refers to the perceived unfairness or injustice by society in the distributions of benefits and burdens. This is what is exactly happening in the developing countries. A great portion of poor and vulnerable population does not have access to solid waste service (Zurbrugg, 2003).

#### **2.1.4.1. Environmental Social Justice Theory**

Environmental justice is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies (E.P.A, 1980). According to Hannigan (2008), environmental and social justice movement began in the United States in the 1980s. The growing frustration of the African-Americans in the US with the placement of toxic landfills and garbage incinerators in the neighborhoods or communities of minority population was the source of the environmental and social justice movement. America can dropped the Toxic and Nuclear residual from the country to the Somalia desert areas by earns of many Millions Dollars .Therefore, the concept of environmental equity was presented as a fight against environmental racism.

#### **2.1.5 Environmental Ethics Theory**

Environmental ethics refers to the moral relationship between human beings and nature (Landmark, 2003).The discourse of environmental ethics mainly focuses on two systems of belief, i.e. anthropocentrism and eco-centrism. The anthropocentrism belief considers human beings separately from the nature and more important and worth than the other organisms. In this belief nature is seen as resources which can be used for human purposes. Anthropocentrism considering much on how environment can help human being to meet his demand without considering the fact that human being should also consider environmental conservation.

But in contrast, an eco-centrism belief sees the environment consisting of complex system of ecological interdependence (*ibid*). In this belief each organism and environment are given intrinsic value, and that pollution and other forms of human interventions is considered to have multiple ecological effects.

Therefore, eco-centrism opposes the anthropocentrism belief which puts an absolute dividing line between nature and human beings (*ibid*).

## **2.1.6. Concept and Theories of Leadership**

### **2.1.6.1. Concept of Leadership**

Leadership studies are an emerging discipline which is still evolving (Daft, 2008). As a result, there is several definition of leadership. Few of these definitions are presented here. Leadership is defined as a form of influence and a type of interaction between an initiator and a follower (Nirenberg, 2002). It is an influence relationship among leaders and followers who intend real changes and outcomes that reflect their shared purposes. Scholars in the field of literature raised many issues regarding leadership and defined the term in varied ways. Jones, R. and George, M. (2006) for instance, defined leadership as a process by which an individual influences other people, and inspires, motivates and directs their activities so that to achieve group or organizational goals. According to Kotter leadership is the process of creating future vision, and aligning it with organizational mission, and inspires followers to achieve it.

### **2.1.6.2. Theories of Leadership**

Interest in studying leadership increased during the early twentieth century. Early leadership theories focused on what qualities distinguished between leaders and followers. On the other hand, subsequent theories looked at other variables such as situational factors and skill level. While many different leadership theories have emerged, most can be classified as bellow (Bolden 2003)

**Contingency Theories:** Contingency theories of leadership focus on particular variables related to the environment that might determine which particular style of leadership is best suited for the situation.



According to this theory, no leadership style is best in all situations. Success depends upon a number of variables, including the leadership style, qualities of the followers, and aspects of the situation.

**Behavioral Theories:** Behavioral theories of leadership are based upon the belief that great leaders are made, not born. Rooted in behaviorism, this leadership theory focuses on the actions of leaders, not on mental qualities or internal states. According to this theory, people can learn to become leaders through teaching and observation.

**Participative Theories:** Participative leadership theories suggest that the ideal leadership style is one that takes the input of others into account. These leaders encourage participation and contributions from group members and help group members feel more relevant and committed to the decision-making process. In participative theories, however, the leader retains the right to allow the input of others.

**Trait Theories:** Similar in some ways to “Great Man” theories, trait theory assumes that people inherit certain qualities and traits that make them better suited to leadership. Trait theories often identify particular personality or behavioral characteristics shared by leaders. But if particular traits are key features of leadership, how do we explain people who possess those qualities but are not leaders? This question is one of the difficulties in using trait theories to explain leadership.

**Relationship Theories:** It is also known as transformational theories. They focus on the connections formed between leaders and followers. In these theories, leaders motivate and inspire people by helping group members see the importance and higher good of the task. Transformational leaders are focused on the performance of group members, but also want each person to fulfill his or her potential. These leaders often have high ethical and moral standards.

### **2.1.6.3. Challenges of Leadership**

Leaders on the course of influencing others face different challenges. Different literatures present several leadership challenges. Of these challenges, few and those which have relevance for the studies are presented below (Gentry, et al., 2016):

**Developing Managerial Effectiveness;** The challenge of developing the relevant skills such as time management, prioritization, strategic thinking, decision-making, and getting up to speed with the job to be more effective at work.

**Inspiring Others;** The challenge of inspiring or motivating others to ensure that they are satisfied with their jobs; how to motivate a workforce to work smarter.

**Developing Employees;** The challenge of developing others, including topics around mentoring and coaching.

**Leading a Team;** The challenge of team-building, team development, and team management; how to instill pride in a team or support the team, how to lead a big team, and what to do when taking over a new team.

**Guiding Change;** The challenge of managing, mobilizing, understanding, and leading change. How to mitigate change consequences, overcome resistance to change, and deal with employees' reaction to change.

**Managing Internal Stakeholders and Politics;** The challenge of managing relationships, politics, and image. Gaining managerial support and managing up; getting buy-in from other departments, groups, or individuals.

## **2.2 The Role of Leadership**

Organizational objectives can be achieved through effective planning, implementation, monitoring and evaluation. For the effective practices of these activities, leadership role have a great impact (Eshetu, 1992). The other thing that a leader must understand to be a successful is motivation. Leaders should apply the principle of motivation to induce his followers to do the same. As Jackson et al. (2008) describes, a successful leader must be willing to assume responsibility for the mistakes of his followers. A leader must not shift a responsibility.

Important roles that leaders have to demonstrate and which are very often mentioned by many literatures are presented below.

**Competency:** Blaha and Rippe (2009) stated that there are different leadership competencies. These include delegation, coaching, planning, and visioning. Among the most important competencies, letting go (delegation) is the major one. Delegation skill needs identifying who will do what, how they will do it, how fast they will do it, and exact expectations.

**Visionary:** Charney (2008) stated that the success and failure of an organization depends on the ability to formulate a clear vision and working constantly to achieve. Therefore, Leaders must have a sense of the big picture, and the ability to communicate and mobilize people around a shared vision (Ryan, 2008). Vision and people are primary ingredients in leadership context (Hong Yu, 2006).

**Problem Solving Skills:** Leaders consult on the nature of an issue; seeking input from others to decision making which involves breaking down complex issues into an understandable and manageable element (Ryan, 2008). The type of problem you faced will determine how to resolve it. It is important to figure out what type of problem they face. Therefore, effective solid waste management needs the quality of applying the problem solving skill (Bailey, 2010).

### **2.3. Roles of Leadership in Solid Waste Management**

Kouzes (2003) describes leadership practices as behaviors that comprise most of the leaders' actions which are established through empirical research. These practices include modeling the way, inspiring the shared vision, challenging the process, enabling others to act and encouraging the heart. According to Wart (2008) this model is based on real practice collected from different leaders. He summarizes his idea as follows:

**Challenge the process:** Kouzes and Posner (2003) assert that successful leaders must "challenge the process," this type of leadership emphasizes quest and courage. In turn, the two supporting practices involve searching for opportunities and taking risks.

***Inspiring a shared vision:*** this practice is composed of the commitment to envision the future and to enlist others in a common vision by appealing to their values, interests, hopes, and dreams. The inclusion of others' idea enables others to act, which is a type of participative style.

***Encouraging the heart:*** this is a supportive style composed of recognizing contributions and celebrating accomplishments (Wart, 2008).

***Enabling others to act:*** this includes supporting and capacitating others to act with their own capacity.

The creation of awareness on the negative impact of solid wastes has great importance in motivating individuals to participate in waste management. In order to increase household participation in recycling waste, the message of recycling as an appropriate waste management technique needs to be adequately communicated to the public. This will enable residents to change their habits, and behavior towards recycling (Gogilo, 2014).

Appropriate practices in solid waste management necessitate clear delineation of jurisdiction and responsibility with all stakeholders participating in system design, and with those affected at every level. Government will generally have final jurisdiction and responsibility for overall policy and management of the municipal solid waste management system (UNEP, 2009).

Effective solid waste management depends upon the coordination among population, municipality, and private organization (Oromia Regional State Guide Line, 2007).

### **2.3. 1 Leadership Challenges in Solid Waste Management**

According to Kouzes and Posner (2007), leadership challenge is about the practices that leader use to transform values in to actions, visions into realities, obstacles in to innovations, isolations in to solidarity, and risks in to rewards. Leaders are models who are willing to go through the unknown and search for alternatives. Leaders actively involve others in all activities for better achievements of an institution.

Gogilo (2014) identified that leaders may face different challenges in solid waste management like limited resource, leadership capability, lack of proper disposal infrastructures, weak institutional capacity and weak coordination of stakeholder's, attitude of households' awareness and attitude towards waste management is another challenge that can affect the whole municipal solid waste management system. All steps in municipal solid waste management starting from household waste storage, waste segregation, recycling, and collection, willingness to pay for waste management services, and waste treatment selection and disposal facilities depend on public awareness and participation.

The solid waste management systems in developing countries has several challenges like low collection coverage, open dumping, burning without pollution control, operational inefficiencies of services, limited utilization of recycling activities, inadequate land fill sites, and inadequate management of hazardous waste are unsatisfactory from the environmental, economic and financial points of view. These challenges can be categorized into technical, Political, financial, institutional, and social constraints.

In Ethiopia, attitudinal problem of the households in solid waste management is a critical problem. Living with waste is not considered as bad practice and shame. The major attitudinal problem is giving the responsibility of solid waste management to the government. This attitudinal problem makes residents victim of different diseases caused by wastes. Residents of the town throwing their waste at night time from their house on sides of rivers, roads, drainage and any open space (FDRE, Ministry of Urban Development and Housing, 2015).

According to Oromia Regional State Environmental Protection Agency (2007), the main stakeholders of SWM are groups, individuals and organizations which are concerned with municipal solid waste management service users, service providers, intermediaries and regulators. These can include communities, informal sectors, private sector enterprises, urban administration and NGOs. Leaders should have to use these stakeholders capacity to contribute their own participation on solid waste disposal.

The Polluter Pays Principle is a principle where the polluting party pays for the damage done to the natural environment. With respect to waste management, this generally refers to the requirement for a generator to pay for appropriate disposal of the waste (Ibid). Progress has been made in waste management policies and strategies. The use of economic instruments and implementation of polluter pays principles in waste management has not yet matured in most African countries (UNESCO, 2009).

## **2.4. Solid Waste Management Practices of Some Countries**

### **2.4.1. Solid Waste Management in Developing Countries**

Zerbock (2003) stated that solid waste management in developing countries is becoming more and more complicated with changing economic and rapid urbanization trends. Solid waste is not only increasing in quantity but also changing in composition from less organic to more paper packing wastes, plastics, glasses, metal wastes, among other types, a fact leading to low collection rate. In addition the problem of municipal solid waste management in developing countries include mixing of waste, collection and storage of waste , transportation of waste, indiscriminate burning of waste and illegal disposal of waste.

Usually in low income community residents tend to gather and dump their garbage at the nearest vacant public space, near river or simply burn it in their surroundings. These uncollected wastes accumulated on the streets and blocked drains which will end up with flooding when it rains. (Medina, 2010)

### **2.4.2. Policies of Solid Waste Management in Ethiopia**

Ethiopia has several laws and regulation on clean environment and pollution control. Article 44 of FDRE constitution urges the right of every person to live in a clean and healthy environment. The 1997 environmental policy of Ethiopia also emphasizes solid waste management and the need for community participation. It also acknowledges the participation of lowest administrative levels or local governments and local communities during planning. FDRE solid waste management proclamation No.513/2007 is also formulated with objective to promote stakeholders participation in solid waste management, and to

prevent the adverse effect and to enhance economic and social benefits from solid waste as well as its management.

According to FDRE environmental pollution control (2002), all urban administrations shall ensure collection, transportation, recycling and safe disposal of municipal waste through the institution of an integrated municipal waste management system, monitor and evaluate the adequacy of municipal waste management systems and ensure the effectiveness of their implementation, monitor the situation with regard to the availability of waste disposal facilities and take the necessary measures to ensure that their availability is satisfactory.

The main environmental problems at the city level in Sub-Saharan Africa are related to various aspects of water, air and noise pollution (Lovelock, 2000). Although air pollution may be considered unimportant because of the low scale of industrialization in Sub-Saharan Africa, it is as serious as in developed countries in certain localized areas. These are the major centers, particularly capital and industrial cities like Johannesburg, Nairobi, Harare and Addis Ababa, where industries are concentrated (UN-Habitat, 2009).

#### **2.4.3. Solid Waste Management in Addis Ababa City**

According to UNDP (2004), solid waste management in Addis Ababa city was started some three decades back. The service was unsatisfactory and could not meet changing demands. Scenes of scattered waste are common in most parts of the city. Residents assume municipal solid waste collection service is not functioning properly. As a result, the willingness of the population to cooperate with waste collection operation and to pay for the service is low. Waste collection, disposal and organizational operation, structure and managements are poor.

Dump sites and trucks for solid waste disposal are insufficient. In densely populated Kebeles, the majority of people live 0.5 -1.00 km away from accessible roads where transfer containers are located, whereas the recommended distance is 150 m from the housing units (Zerayakob, 2002 as cited by Teshome).

Solid waste collected from hospitals, residential and business areas is dumped at the landfill sites on the outskirts of the city. It is common to find refuse pileup at road intersections or strewn in open spaces. With context to processing and recycling of social waste, little is done at all level of its management i.e. there is no source separation or sorting and this happens at disposal sites too. Most of the waste is administered by the government with no or little involvement of private sectors and tends to be costly and inefficient (ENDA, 2006).

In Addis Ababa, Ethiopia, solid waste is one of the major environmental issues facing the city administration. The sources of solid wastes include:76 % (Household), 18 % (Institutions, Commercial, factories, and hotels) and 6% (street sweepings) (Environment Protection Agency, 2003).

## **2.5, The Research Gap**

There are different researches in the world, including Ethiopia that shows mainly the general situations, concepts and definitions of solid waste management. Most of these studies examined issues regarding practices, challenges, opportunities, sustainability, ideas, public participation of solid waste management. Leadership challenges in managing household solid waste management were not adequately studied independently from other challenges in detail.

Moreover, there was no study related to leadership challenges in managing household solid waste in the town. Recognizing this research gap, the study aims at identifying leadership challenges in managing household solid waste management in Jimmaa town. Thus, the researcher motive to assess leadership challenges in managing household solid waste in the case of some selected kebeles in jimmaa town.

This researches can address and solve the Gaps of the leadership challenge and House Hold solid waste problems of Jimmaa Town which can be not attention by administration and the problems of House Hold attitude in terms of solid waste management's and the like which intended to come to attack the residents which are Environmental Sanitation ,water problem.



## 2.6. Conceptual Framework

Leadership plays important role in solid waste management. Solid waste management is a complex task that needs proper collection, transportation and disposal. The size and type of waste to be managed can be made the task more complex. It cannot be carried out by government or community alone. Effective solid waste management needs coordination of all stakeholders such as residents, municipal administration, and the private sector. These actors should work hand in hand in order to properly manage solid waste. In addition, there should be wants to be strong plan. Leadership Creativity and innovation is also crucial.

Coordinating all stakeholders is the main role of leadership. Leader should be able to formulate strong vision and inspire followers by his/her vision to effectively lead solid waste management. According to Perrin (2012), middle level and higher level leaders play important role in solving the problems of municipal solid waste management by integrating different activities and coordinating all stakeholders.

Solid waste management is a complex task that involves several challenges. Leadership in this area faces different challenges. Deficiency in human and institutional capacity, lack of resource, adverse attitude of residents towards solid waste management, lack of coordination among stakeholders are some of major challenges in solid waste management.

To design best strategies and overcome the challenges, the role of leadership is significantly important. It is the role of the leader to create a shared vision, engaging and involving all stakeholders, motivating followers, exerting extra commitment as well as efforts and achieving result through strong team work. The conceptual framework diagram shown below consists of independent and dependent variables that

have negative or positive relations in managing solid waste. The interconnection of the variables indicated in the diagram may have a positive impact on leadership and solid waste management if the appropriate role of leadership is applied to convert different leadership challenges in solid waste management in to opportunities of self learning.

Here, the conceptual framework indicates the flow of independent and dependent variables of the study entitled with leadership challenges in managing household solid waste management. Hence, leadership challenges are the independent variable, and its related factors such as availability of resource, leadership capacity, and institutional capacity, attitude of house hold and participation of stake holders, where as effective solid west management are recognized as dependent variables of study.

Figure 2.1. Conceptual Framework: leadership challenges & strategies in managing HHS SWM.



Source: *Researcher Construction from Reviewed Literature (2017)*

## CHAPTER THREE

### RESEARCH DESIGN AND METHODOLOGY

#### 3.1. Introduction

This section describes how the study was conducted in order to achieve the desired objectives. It includes research design, study area, target population, sample size, sample techniques, source of data, method of data collection, validity and reliability of the instruments and method of data analysis. It also contains lastly ethical issues that have been considered in the study.

#### 3.2 Study Area

The study was conducted in Jimma town administration, Oromia region, south west Ethiopia. Geographically, Jimma town is located at south western part of Ethiopia. It is 345 km away from the capital city, Addis Ababa, on Addis-Mettu-Gambella and Addis – Mizan Tepy highway. The town was founded in 1830 E.C. Since its foundation, Jimma has served political, cultural and economic center for the southwestern part of the country. The location of Jimma town is [7.40<sup>0</sup> N latitude and 3.65<sup>0E</sup> longitude](#), its altitude is 1,760 meters above sea level. According to the recent master plan, the total area of the town is 50.52 square kilometers. Based on the 2007 Census conducted by the Central Statistics Agency of Ethiopia (CSA), Jimma city has a total of 120,960 population, of whom 60,824 are men while 60,136 women. A total of 32,191 households were also counted in the town, during the same period.

Topographically, Jimma is divided into escarpment and alluvial plains, elevation within the town boundary range from the lowest 1,760 meters above sea level at kitto Air port to the highest pick at Jiren with 2,010 meters above sea level. The mean annual rain fall in the town and its surrounding is 1,450-1,800 mm. And the daily average temperature of the town is 19.5<sup>o</sup>the information on zoning of the town indicate that 25.7% of the total area of the town is covered by residential buildings, 2.65(3.95) % of commercial area, 10.6% of social and public services, and 2.6% by administrative zone. 15.4% of the land is reserved for constructions of roads and the remaining 39.1% of the land is left for other infrastructures (Jimma town industry and urban development office). Jimma town is the seat of Jimma zone administrations and its zonal sector offices. It is also a place where Jimma University, Jimma

international airport, international coffee market and Jimma Research Center and now Industry Parks are located and prepaid for new works and for unemployment's opportunity. The town has 14 urban and 3 rural kebeles. River Aweetuu crosses at the center of the town. Jimma town has more than 27,000 legally registered houses. The total length of its road infrastructure reaches about 379 km, out of which 29 km is Asphalt, 56 km gravel and the remaining 294 km dry weather roads.

Jimma, like many other towns in the country, has many sanitary problems of which the bigger one is solid waste. It is very common to see piles of waste on and around streets, river banks, individual houses, available open areas and market places. The poor housing condition of the town is characterized by lack of toilet, kitchen and proper sanitation. Besides, above 70% of the existing houses are owned by the government where regular maintenance and renovation is almost impossible. These make solid waste management one of the most important problems of Jimma town (Lem, 2006)

### **3.3 Research Design**

The study used Descriptive and Explanatory research design by combining both quantitative and qualitative research approaches to analyze data and obtain adequate information about realities of the study. A Mixed Methods Approach is one in which the researcher tends to base knowledge claims on pragmatic grounds. It employs strategies of inquiry that involve collecting data either simultaneously or sequentially to best understand research problem. Additionally it helps the researcher for triangulation purpose. Descriptive method is adopted because it helps to explain phenomena in terms of the conditions or relationships that exist; opinions that are held by respondents and experts; processes that are going on; effects that are evident; or trends that are developing (Koul, 2005). Descriptive research design deals on describing the characteristics of a particular individual, or of a group, in the case of this study the researcher selected to describe the leadership challenges in managing household solid waste in Jimma town administration. In adding together, it is due to the researcher's intension is to describe the existing phenomenon's.

According to Kothari (2004) the emphasis of explanatory research is on studying a situation or a problem in order to explain the relationships between variables. In this case the researcher used to

examine the relationship between social, financial, technical and institutional factors and effective solid waste management, in addition to see their cause and effect relationship on each other.

### **3.4. Research Approach**

The approaches of the research is both quantitative and qualitative method, to be more valuable the mixed approach for triangulation purpose and to tangible, touch and more accurate the finding of the study through data from different sources were essentially use. The study used the mixed research approach helps validate that the findings of the study through triangulation of data from different sources. Both qualitative and quantitative approaches were used to manage the possible inherit weakness in a simple and make findings more reliable moreover, the approach gives a chance to have a wide understand about the challenges in depth and breadth. This is because of the fact that combining both approaches enables to understand the complex nature of solid waste management. As Creswell, (2007) described, mixing methodologies provides researchers with several important opportunities.

### **3.5 Source of data**

The main source of data for the research was both from primary and secondary sources. The primary source of data were raw data gathered from Households through interview, questionnaire, survey and focus group discussion while the secondary source of data was published and unpublished materials, internet, Personal Diary, books, journals, articles, and report papers. The secondary source data of the study is from different relevant documents sources were assessing in conducting this study. The main documents used for this study as secondary data source include reports, proclamations, directives, guidelines, different official records, books, internets, previously conducted researches and publications of government offices.

### **3.6. Target population**

Kothari (2004) uses the term “target population” to refer to the intended population covered by a study in a specific geographical area such as country, region and town in terms of age group and gender. The target population of the research was 3 kebeles households those are Bacho Booree 5,924,

Hermatamerkato 1,894 and Awetu Mander 1,134 with 8,952 total households, (Jimma Town Health office Reports, 2017).

### 3.7 Sampling Techniques

To select sample respondents from total study population, both probability and non probability sampling methods was used. The probability sampling method was selected because it avoids biasness and helps to generalize data gained from sample respondents avoiding an error which could arise from sampling. Therefore, in case this simple random sampling (specifically lottery method) technique was used because it ensures that each number of the target population to have an equal and independent chance of being included in the sample and systematic sampling method has been used. Moreover, Purposive Sampling was also been used, it was decided to use this method in order to include those Management Bodies and Gain relevant data concerning all available data about the study.

### 3.8 Sample Size

According to Kothari (2004) sample size should be optimum in which it fulfills the requirement of Efficiency, Representativeness, Reliability and Flexibility. The number depends on the accuracy needed, the population size, population heterogeneity and resources available. So, the sample size should be determined by using statistical formula. Of course, different authors use different formulas to determine the sample size of the study. For the purpose of this study, the formula set by Yaman's formula was used to determine the sample size, which is reliable when the population size is known.

The samples were taken from the total number of households in the 3 kebeles those are 8,952 . By using (Yaman's formula) that is:

n

N=population

n=sample size

e= level of precision

$\sigma^2$ = variance of attributes in the population

The conventional confidence level of 93% was used to ensure a more accurate result. Margin of error is 7% (0.07) the sample size for random sampling technique to draw samples from the population of household in three some selected Kebeles.

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

By using this formula, the total 8952 is a list that consists of all the categories of sampling population of three kebeles 8952, and then the researcher decides it. That is sample size representative was take from selected three Kebeles residents. Therefore, 200 Household respondents were selected as a representative of the total population was 8,952.

### **3.9 Method of Data Collection**

The method of data collection used to this study was survey method, and the data collection tool that was used to gather data from sample respondents was questionnaire, focus group discussion, key informants interview. The questionnaire has contained both closed and open ended formats. The questionnaire was selected because; it helps to gather data with minimum cost faster than any other tool. In addition to this, interview because this helps to get some facts related to the issue. Depending on the types of data, there are different methods were used to collect the relevant data necessary for the study at proper ways.

#### **3.9.1 Questionnaire**

Questionnaire is an instrument by which information is obtained from respondents in written form. Questionnaires were prepared in English and translated to Afaan Oromo in order to be easily understood for the respondents. The questionnaire prepared has two parts; the first part was designed to collect information about the background like sex, age, academic qualification, and income of the respondent. The second part is major leadership challenges in house hold solid waste management indicated on five point Likert scale ranging from strongly disagree (1) to strongly agree (5).

#### **3.9.2, Interview**

In addition to the questionnaires the researcher has prepared interview questions. The interview guide contained semi-structured questions focusing on leadership challenges in household solid waste



Management. Interview was selected because it helps to get some facts related to the issue under the

Study from top official of the town administration those implement the government policy and it also help for triangulation. The interview is use based on the assumption that the participants' perspectives Are meaningful, and they have the knowledge in the area, and able to make precise points and their perspective affect the success of the research.

### **3.9.3 Document analysis**

The study used different written data those collected from various sources. Both qualitative and quantitative data were gathered in the form of secondary data. Secondary data gathered for the purposes of this study includes organization policy or procedure related to house hold solid waste management. In addition to the secondary data source, tertiary sources such as books, review articles, published reports, and web site and analysis essays were used for the study. Reviews of various publications were also conducted to find the facts.

### **3.10, Procedure of data collection**

The primary step in the data collection process was to get motivation of the subjects to fill the questionnaire by self introducing. Once the subjects were willing to fill the questionnaire and able to return the papers within a short range of time to voluntarily collect the papers collaborating with leaders from each Kebeles. Finally, questionnaires were distributed to each respondent and exception of few respondents those doesn't respond all most all of them were correctly filled and returned.

#### **3.10. 1, Pilot testing**

A pilot test is a beginning study conducted before the final study begins to ensure that the research instruments are working properly. pilot testing was conducted within a period of one week. The researcher involved 10 household from Kito-furdisa and Ginjo Guduru Kebeles. Those respondents were not part of selected sample respondent of study but have the same characteristics. The pilot testing adopted the procedures and sampling techniques outlined in the main study. Problems such as vague questions and unclear instructions that may be noticed in the research instruments during the pilot testing enabled the researcher to adjust or redesign the questions in a manner that made the instruments

to be clear and free from vagueness. The corrected instruments were then retested to ensure that they were now working properly before proceeding to the main study. This improved the efficiency of the tools and maximizes the response of respondents because respondents became able to answer the questions without difficulties.

### 3.11 Validity and reliability of research instruments

According to Kothari (2004), validity is a measurement characteristic that describes the ability of a research instrument or tool to measure what it was intended to measure. In this study, validity of instruments is ensuring by using simple language when constructing instruments for respondents to understand easily. During the data collection process, all the interview schedules and questionnaires

forms were verified by the researcher to check whether all the questions are properly answered to completion. Questionnaires were pre-tested by potential expert. It was examined and checked by adviser and other experts who have knowledge about the study issue. This exercise ensured further validity of collected data.

The reliability of the instrument was measured by using Cronbach's alpha test. A reliability test is performed to check the consistency and accuracy of the measurement scales. According to William's (1986) he suggested that the reliability coefficients of the Cronbach's alpha result  $>0.9$  excellent,  $>0.8$  good,  $>0.7$  acceptable,  $< 0.6$  questionable, and  $< 0.5$  poor. The internal consistency reliability results the study was 0.90 that is classified under excellent categories.

The table 3.1: below indicates the computed internal reliability coefficients.

No	Detail description on the title of the questions	No of items	Cronbach's alpha
1.	leadership challenge in solid waste management	6	0.778
2.	leadership role in solid waste management	5	0.845
3.	solid waste management strategy	5	0.982
4.	knowledge's, attitudes, and practices of households	5	0.866
5.	causes for poor solid waste management	5	0.952
	Overall average	<b><u>26</u></b>	<b><u>0.909</u></b>

Source own survey, 2018

### **3.12 Method of Data Analysis**

The way of the researcher analyze the data, for understanding and successful accomplishment of the study, data collect from different primary and secondary sources were record, edited, organized, analyzed, interpreted and presented in relation to research questions. Data collected using the above mentioned instruments were analyzed using both qualitative and quantitative. Quantitative data were interpreted through questionnaire survey and presented in graphs and tables with frequency distributions, standard deviation and means. The qualitative data those are interview were interpreted through narration.

#### **3.12.1 Descriptive Statistics**

Both primary and secondary sources of data were analyzed using both qualitative and quantitative methods. The collected data was quantified and edited thoroughly. Later the data was coded and computed. The competed data had been tabled to the requirements. The influence of the variables designed for each factor has been quantified with Likert scale ranging from 1 to 5. Statistical tools such as mean, standard deviations, percentage, and frequency of occurrence were used to reach the objectives meaningfully and analyze and interpret the data. The researcher used descriptive statistics like mean; standard deviation, frequency, and percentage were used to describe demographic data.

#### **3.12.2 Inferential Statistics**

Inferential statistics is used to identify the degree of correlation between the variables using Pearson's Correlation. Further regression analysis is done to determine the degree of relationship between social, financial, technical and institutional factors and effective solid waste management.

#### **3.12.3 Model specification**

In this study multiple linear regression model were used to achieve research objectives. The basic objective of using multiple linear regression analysis in this study was to make the research more effective in analyzing impacts of social, financial, technical and institutional factors on effective solid waste management. According to Gujarati (1995) defines a regression function as follows:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_n X_n + u_i$$

Where Y is the dependent variable (effective solid waste management)

$\beta_n$  is the coefficient of independent variables

$X_n$  is independent variables (social, financial, technical and institutional factors)

$U_i$  is error term.  $U_i$  can be described as;

$$U_i = Y - \beta_0 - \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_n X_n$$

$\beta_1$  is the intercept term- it gives the mean or average effect on  $Y$  of all the variables excluded from the equation, although its mechanical interpretation is the average value of  $Y$  when the stated independent variables are set equal to zero. Multiple linear regression model assumptions were conducted based on a Gujarati (1995). Checking goodness-of-fit carry significant benefits for the research; because once the model is fitted, it is effective in describing the outcome of variables. Let summarize each assumptions one by one;

**1. Multi co linearity:** it meant the existence of a perfect or exact, linear relationship among some or all explanatory variables of a regression model. If there is perfect colinearity among the independent variables, their regression coefficients are indeterminate and their standard errors are not defined. Therefore, independence of independent variables was tested by Variance inflation factor (VIF) and tolerance.

$$\text{Tolerance } 1 - R^2$$

Where;  $X_j$  = the  $j^{\text{th}}$  explanatory variables regressed on the other independent variables.

$R_j^2$  = the coefficient of determination when the variable  $X_j$  regressed on the remaining explanatory variable.

**2. Normality:** The distribution of residuals should be normal at each value of the dependent variable is one of multiple linear regression assumption. This means that errors are normally distributed, and that a plot of the values of the residuals was approximated a normal curve (Keith, 2006). According to Gujarati (1995)  $u_i$  are independently and normally distributed with mean zero and a common variance  $\alpha^2$  was given as;  $u_i \sim \text{IN}(0, \alpha^2)$

**3. Homo scedasticity:** The variance of the residuals for every set of values for the independent variable is equal and violation is called Hetero scedasticity. This means that researcher assume that errors are spread out consistently between the variables. Symbolically described as follow;

$$\alpha^2$$

For all  $i$   $U_i$  is disturbance term or error term  $X_k$  is explanatory variable  $\alpha^2$  is the constant or **homo scedastic** variance of  $u_i$

### **3.13 Ethical Issue Considerations**

These are principles or standards that protect the rights of participants in a research study. These considerations are therefore usually made to ensure that research involving human or living thing subjects is carried out in accordance with high ethical standards. In this study ,participants were voluntarily allow to participate and prospective research participants were fully inform on procedures, benefits and risks involved in the research after which they were voluntarily ask to fill informed consent forms to participate .They were guaranteed of confidentiality of the information and to ensure this was achieved participants were not asked to give their names or indicate anything on the research instruments that could be used to identify or link them to the study reports. In addition to this the acknowledgement which used in to the study in the form of literatures, journals and other information's should not be forgotten. The necessary approval and permission letter written and obtained from the Jimmaa University College of Business and Economics Department of managements are submitted to the study area. Through the whole process of questionnaire distribution time, all samples of target population were treated in an ethical manner with mutual understanding of each other.

## CHAPTER- FOUR

### RESULTS AND DISCUSSIONS

#### 4.1 Introduction

This chapter is concerned with the final findings of the study by analyzing, interpreting and presenting gathered data on the challenges and practices of leadership in special focus of solid waste management in the case of Jimmaa city administration of three kebeles. In this chapter the data collected by quantitative and Qualitative methods was analyzed according to the objectives of the research, problem statements and research questions as mentioned in the research methodology all data that generated from the respondents of Jimma town were analyzed by using simple descriptive statistics such as percentages, mean and frequency inferential statics and multiple linear regressions. The data presentation, analysis, detailed interpretation of the data was made based on the data obtained from questionnaires, interviews and focus group discussions.

#### 4.1 Response rate of respondents

Based on sample size 200 questionnaires were prepared and distributed to the participants and from these 3 respondents from Jimma town Bacho Boore Kebele , 2 from Jimma town Hermata Markato Kebele and 2 from Jimma town Awetu mendera did not return back the questionnaire. Due to this reason, 96.5% of the distributed questioners are collected, almost all respondent express their view properly and few open ended questions are left blank without giving their reply. The participants of an interviewee and focus group clearly share their idea and the practical knowledge.

Table 4.1: Response rate

No	Data collection tools	No. of respondents	No. of answered	No. of Un answered	Respondents rate%
1.	Questionnaires	200	193	7	96.5
2.	Interviews	2	2	-	100
3.	Focus group discussion	15	15	-	100

Source own survey, 2018

#### 4.2. Background of respondents

This section describes the demographic and socio-economic background of the respondents. These include sex, age, educational qualifications, marital status, family sizes, monthly income and occupation of the head of the household. Understanding the demographic and socio-economic background of respondents help to relate such information with other variables, the summarization of information of the sample respondents is presented under this.

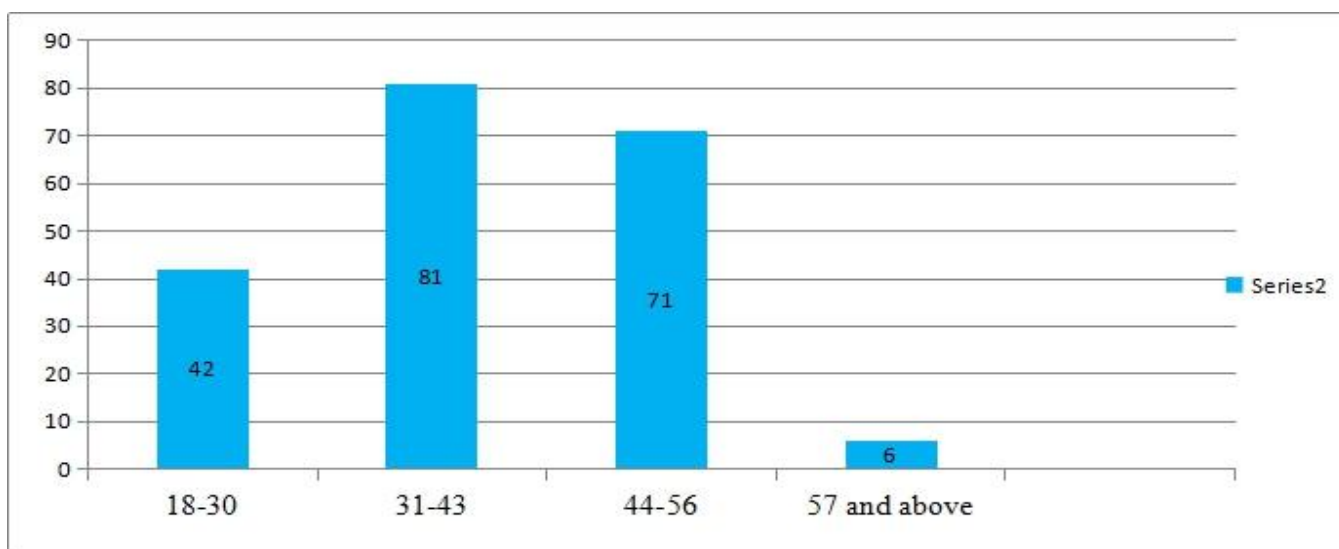
**Table 4.2: Sex of the respondents**

No		Frequency	Valid Percent	Cumulative Percent
1	Male	115	60	60
2	Female	78	40	40
3	Total	193	100.0	100.0

Source: (Data obtained from respondents through questionnaire, 2018)

In terms of sex statistics that only 40% of the respondents were females while the male respondents were 60%. This is an indication that we have more male participating in the study since the researcher distributed questionnaires randomly without dividing any quota by gender.

#### 4.2.1 Age of Respondents

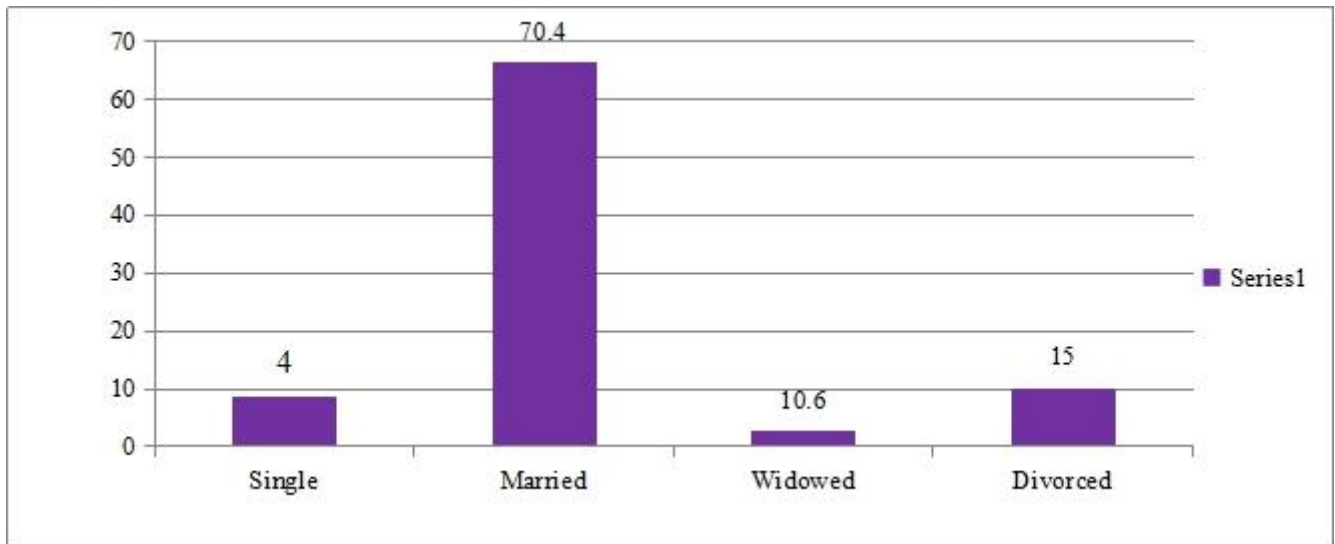


**Figure 4.1 shows age of the respondents**

Source: Data obtained from respondents through questionnaire (2018)

The category is started from 18 years old. Regarding age among the respondents (42) 21 percent were at the age category 18-30 years, (81) 41.5 percent age category 31-43, 71(36.5 percent) of them at the category of 44-56, (6) 3 percent of them at the category of 57- and above. The data indicates that most of the respondents were young house hold, its opportunity for the county development and for sustainable solid waste management.

#### 4.2.2 Marital status of the respondents

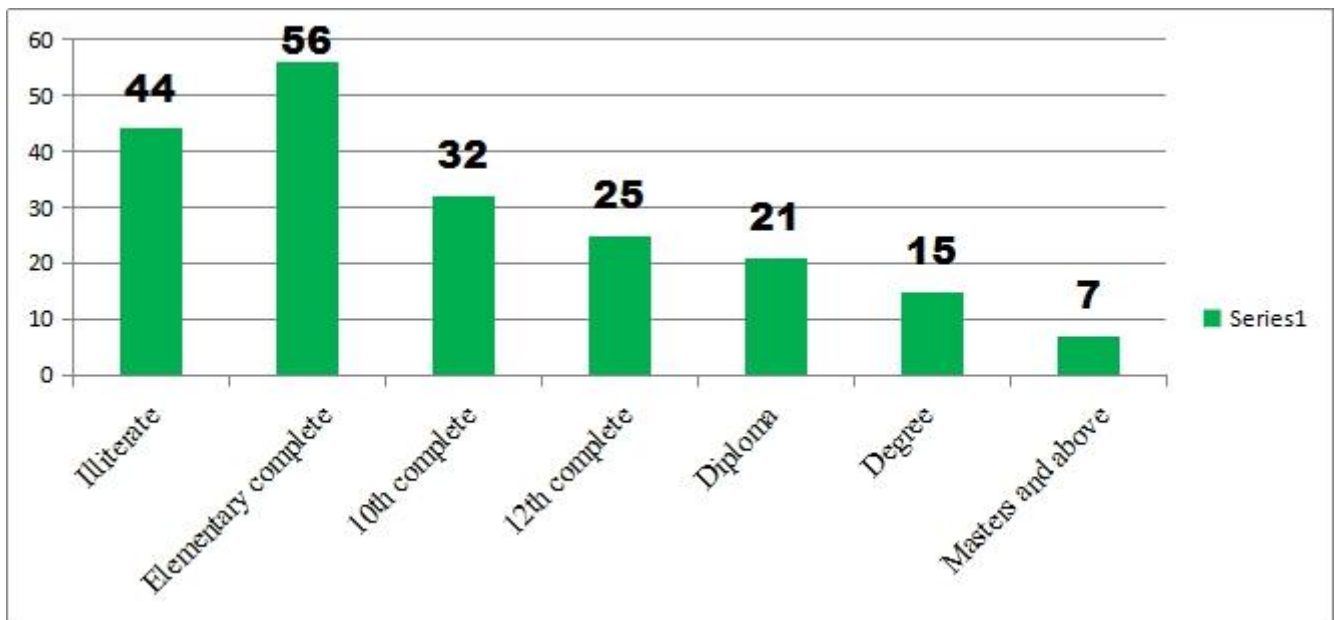


**Figure 4.2 Marital status of the respondents**

Source: Data obtained from respondents through questionnaire, 2018

Figure 4.2 presents the marital status of respondents. It shows that 4 percent were not married while 70.4 percent were married, 10.6 percent were widowed and the remaining 15 percent are divorced.

#### 4.2.3. Education status of the respondent



**Figure 4.3 Education levels of the respondents**

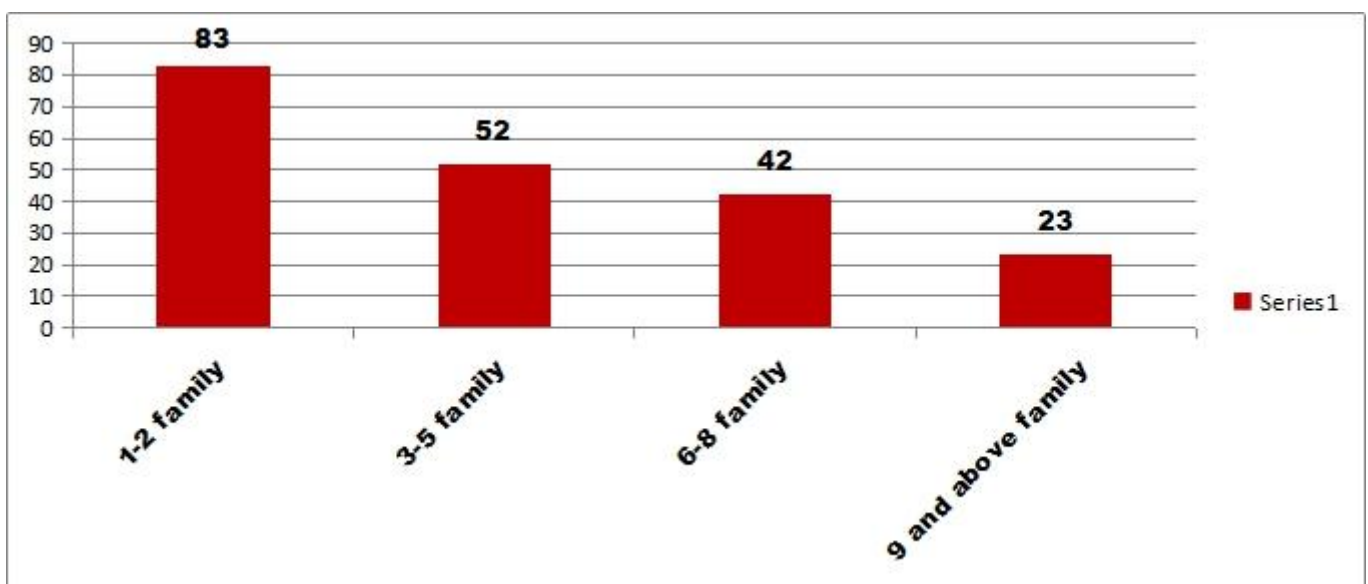
Source: Data obtained from respondents through questionnaire, 2018



The other influentially relevant demographic characteristics is education, because a level of education tends to influence the performance of house hold in all fields, and could much significantly influence the performance of Solid Waste Management sector in the research area. Statistics from own survey shows the distribution of respondents by their level of education. It shows that majority (50%) of the respondents had completed secondary education; while 18.5% had primary education; the other 11.1% of the respondents had diploma; 7.4 % of the employees had BA degree education and 0.9% of the respondent had Masters Education. On the other hand 6.5% of the respondents were illiterates. This shows that most of the respondents have secondary education background.

As can be seen in the figure 4.3, the qualification of respondents were found to be 7(3.5 percent) second degree holders, 15(7.5 percent) first degree, 21(10.5 percent) diploma, 25(12.5)12<sup>th</sup> school complete, 32 (16 percent) 10<sup>th</sup> school complete and 56(28 percent) elementary complete. It implies that respondent's qualification is good they can answer the question and know challenges and practices of leadership in special focus of solid waste management.

#### 4.2.4. Family Back Ground of the Respondents

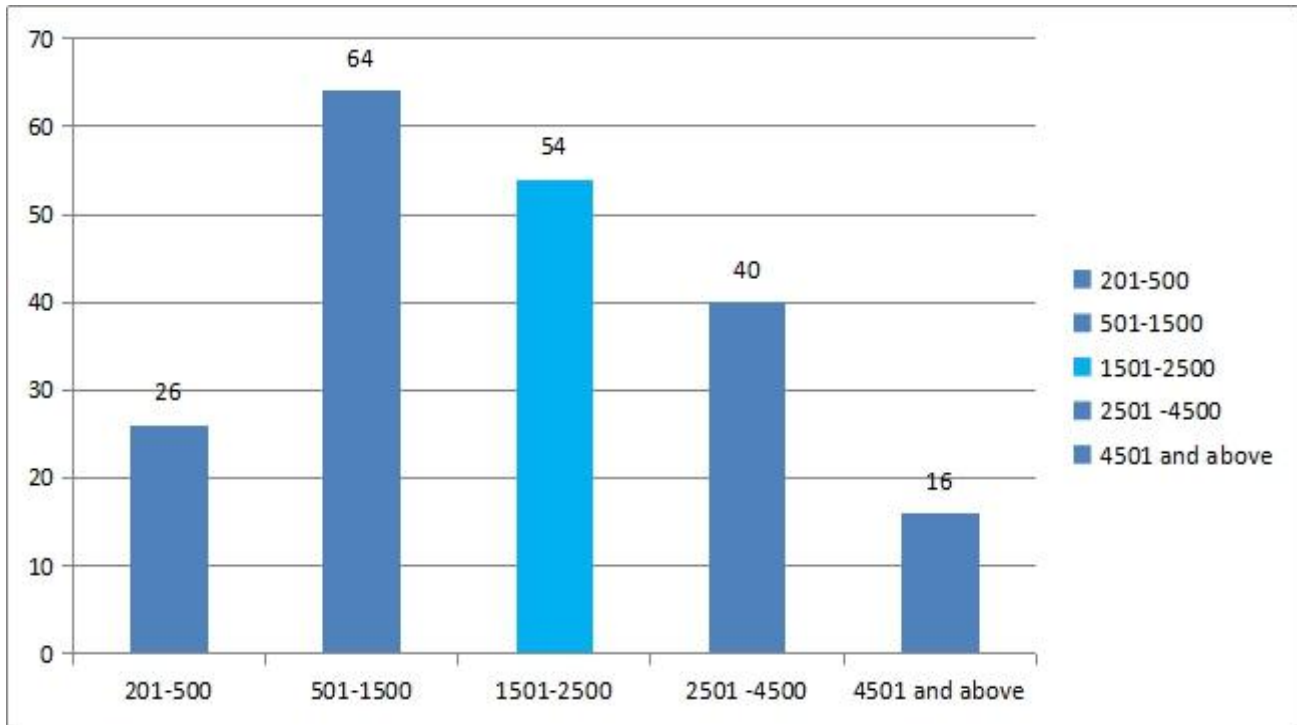


**Figure 4.4 family back ground of the respondents**

Source: Data obtained from respondents through questionnaire, 2018

It shows that 83(43%) respondents were have 1-2 family, 52(26.9%), were have 3-5, 42(21.7%) were 6-8 family and 23(12%) percent have 9 and above family.

#### 4.2.5. Income Level of Respondents



**Figure 4.5 Income Levels of Respondents**

Source: Data obtained from respondents through questionnaire, 2018

13.7% ranging from 201 to 500 birr which is a low-level income, about 33.1% of the households have a monthly income ranging from 501 to 1500 birr whereas about 28% of the households have a monthly income ranging from 1501 to 2500 birr whereas about 20.7% of the households have a monthly income ranging from 2501 to 4500 birr whereas about 8.2% of the households have a monthly income ranging 4501 and above birr. The higher income leads peoples to more participation domestic solid waste management. Because, the higher income earner groups have a power to use the service of micro enterprise of waste collectors at any cost than the lower income group.

#### 4.3 Leadership Challenges in Managing House Hold Solid Waste Problems

The analysis is based on the assumption Zaidatol (2009) comparison bases of mean score for five point Likert scale instruments is used to compare the mean value.

Table: 4.3 Mean score measurement

No	Mean Score	Description
1	< 3.39	Low
2	3.40 - 3.79	Moderate
3	> 3.80	High

Source: Zaidation (2009)

According to Zaidation (2009), the mean score below 3.39 is considered as low; the mean score from 3.40 up to 3.79 is considered as moderate and mean score above 3.8 is considered as high.

### 4.3.1 Leadership Challenge

This part focuses on respondent’s opinions related to leadership challenges on effective solid waste management. Based on the responses of respondents the descriptive analysis was performed to compare using mean and standard deviation.

Leadership situation can be evaluated using the indicators of existing relationship between local and central governments (the effective degree of decentralization), the form and adequacy of law and policy making and priorities given about environment by politicians and administration all affect the character of management, governance and the type of solid waste management system which is possible and appropriate (Schubeler, 1996)

Table 4.3.1 Mean Scores Measurements of leadership challenge

No	leadership challenge in solid waste management	No	Mean	Std. Deviation
1.	There is a problem of integrated solid waste management practice between leaders and community	193	3.87	1.127
2.	There is no proper institutional set-up for solid waste management service	193	3.82	1.158
3.	There is no adequate revenue generation, for provision of effective solid waste management in the town administration	193	3.9	1.015
4.	The existence of inadequate internal roads (alternative roads) has created challenges on solid waste transportation.	193	3.92	1.01
5.	Lubricant trap, kitchen waste, is not collected by authorized staff in strong, leak proof containers that are clearly labeled.	193	3.72	1.21
6.	Leaders does not regularly monitor kebele waste management and disposal activities	193	3.81	1.23
7.	Overall average	<b>193</b>	<b>3.84</b>	<b>1.125</b>

Source own survey, 2018

Regarding item 1 in table 4.3.1 as reflected on the table it had the 3<sup>rd</sup> highest the mean scores 3.87. The respondent replied there is a problem of integrated solid waste management practice between leaders and community in the Jimma town administration. As the majority of the respondent confirms that there is a problem of integrated solid waste management practice between leaders and community, this finding is supported by Getinet (2013) the integration between leaders and community is critical to achieve effective solid waste management.

Concerning item 2 in table 4.3.1. as reflected on the table it had the 4<sup>th</sup> highest the mean scores at 3.82. Respondents rated regarding to there is no proper institutional set-up for solid waste management service in the town. Institutional condition was conceptualized as proper organizational set up for responsibility, integrated Participation between government and community, sufficient and consistent contract between the service provider, beneficiaries and the authority and waste managing companies that are responsible for service reliability. As the superior part of the respondent reply there is a problem of institutional set up to effectively achieve the problem of house hold solid waste management in the town that have direct influence of solid waste management

As it is indicated in table 4.3.1. item 3, there is no adequate revenue generation, for provision of effective solid waste management in the town administration were rated as a 'major cause' with a weighted mean score of 3.9. As the majority of the respondent confirms that the town administration lacks financial resource to plan for the promotion of waste reduction, recycling and recovery programs.

In line with this the result of interview conducted shows financial condition as well indicates poor condition. Particularly interviewees' claimed; the existing payment as unfair. They furthermore added their complaint on the waste management office. According to the interviewees', the office has changed the existing measurement from meter cube to kilogram and it introduced the far sanitary site without clearly communicating the surrounding community. As a result of this change their income has decreased dramatically and a significant number of companies cut their employees and many of them have stopped their job. The combined statistical evidence and interview about the condition of financial indicators from the surveyed firms indicated that financial resource is the main constraint on the waste service delivery practice in the research area. Hence, financial constraint is one of the major factors negatively influencing the effectiveness of solid waste management practice. This finding is also in line with the literature (Shubeler, 1996; Coffey and Coad, 2012)

As presented on table 4.3.1 item 4, respondents were asked to rate the existence of inadequate internal roads (alternative roads) has created challenges on solid waste transportation. This issue was ranked 1<sup>st</sup> with a grand mean of 3.92, thus, the rated issue as a ‘major cause’ for effective solid waste management in the town. Based on the findings it is safe to conclude that leaders are facing challenges on solid waste management due to problem of adequate internal road to transport solid in to the disposal area. This finding is in line with the theory of (Schubeler, 1996), which states the lack of adequate internal road and vehicles were the hindering factors to transport solid waste. Hence, current solid waste transportation is less effective.

In relation to item 5, on table 4.3.1, Lubricant trap, kitchen waste, is not collected by authorized staff in strong, leak proof containers that are clearly labeled had a grand mean score of 3.72, The respondents rating the item as a ‘moderate cause’ for effective solid waste management in the study area. As the majority of the respondent confirms that Lubricant trap, kitchen waste, is not collected by authorized staff in strong, leak proof containers that have direct effect on SWM practice in the town.

Regarding item 6 in table 4.3.1. As reflected on the table it had the 5<sup>th</sup> highest the mean scores 3.81. The respondent replied leaders do not regularly monitor your kebele waste management and disposal activities. Majority of the respondent replied that leaders do not frequently keep an eye on kebele waste management and disposal activities.

#### **4.3.2. Leadership role in solid waste management**

Leadership practices as behaviors that comprise most of the leaders’ actions which are established through empirical research. These practices include modeling the way, inspiring the shared vision, challenging the process, enabling others to act and encouraging the heart (Kouzes, 2003). Based on the responses of respondents the descriptive analysis was performed to compare using mean and standard deviation.

Table 4.4 Mean Scores Measurements Leadership Role

No	leadership role in solid waste management	No	Mean	Std. Deviation
1.	There are no any leadership support to micro and small scale enterprise collecting solid waste in kebele	193	3.82	1.127
2.	The existing practice of leadership role in managing solid waste management is low	193	3.81	1.158
3.	Local administrators does not have important role in the implementation of solid waste management in the study area.	193	3.78	1.255
4.	Leaders are not properly, leading human resource in solid waste management	193	3.83	1.095
5.	Jimma town administrators do not have sufficient manpower and vehicle to transport solid waste.	193	3.86	1.002
	<b>Overall average</b>	<b>193</b>	<b>3.82</b>	<b>1.1274</b>

Source own survey, 2018

Regarding item 1 in table 4.4 as reflected on the table it had the 3<sup>rd</sup> highest the mean scores 3.82. Respondents rated regarding to there are no any leadership support to micro and small scale enterprise collecting solid waste in their kebele thus, the rated issue as a ‘major cause ‘for a problem of effective solid waste management in the town.

As the majority of the respondent confirms that there are no any leadership provision to micro and small scale enterprise collecting solid waste in the study area. The contribution of the leaders in handling solid waste management have lion share in effective solid waste management. Based on the findings it is safe to conclude that contribution of leaders in supporting the micro and small scale enterprise are insignificant that may causes for in effective solid waste management in the town.

In relation to item 2, on table 4.4 the existing practice of leadership role in managing solid waste management is low had a grand mean score of 3.81, the respondents rating the item as a ‘major cause ‘for the problem of house hold solid waste management in the study area. Based on the findings it is safe to conclude that the role of leadership which is critical in the effective solid waste management but the real current existing status of leader’s contribution is insignificant which directly influence the activity of the house hold solid waste management. In line with this the result of focus group interview shows that in our kebele, the contribution of leaders in handling the problem of house hold solid waste management was near to the ground due to leaders does not gave the attention of leaders.

As presented on table 4.4 , item 3, respondents were asked to rate local administrators does not have important role in the implementation of solid waste management had a grand mean score of 3.78, the respondents rating the item as a ‘major cause ‘for the problem of house hold solid waste management in the study area. Majority of the respondent replied that a local superintendent does not have significant part in the operation of solid waste management, while the minority of the respondents responded that local managers have chief part in the carrying out of rock-hard waste administration. the researcher conclude that in the implementation of solid waste the contribution of the lower administrators is near to the ground which affect the effective solid waste management in the Jimma town administration.

Regarding item 4 in table 4.4 as revealed on the bench it had the 2<sup>nd</sup> highest the mean marks 3.83. Respondents appraised concerning leaders are not properly, leading human resource in solid waste management in the study area, the respondents rating the item as a ‘main reason ‘for the badly-behaved of house hold solid waste management. As majority of the respondent replied that frontrunners are not appropriately, leading human resource in solid waste management, while minority of the respondents responded that leaders are properly, leading human resource in solid waste management in the study area, This finding is in line with the theory of according to Schubeler (1996), which states the lack of skilled and adequate manpower and vehicles were the hindering factors to conveyance solid waste. Hence, current solid waste transference is less effective.

As it is indicated in table 4.4 Item as reflected on the item 5 it had the 1<sup>st</sup> highest the mean scores of 3.86. The respondent answered Jimma town administrators does not have sufficient manpower and vehicle to transport solid waste. Majority of the respondents revealed that in Jimma town administrators does not have sufficient manpower and vehicle to transport solid waste.

This finding is supported with the finding of the Hufane(2015) effective solid waste management, safe and reliable transportation was considered as one of the key measurement for effective SWM Subsequently, effective solid transportation can be achieved by companies with sufficient manpower and modern vehicle, nature of available roads, traffic condition and traveling Schedule.

### 4.3.3. Solid waste management strategy

Table 4.5 Mean Scores Measurements of solid waste strategy

No	solid waste management strategy	No	Mean	Std. Deviation
1	Clear policy and strategy that achieving effective solid waste management	193	3.8	1.127
2	policy and strategy does not have problem on attain effective solid waste management	193	3.78	1.158
3	Implementers does not have knowledge of policies and strategy that achieving effective solid waste management	193	3.49	1.03
4	Policy and strategy of the town administration is not effectively implemented in related to solid waste management.	193	4.12	0.85
5	Lack of careful monitoring and evaluation of the policy implementation that enhance effective solid waste management	193	4.00	0.95
	<b>Overall average</b>	<b>193</b>	<b>3.838</b>	<b>1.023</b>

Source own survey, 2018

Regarding item 1, on table 4.5, respondents were asked to rate Clear policy and strategy that achieving effective solid waste management at a mean of 3.8, In respect to this, majority of the respondent decided that their clear policy and strategy that achieving operational solid waste management. In line with this the data obtained from interview also supports the above idea; they said that there are policies which address house hold solid waste management. This finding is supported by the finding of Hana (2016) Ethiopian policy environment on waste management have a sufficient scope to the needs, concerns and safety of the environment for the county citizens.

Regarding item 2, on table 4.5, respondents were asked to policy and strategy does not have problem on attain effective solid waste management at a mean of 3.78, In respect to this, majority of the respondent agreed that policy and strategy does not have problem. From this finding the researcher concluded that there is no a problem of policy and strategy in attain effective solid waste management. The finding is supported with Genet (2014) policy and strategy of the Ethiopia government does not hinder attain effective solid waste management rather it gives them priority.

Concerning item 3, on table 4.5 respondents were asked to rate Implementers does not have knowledge of policies and strategy that achieving effective solid waste management at a mean of 3.49, the



respondents rating the item as a 'moderate cause' for in effective solid waste management. In respect to this, huge amount of the respondent agreed that Implementers does not have knowledge of policies and strategy that achieving effective solid waste management. From this finding the researcher concluded that in Jimma town administration the implementer does not have awareness and knowledge of policy and strategy. Their lack of awareness was cause for in effective solid waste management.

Concerning item 4, on table 4.5, respondents were asked to rate Policy and strategy of the town administration is not effectively implemented in related to solid waste management at a mean of 4.12, the respondents rating the item as a 'major cause' for the for in effective solid waste management. In respect to this, majority of the respondent approved that policy and strategy is not effectively implemented, this indicate that Jimma town administration does not effectively implement policy and strategy which have contribution for the in operational solid waste management.

Regarding item 5, on table 4.5, respondents were asked to rate lack of careful monitoring and evaluation of the policy implementation that enhance effective solid waste management at a mean of 4.00, the respondents rating the item as a 'major cause' for the in operational solid waste management. In respect to this, large part of the respondent confirmed that there is problem of careful monitoring and evaluation of the policy. From this finding it's safe to conclude that there is problem of monitoring and evaluation of the policy and strategy that improve house solid waste management.

#### **4.3.4. Knowledge's, attitudes, and practices of households in solid waste management**

A critical component in any waste management program is public awareness and participation in addition to appropriate legislation, strong technical support and adequate funding. According to Hasan (2004) has explained that waste is the result of human activities and everyone needs to have a proper understanding of waste management issues without which the success of even the best conceived waste management plan becomes questionable. A person who has poor awareness about the impacts of wastes is of opinion that living with the wastes, nothing will happen if they continue likewise and this constrains the proper management efforts.

Table 4.6 Mean Scores Measurements knowledge's, attitudes, and practices

No	knowledge's, attitudes, and practices of households	No	Mean	Std. Deviation
1	Community does not attend any awareness programmed conducted by local authority/non government organization regarding house hold waste management.	193	4.25	.978
2	Beneficiaries have not good attitude for waste collecting workers.	193	3.8	1.215
3	Completely you throw your solid waste outside your room or household.	193	4.03	.984
4	There is no continuous training and capacity building on solid waste collection for the households.	193	3.91	1.04
5	Every community does not have the responsibility for the proper collection and disposal of solid waste.	193	3.84	1.03
	<b>Overall average</b>	<b>193</b>	<b>3.966</b>	<b>1.0494</b>

**Source own survey, 2018**

While indicated in table 4.6, item 1 respondents were invited to rate community does not attend any awareness programmed conducted by local authority/non government organization regarding house hold waste management mean of 4.25, In respect to this, majority of the respondent decided community does not attend any awareness programmed conducted by local authority and non-government organization regarding house hold waste management. From this finding awareness is a critical point for effective solid waste management but the real thing in the study area is its inverse meaning their lack of awareness on solid waste management. Training, capacity building and awareness creation of the house hold is the best method of proper solid waste management.

As specify in table 4.6 item 2 respondent were requested to rate beneficiaries have not good attitude for waste collecting workers, at grand mean of 3.8, respondents rating the item as a ‘main reason ‘for the badly-behaved of house hold solid waste management in the study area. Majority of the respondent replied that beneficiaries have not good attitude for solid waste collecting workers, while minority of respondent revealed that beneficiaries have good attitude for solid waste collecting workers. From this finding attitude have a power in every human being in a decision making for good and bad so, due to most of community have negative attitude on the solid waste collecting workers they does not help them and motivate them to do the work properly.

In relation to item 3, on table 4.6, respondents were invited to price completely you throw your solid waste outside your room or household at grand mean 4.03, the respondents rating the item as a 'major cause' for in effective solid waste management. In respect to this, majority of the respondent settled that households throw solid waste outside room and household. From this finding its save to conclude the community is throwing on the road and outside of their home which have direct influence on the community solid waste management. In line with this the result of the observation also shows the communities throw wastes on the road and water.

In relation to item 4, on table 4.6, respondents asked to there is no continuous training and capacity building on solid waste collection for the households at grand mean of 3.91, the respondents rating the item as a 'major cause' for in effective solid waste management. In reverence to this, widely held of the respondent replied that there is no continuous training and capacity building on solid waste collection for the households.

From this find the researcher accomplish that community who has poor awareness about the impressions of wastes is of opinion that living with the inhospitable surroundings, unknown will come about if they come to an end likewise and this pressures on the proper management efforts on solid waste management. This finding is supported by the Rathana (2009) stated the fact that a lack of public awareness and co-operation are root causes of solid waste service delivery practices

Concerning item 5, on table 4.6, respondents were asked to response every community does not have the responsibility for the proper collection and disposal of solid waste at a mean of 3.84. Majority of the respondent replied that community does not have the responsibility for the proper collection and disposal of solid waste rather than the solid waste collectors and the governments. Commencing this attitude of the community also have a problem on the knowledge of solid waste management due to this they does not see them as a responsible person on solid waste collection and disposal. In line with this the result of the focus group interview shows that households left all the responsibility of waste collection and disposal for the government, waste collecting workers and non-government job which have a difficult problem on solid waste management.

#### 4.4 Major problems cause for poor solid waste management

Table 4.7 Mean Scores Measurements Major problems cause for poor solid waste

No	causes for poor solid waste management	No	Mean	Std. deviation
1.	There is no sufficient money for the promotion of waste reduction, recycling and recovery programs	193	3.86	1.005
2.	Jimma town administration is not well planned with appropriate infrastructure to collect and transport waste.	193	3.81	1.125
3.	The government does not gave high priority to solid waste management	193	3.84	1.026
4.	there is no well-planned with appropriate infrastructure to collect and transport waste from household to the disposal site	193	3.83	1.021
5.	Several institutions or agencies are not involved in solid waste management	193	3.79	1.231
	<b>Overall average</b>	<b>193</b>	<b>3.826</b>	<b>1.081</b>

Regarding item 1, on table 4.7 respondents were asked to rate there is no sufficient money for the promotion of waste reduction, recycling and recovery programs at grand mean of 3.86. Majority of the respondent replied that there is no sufficient money for the promotion of waste reduction, recycling and recovery programs. From the finding it's safe to conclude that the economic factors are the main cause for poor solid waste management in the study area.

Regarding item 2, on table 4.7, respondents were asked to rate Jimma town administration is not well planned with appropriate infrastructure to collect and transport waste at a mean score of 3.81.

Majority of the respondent replied that Jimma town administration is not well planned with appropriate infrastructure to collect and transport waste, from this finding the other causes for poor solid waste management in the town are transportation factors. This finding is in line with the theory of Schubeler, (1996) which states the lack of skilled and adequate manpower and vehicles were the hindering factors to transport solid waste.

In relation to item 3, on table 4.7, respondents were invited to price the government does not give high priority to solid waste management at a grand mean of 3.84. Greater part of the respondent answer back government does not give high priority to solid waste management in the study area.

From this finding it is safe to conclude that government which have the lion share in solving the problem of waste management the reality in practice was its inverse due to lack of government attention this area it was the other causes for poor solid waste management in Jimma town administration.

Concerning item 4, on table 4.7 respondents were asked to response there is no well-planned with appropriate infrastructure to collect and transport waste from household to the disposal site at grand mean of 3.83. Superior part of the respondent response that there is no well-planned with appropriate infrastructure to collect and transport waste from household to the disposal site. From this find In consequence, it is evident that technical aspects pose serious influence on solid waste management practice in the study area. Lack of adequate modern waste disposal equipment, none frequent use of environmentally adaptable and maintainable equipment, the town not being well planned with the appropriate infrastructures suitable for waste collection and transportation, and most of the organizations falling to give regular training to their employees, inaccessibility of spare parts for damaged and broken vehicles and equipments are more or less the influencing factors for none effective waste management practice coming from the technical aspects.

Concerning item 4, on table 4.7 respondents were asked to response several institutions or agencies are not involved in solid waste management at grand mean of 3.79. Superior part of the respondent response that several institutions or agencies are not involved in solid waste management. From this finding it is safe to conclude that lack of the integration of the organization to work on solid waste management is the critical causes for poor solid waste management in the study area.

#### **4.5. Association between dependent and independent variables**

In this part of the analysis bivariate Pearson correlation coefficient has been used to examine the relationship between the dependent and independent variable. According to (Robert, 2008), Pearson correlation coefficients ranges between -1 and +1, when 0 indicates no relationship between, -1.00 indicates a perfect negative relationship and +1.00 indicates a perfect positive relationship. For intermediary values the study uses Pallant (2010) guideline to determine the strength of the correlation, less than 0.1 indicate weak correlation, small correlation for value 0.1 to 0.29; medium/moderate for 0.3 to 0.49; and large for 0.50 to 1.00).

Table 4.8: shows correlations of social, financial, technical and institutional factors and Effective solid waste management shows

**Correlations**

		Effective solid waste management	Social Factors	Financial factor	Technical factor	Institutional factor
Effective solid waste management	<b>Pearson Correlation</b>	1				
	<b>Sig. (2-tailed)</b>	.000				
	<b>N</b>	193				
Social Factors	<b>Pearson Correlation</b>	.538**	1			
	<b>Sig. (2-tailed)</b>	.001				
	<b>N</b>	193	193			
Financial factor	<b>Pearson Correlation</b>	.547**	.283**	1		
	<b>Sig. (2-tailed)</b>	.001	.001			
	<b>N</b>	193	193	193		
Technical factor	<b>Pearson Correlation</b>	.523**	.321**	.256**	1	
	<b>Sig. (2-tailed)</b>	.001	.001	.001		
	<b>N</b>	193	193	193	193	
Institutional factor	<b>Pearson Correlation</b>	.518**	.298**	.435**	.365**	1
	<b>Sig. (2-tailed)</b>	.001	.001	.001	.001	
	<b>N</b>	193	193	193	193	193

From this analysis it can be noted that, social, financial, technical and institutional factors has significant and positive relationship with Effective solid waste management. Therefore, they have positively correlated and strong association among each other.

#### 4.5.1. Multiple linear regression assumptions

Testing assumption of multiple linear regression analysis models is very important before running regression analysis. Some tests were conducted in order to ensure the appropriateness of data to assumptions regression analysis results were discussed in the following sub topics.

##### 4.5.1.1. Multi-co linearity Test

According to Gujarati (2003) Multi-co linearity tests helps to identify the high correlation between explanatory variables and to avoid double effect of independent variable from the model. Predictor variable should be strongly related to dependent variable but not strongly related to each other. For this purpose variance inflation factor (VIF) and tolerance test were used to check Multi co linearity for variables if the value of VIF is less than 10 there is no Multi co linearity and on the other hand if VIF greater than or equal to 10 there is a serious Multi co linearity problem. In addition tolerance is an indicator how much of the variability of independent variable is not explained by the other independent variable in the model and is calculated using the formula  $1 - R^2$  for each variable.

Table 4.9 Shows Multi - Co Linearity

No	Variables	Tolerance	VIF(variance inflation factors)
1.	Social Factors	0.313	3.19
2.	Financial factor	0.253	3.95
3.	Technical factor	0.242	4.1
4.	Institutional factor	0.261	3.98

Source own survey, 2018

Table 4.9. Shows the computation result that the value of VIF all variables were by far less than 10 and the value of tolerance statistics being above 0.1 they were accepted entered in to regression model for the estimation of variables.

##### 4.5.1.2. Linearity Test

Linearity is used check whether all the estimates of regression including regression coefficients, standard errors and tests of statistical significance are biased or not (Keith, 2006). There is no linearity problem on the data for this study residual follow at straight line.

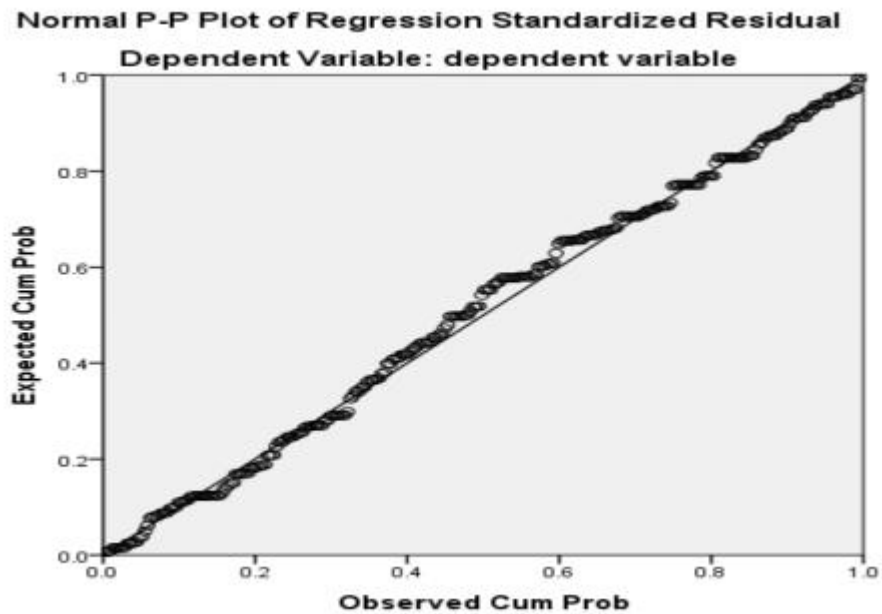


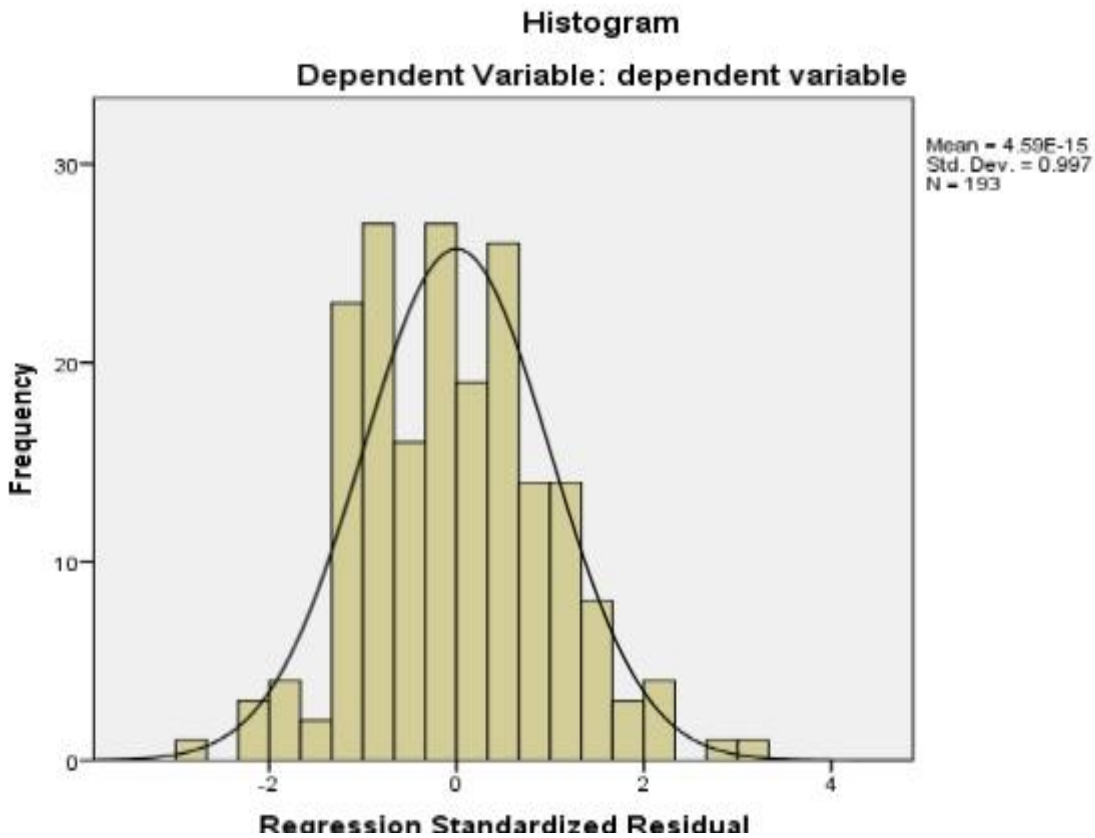
Figure 4.7. : Shows linearity test

(Source: Own Survey, 2018)

#### 4.5.1.3. Normality Test

Normality assumption is around the mean of the residuals is zero and used to determine whether a data set is well modeled by a normal distribution or not and also to indicate un underlying random variable is to be normally distributed (Gujarati,2009). Researcher was used histogram methods of testing the normality of the data. If the residuals are normally distributed about its mean of zero, the shape of histogram should be a bell-shaped and regression standardized residual plotted between -3.3 and 3.3. From the figure below data normality can be indicated.





#### 4.5.1.4 Hetero scadasticity test

Heteroscedasticity is the equality or violation of the residuals for every set of values for independent variable. So the researchers assume that errors are spread out constantly between the variables. Heteroscedasticity problem exist when scatter plot is greater than 3.3 and less than -3.3. Therefore as it was indicated in figure below the data did not violate Heteroscedasticity assumption and instead it was homoscedastic.

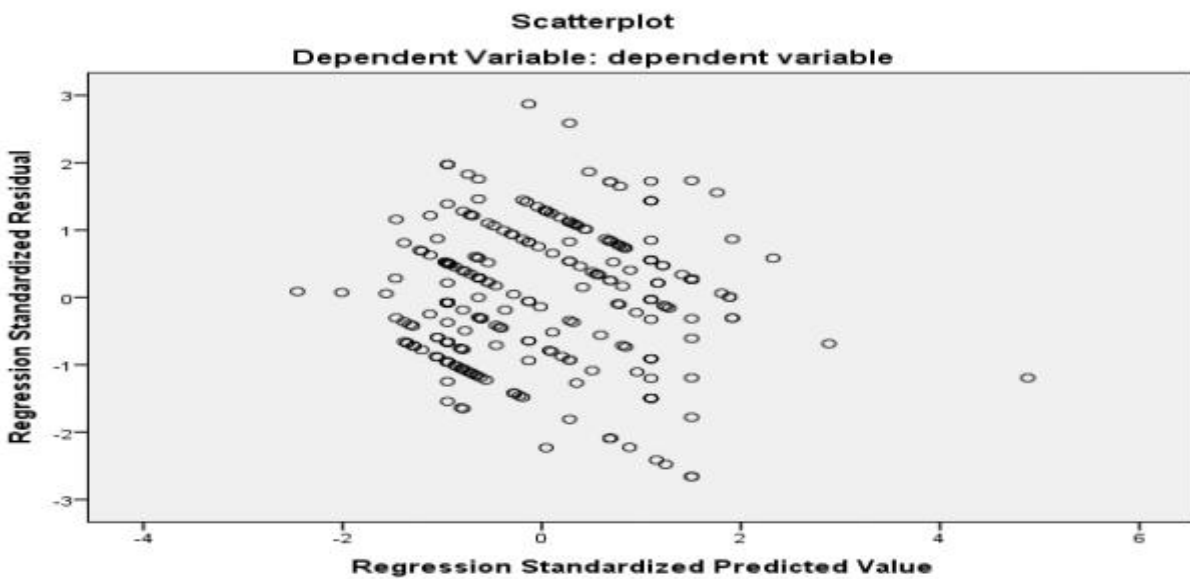


Figure 4.8.: Shows scatter plot

Source own survey, 2018

**The effect of social, financial, technical and institutional factors on Effective solid waste management (Regression Analysis)**

Through a correlation analysis it is identified that there is a significant relationship between the social, financial, technical and institutional factors and Effective solid waste management. To what extent the variance in the dependent variables will be explained by the independent variable is discussed here.

**Table 4.10.: Shows Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.695	.483	.477	.2819

Source: Own Survey, 2018

Based on the above table the R value obtained for the regression was .695. The value of R square .483 and the value of adjusted R square is .477 indicates that 47.7 percent variations in the effective solid waste management have been explained by the social, financial, technical and institutional factors. To assess the statistical significance of this result or relationship i.e. the 47.7 percent variance in the effective solid waste management as a result of social, financial, technical and institutional factors. The variation associated with the independent variables; therefore, there might be other factors which bring about 52.3 pct in the dependent variable.

Table 4.11: Shows coefficient of variables

Coefficients						
Model		UnStandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.669	.285		2.347	.020
	Social Factors	.341	.178	.223	1.689	.052
	Technical factor	.255	.163	.166	1.564	.019
	Financial factor	.404	.184	.255	1.810	.041
	Institutional factor	.236	.130	.151	2.196	.029
a. Dependent Variable: dependent variable						

Source own survey, 2018

The results in table 4.11.show that the largest influence on women participation on effective solid waste management is the financial factor at beta value .404.

This implies that financial factor at beta value of .404 which implies that a 1% increase in financial factor unit will cause a 40.4% increase in effective solid waste management.

Social Factors at beta value of .341 which implies that a 1% increase in Social Factors unit will cause a 34.1% increase in effective solid waste management. Technical factors

at beta value of .255 which implies that a 1% increase in Technical unit will cause a 25.5% increase effective solid waste management. Institutional factors at beta value of .236 which implies that a 1%

increase in institutional factors unit will cause a 23.6% increase in effective solid waste management. So that in order to develop regression equation which fits with that are statistically significant, multiple

correlation coefficient (R) and Beta coefficient value was tested. In general the regression equation model of this study summarized as; Formula

$$Y=a+b_1x_1+b_2x_2+b_3x_3\dots n$$

$$Y= 0.669+0.341(\text{social factors}) +0.255 (\text{Technical factor}) +0.404 (\text{Financial factor}) + 0.236 (\text{institutional factor}).$$

## CHAPTER FIVE

### SUMMARY, CONCLUSION AND RECOMMENDATIONS

#### 5.1 Summary

The objective of the study was to assess leadership challenges in managing household solid waste in Selected Keble's of Jimma town administration. Effort to meet the above stated purpose of the research, basic questions were stated and answered. The researcher therefore, identified the following most important summary.

- Regardless of the knowledge's, attitudes and practice of households toward solid waste management in Jimma town administration. Community does not attend any awareness programmed conducted by local authority/non government organization regarding house hold waste management mean of 4.25. Beneficiaries have not good attitude for waste collecting workers, at grand mean of 3.8, respondents rating the item as a 'main reason 'for the badly-behaved of house hold solid waste management. Community throws solid waste outside of their room or household at grand mean 4.03. There is no continuous training and capacity building on solid waste collection for the households at grand mean of 3.91. The attitude of community does not have the responsibility for the proper collection and disposal of solid waste at a mean of 3.84.
- In spite of leadership challenges in solid waste management in Jimma town administration: there is a problem of integrated solid waste management practice between leaders and community at a grand mean of 3.87, there is no proper institutional set-up for solid waste management service in the town at mean score of 3.82, there is no adequate revenue generation, for provision of effective solid waste management at mean of 3.9, the existence of inadequate internal roads (alternative roads) has created challenges on solid waste transportation at mean score of 3.92, Lubricant trap, kitchen waste, is not collected by authorized staff in strong, leak proof containers that are clearly labeled had a grand mean score of 3.72 and leaders do not regularly monitor your Keble waste management and disposal activities.
- In the midst of the role of leadership in solid waste management in the study area: there are no any leadership support to micro and small scale enterprise collecting solid waste in their area at mean score of 3.82, the existing practice of leadership role in managing solid waste management is low had a grand mean score of 3.81, local administrators does not have important role in the implementation of solid waste management had a grand mean score of 3.78, leaders are not properly, leading human resource in solid waste management in the study area,

the respondents rating the item as a 'main reason 'for the badly-behaved of house hold solid waste management at mean of 3.83, Jimma town administrators does not have sufficient manpower and vehicle to transport solid waste at grand mean of 3.86,

- In spite of solid waste management strategy related issues area: there is clear policy and strategy that achieving effective solid waste management at a mean of 3.8, policy and strategy does not have problem on attain effective solid waste management at a mean of 3.78, Implementers does not have knowledge of policies and strategy that achieving effective solid waste management at a mean of 3.49, policy and strategy of the town administration is not effectively implemented in related to solid waste management at a mean of 4.12 and lack of careful monitoring and evaluation of the policy implementation that enhance effective solid waste management at a mean of 4.00.
- Regarding major problems causes for poor solid waste management in Jimma town administration: there is lack sufficient money for the promotion of waste reduction, recycling and recovery programs at grand mean of 3.86, the government does not give high priority to solid waste management at a grand mean of 3.84, there is no well-planned with appropriate infrastructure to collect and transport waste from household to the disposal site at grand mean of 3.83 and several institutions or agencies are not involved in solid waste management at grand mean of 3.79
- The correlation analysis result is used to understand the degree of relationship between the financial, social, technical and institutional factors and effective solid waste management. The variables in this study correlation coefficient among them are 0.575 that falls within the range of strong relationship. The direction of their relationship is positive sign that dictates a positive change in financial, social, technical and institutional factors can result in a positive change in the effective solid waste management. From this analysis a strong correlation is observed among each other.
- Regression analysis results indicates the largest influence on effective solid waste management is the financial factors at beta value 0.404, social factors at beta value 0.341 technical factor at beta value 0.255 and institutional factor at beta value 0.236 respectively.

## 5.2 Conclusions

The study has been conducted to address the leadership challenges in managing household solid waste in Jimma town administration. Solid waste management is one of the important obligatory functions of not only urban local bodies but also of rural local bodies. But this essential service is not efficiently and properly performed by the concerned bodies of Jimma town administration resulting various sanitation, social and environmental problems. Waste management problem is complex because it involves a multitude of scientific, technical, economic and social factors. Based on the findings, the current solid waste service delivering practice of Jimma town is characterized by the huge generation of solid waste coupled with unbalanced solid waste management service. Knowledge's, attitudes and practice of households to ward solid waste management, there is negative attitude of community towards of solid waste collector that affects effective solid waste management, lack of training and awareness makes the community poor practices of solid waste management and community throws solid waste outside of their room or household. The finding revealed that Jimma town administration community have poor level of knowledge as well as have negative attitude and have poor practice to ward waste management.

The chief leadership challenges in solid waste management in the study area contain lack of motivating followers, awareness creation, monitoring and evaluation, leading a team, stakeholder participation, leader's skill and ability to provide direction about sustainable solid waste management and use waste as a resource, sharing a vision of solid waste management for the residents. There is a problem of integrated solid waste management practice between leaders and community; there is lack of proper institutional set-up for solid waste management service in the town, as well lack of adequate revenue generation, for provision of effective solid waste management all those are challenges for leaders and causes for poor solid waste management in Jimma town administration.

In adding together the role of leadership in solid waste management revealed that low leadership commitment, weak mobilization of stakeholders, insufficient budget and resources, lack of sufficient skilled human resource, poor practice of solid waste management and attitudinal problem of the residents, additionally there are problem of leadership support to micro and small scale enterprise collecting solid waste in their area, leaders are not properly, leading human resource in solid waste management, due to the role of leaders are insignificant contribution in managing effective solid waste management Jimma town is not conducive and attractive town for her residents and tourist .

The study indicated that the causes of poor solid waste disposal are attitude of households towards solid waste, lack sufficient money for the promotion of waste reduction, recycling and recovery programs, town administration is not well planned with appropriate infrastructure to collect and transport waste from house hold to the disposal area, government does not give high priority to solid waste management and numerous institutions or agencies are not involved in solid waste management. Similarly, it is observed that lack of financial resources, institutional weakness, improper selection of technology, transportation systems and disposal options, social problem associated with lack of interest towards environmental cleanliness and sanitation have made this service unsatisfactory and inefficient in the Jimma town administration.

Based on the correlation analysis the relationship between financial, social, technical and institutional factors and effective solid waste management were strong and positive relationship and the results of regression analysis observed that financial, social, technical and institutional factors has a significant positive effect on the effective solid waste management.

### 5.3 RECOMMENDATIONS

Based on the major findings of the study, the following recommendations are submitted, Implementation of all recommendation is necessary to reduce the existing gap. However, some of the recommendations need serious commitment to implement in the town.

- The government is supposed to realize the effective solid waste management through its laws, policies and regulations by effective implementation.
- Jimma town municipality office is supposed to develop and design workshops and training on the way of effective solid waste management and the approach it shape or change the attitude of house hold on solid waste management.
- Jimma town municipality office is supposed to have to create conducive work environment and adjust them as suitable for micro and small scale enterprise worker those organized in solid waste collection.
- Jimma town administration is supposed to have to facilitate proper institutional structure and integrated waste management between stakeholders. It should make longer the duration of the contract agreement with micro enterprise waste managing firms for potential cost recovery; besides, the contract agreement should be modified to allow the micro enterprise work in a flexible manner. There should be continuous assessment of satisfaction about the service delivery and supervision function as well.
- Communities have to develop their capacity, they have to use their own effort and upgrade themselves by education, knowledge and skills. They should increase social networks through social medias and by creating inter personal relationship to manage and effectively use wastes that come from their house and from community.
- The Jimma town administration and private firms should ensure better waste management through waste reduction, reuse, and recycling of compost waste. The government should support business communities through pilot projects, funding training, and technical assistance information exchange follow up support and monitoring.
- NGO and stake holders are supposed to have to providing technical support like mentoring, networking, and develop follow up mechanisms in effective solid waste management. This can be done by empowering community, micro and small scale enterprise worker those organized in solid waste collection and allowing them to take part in leadership and decision making and should encourage community education by upgrading their skills and these makes they better qualified personnel to participate in leadership.



- The research found out that there are policies and laws that promote about effective SWM but it lacks strict enforcement by-laws, by the waste cleaning agencies such that dumping of waste on open pits and drainages are common. This research recommends that existing by-laws should be strictly enforced in all areas of the city.

#### **5.4 Suggestions for Further Research**

For further researchers it is better to choose other research design rather than this study to examine the cause and effect relationship as well as to analyze and compare changes in variable over time. the research have be done only at few kebeles of Jimma town administration, if it would have been conducted at all kebeles of Jimmaa towns, region and country in general, having comparable or similar context with wide area coverage and a much larger number of respondents would have provided much deeper and useful information concerning leadership challenges in managing house hold solid waste problems.

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## APPENDIX

### JIMMAA UNIVERSITY COLLEGE OF

### BUSINESS AND ECONOMICS DEPARTMENT

#### QUESTIONS FOR HOUSEHOLD'S HEADS

**Dear respondents,**

This questionnaire is prepared to gather information about the leadership challenges in managing household solid waste management in Jimma town. This assessment is being undertaken by ZakirAbaDura, a student of Jimmaa University College Of Business And Economics Department Of Management Master Of Public Management for the partial fulfillment for the award of MPM. The information collected will be confidential and for academic purpose only and so, no reference will be made to you. Therefore, please feel free to respond and provide unbiased information for all questions to the best of your knowledge.

I would like to thank you for your cooperation.

#### General Instructions

- Read all the instructions before attempting to answer the questions;
- Please do not leave any of the questions unanswered
- Please read all the questions and put tick mark (Ö) on your responses that most accurately reflect your answers or write your answers in the space provided. If the space provided is not enough use back of the paper indicating the question number

**Part I: Demographic Characteristics/Background/**

Please use (√) in the appropriate box

Address: - Jimma town – kebele \_\_\_\_\_

Sex of the respondent      A. Male       B. Female

Age: 20-29       30-39       40-49       50 and above

1. Educational Status

A. Illiterate

D. College Diploma

B. Primary school level (grades 1-8)

E. 1st Degree and above

C. Completed Grade 10

F. Specify if any \_\_\_\_\_

2. Marital status A. Single       B. Married       C. Divorce       D. Widows

3. Family sizes      A. 1-2       B. 3-5       C. 6-8       D. above 8

4. Occupation of the head of the household?

A, Governmental employee  ;

B, Private organization employee

C, Housewife/worker

D, Merchant

E, Other, specify \_\_\_\_\_

1. Monthly income A. 201-400       B. 401-600       C. 601-1000       D. 1001-2000   
 E. Above 2000

## Part II

<b>No</b>	<b>leadership challenge in solid waste management</b>	<b>No</b>	<b>Mean</b>	<b>Std. Deviation</b>
1.	There is a problem of integrated solid waste management practice between leaders and community	193	3.87	1.127
2.	There is no proper institutional set-up for solid waste management service	193	3.82	1.158
3.	There is no adequate revenue generation, for provision of effective solid waste management in the town administration	193	3.9	1.015
4.	The existence of inadequate internal roads (alternative roads) has created challenges on solid waste transportation.	193	3.92	1.01
5.	Lubricant trap, kitchen waste, is not collected by authorized staff in strong, leak proof containers that are clearly labeled.	193	3.72	1.21
6.	Leaders does not regularly monitor kebele waste management and disposal activities	193	3.81	1.23

<b>No</b>	<b>leadership role in solid waste management</b>	<b>No</b>	<b>Mean</b>	<b>Std. Deviation</b>
1	There is no any leadership support to micro and small-scale enterprise collecting solid waste in kebele	193	3.82	1.127
2	The existing practice of leadership role in managing solid waste management is low	193	3.81	1.158
3	Local administrators do not have important role in the implementation of solid waste management in the study area.	193	3.78	1.255
4	Leaders are not properly, leading human resource in solid waste management	193	3.83	1.095
5	Jimma town administrators do not have sufficient manpower and vehicle to transport solid waste.	193	3.86	1.002



No	<b>solid waste management strategy</b>	No	Mean	Std. Deviation
1	Clear policy and strategy that achieving effective solid waste management	193	3.8	1.127
2	policy and strategy do not have problem on attain effective solid waste management	193	3.78	1.158
3	Implementers does not have knowledge of policies and strategy that achieving effective solid waste management	193	3.49	1.03
4	Policy and strategy of the town administration is not effectively implemented in related to solid waste management.	193	4.12	0.85
5	Lack of careful monitoring and evaluation of the policy implementation that enhance effective solid waste management	193	4.00	0.95

No	<b>knowledge's, attitudes, and practices of households</b>	No	Mean	Std. Deviation
1	Community does not attend any awareness programmed conducted by local authority/non-government organization regarding house hold waste management.	193	4.25	.978
2	Beneficiaries have not good attitude for waste collecting workers.	193	3.8	1.215
3	Completely you throw your solid waste outside your room or household.	193	4.03	.984
4	There is no continuous training and capacity building on solid waste collection for the households.	193	3.91	1.04
5	Every community does not have the responsibility for the proper collection and disposal of solid waste.	193	3.84	1.03

<b>No</b>	<b>causes for poor solid waste management</b>	<b>No</b>	<b>Mean</b>	<b>Std. deviation</b>
1.	There is no sufficient money for the promotion of waste reduction, recycling and recovery programs	193	3.86	1.005
2.	Jimma town administration is not well planned with appropriate infrastructure to collect and transport waste.	193	3.81	1.125
3.	The government does not gave high priority to solid waste management	193	3.84	1.026
4.	there is no well-planned with appropriate infrastructure to collect and transport waste from household to the disposal site	193	3.83	1.021
5.	Several institutions or agencies are not involved in solid waste management	193	3.79	1.231

## Appendix - II

### JIMMAA UNIVERSITY COLLEGE OF BUSINESS AND ECONOMICS DEPARTMENT

#### Research Interviews

The interview is prepared on the leadership challenges in managing household solid waste management in Jimmaa town. The result of this study is intended to serve for academic purpose and benefit of your town administration as well as the research is conducted based on the accuracy of the information you provide.

#### Part I: General Information of the Respondents Sex: Male 5 Female 5

1. Age: 20-29 5 30-39 5 40-49 5 50 and above 5
2. Level of Education: Secondary completed 5 Certificate 5 Diploma 5 Bachelor Degree 5 Master's Degree and Above 5 Other \_\_\_\_\_
3. Marital status: Single Married 5 Divorce 5 Widowed 5
4. Work experience: less than or equal to 2 years 3 to 5 years 6 to 10 years  
11 to 15 years greater than or equal to 16 years
5. Position \_\_\_\_\_

#### Part II: Responses to Solid Waste challenges by leadership

##### *Elements of interview: - Actors, challenges in Solid waste management*

- I. Question related to the existing practice of leadership in solid waste management
  1. How do you describe the existing practice of leadership in managing solid waste management?
  2. How do the leaders understand the vision of solid waste management?
  3. How leaders create awareness for the households about how to properly manage solid Waste and the impacts of poor solid waste management by using public meetings?
  4. How leaders are conducting monitoring and evaluation in solid waste management activities?
  5. How to communicate and connect households with small & micro enterprises cooperatives to use and dispose solid waste?

6. Who are the actors in solid waste management in this Municipality and what are their roles?

## **II. Questions related to Leadership Challenges that hinder Effective Solid Waste Management.**

1. What are the challenges of leadership that face leaders in implementing solid waste management in Jimma town administration?
2. Are leader uses and mobilizes resources efficiently and effectively in the achievement of your administration?
3. How you are co ordinate, mobilize and push to participate stakeholders in managing household solid waste ?
4. How do organizational structure and human resource to implement solid waste management activities? What is the strategy for solid waste management in Jimma town?
5. Do you have any contractual agreement with any waste collecting company/youth organized to collect waste?
6. In all, would you say your strategy for managing solid waste has been successful?
7. How does this strategy impact on the municipality as a whole? Does it reduce immorality in the municipality? Does it created more environmental problems?
8. What do you think are the inefficiencies within the solid waste management strategy for the leadership of the town? Can we link the current outcome of strategies for managing solid waste to the challenges?
9. What is the way forward?

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## **III. Question related to knowledge, altitude and Practice (KAP) of leaders towards solid waste management?**

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- 10, what is the role leadership to create awareness and providing clear direction towards managing solid waste management?
- 11, Have the leaders building trust in the community and they put their idea into action toward the achievement?

**IV. Question related to the problem Caused by poor waste collection**

- 1, What is the cause of poor solid waste management?
- 2, Brief it, what do you suggest to improve the current solid waste management practice?
- 3, Do you think the current legal framework is adequate, in regarding proper management of solid waste?
- 4, What is your opinion about the attitude of the community towards solid waste disposal?
- 5, How does the community participate in waste disposal initiatives?
- 6, Do you believe that the community is aware of the rules and regulations for the preservation and disposal of wastes?

### Appendix - III

#### FOCUS GROUP DISCUSSION GUIDELINE FOR SMALL SCALE&MICRO ENTERPRISE

##### A. Questions related to existing practices of leadership.

1. Are Leaders sharing their vision of solid waste management for yours? Yes 5 No 5

2. What strategies are used to manage solid waste in your work area?

A. Reusing, E, None of them

B. Recycling

C. Prepare compost from solid waste

D. Any other (specify) \_\_\_\_\_

3. How the leaders motivating, monitoring and evaluation methods of your work?

A, Supervision B, Report C, Monthly meeting D, None

4. Do leaders regularly monitor your kebele waste management and disposal?

A. Yes B. No

Do Leaders use motivational Strategies to facilitate solid waste management activities?

A. Yes B. No

##### B. Questions related to the challenges of leadership

5. What are the challenges of leadership do you observed in the implementation of solid waste management activities? \_\_\_\_\_

6. What challenges facing while working on solid waste management activities, what do you expect from leaders? \_\_\_\_\_

##### C. Questions related to the role of leadership

7. Which is the role leadership demonstrated by town and kebele leaders while implementing solid waste management activities?

\_\_\_\_\_

Brief it, what do you suggest to improve the current solid waste management practice?

\_\_\_\_\_

Do you think the current legal framework is adequate, in regarding proper management of solid waste? A, Yes B, No

What is your opinion about the attitude of the community towards solid waste disposal?

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Do you believe that the community is aware of the rules, regulations for the preservation and participation disposal of wastes? A, Yes      B, No

What are the practices of leadership in awareness creation, controlling, monitoring, and law enforcement      system      for      your      work?

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## ANNEX- IV

### FOCUS GROUP DISCUSSION GUIDELINE FOR HEALTH EXTENSIONS

1, What is your department contribution or role in improving the household's solid waste management system or practice? A, Training B, Financial support C,

2, How do you evaluate the household's solid waste management practice of the community?

3, If your answer is "poor" is there any future plan for tackling household effluents in relation to human sanitation?

4, Has your section offered environmental sanitation education to the community, particularly on solid waste management? A, Yes B, No

5, If "Yes" what is the achievement?

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6, What are the main problems or challenges encountered to communities', regarding proper solid waste management? A, Lack of Awareness B, Lack of finance C, lack of space

7, Do you think the current legal framework is adequate, in regards proper management of solid waste? A, Yes B, No

8, What is your opinion and suggestion for the improvement your community's household solid waste management practice and the types of technology?

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9, Do you think any possible solution in solid waste management?



## Appendix - V

### FOCUS GROUP DISCUSSION GUIDELINE FOR DEVELOPMENT TEAM LEADERS

1 , What do you think the impacts of solid waste management with special reference of improper solid waste management on health and the environment?

2 , Is there, any attempt to improve the solid waste management before?

If 'yes'

3, What was the result, causes for failures and challenges?

4, What was the role of the community?

5, What was the role of the kebeles?

If 'No' Why?

6, What do you suggest to improve the current solid waste management practice?

7, Do you think the current legal framework is adequate, in regards proper and sustainable management of solid waste?

8, What is your opinion about the attitude of the community towards solid waste disposal?

9, How does the community participate in waste disposal initiatives?

10, Do you believe that the community is aware of the rules and regulations for the preservation and disposal of wastes?

11, What are the practices of leadership in awareness creation, controlling, monitoring, and evaluation?

12, Members of development teams separately store solid waste generated in their house, reusing, recycling and preparing compost from solid waste?

13, Members of development teams have used waste collection cooperatives to dispose solid waste?