

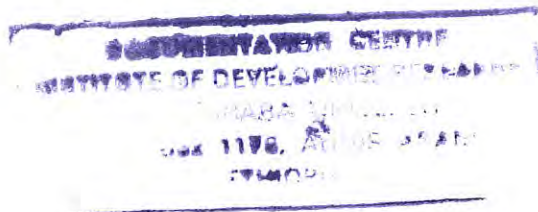


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**Addis Ababa University
School of Graduate Studies
Institute of Development Research**

STATUS, CHALLENGES AND OPPORTUNITIES OF
COOPERATIVES AND PRIVATE MSEs SOLID WASTE
COLLECTION INITIATIVE IN ADDIS KETEMA KIFLE-KETEMA

BY: GETACHEW AGWAR



JULY, 2007

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School of Graduate Studies
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**Status, Challenges and Opportunities of Cooperatives
and Private Mses Solid Waste Collection Initiative in
Addis Ketema Kifle-Ketema**

A Thesis Submitted to the School of Graduate Studies of Addis Ababa
University in Partial Fulfillment of the Requirements for the Degree of
Master of Arts in Development Studies (Environment and Development)

By: Getachew Agwar

Advisor: Yigremew Adal (Asst. Prof.)

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**ADDIS ABABA UNIVERSITY
SCHOOL OF GRADUATE STUDIES**

**INSTITUTE OF DEVELOPMENT
RESEARCH (IDR)**

Title

**Status, Challenges and Opportunities of Cooperatives and Private MSEs
Solid Waste Collection Initiative in Addis Ketema Sub-City.**

BY

Getachew Agwar Debel

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Dedication

This research paper has dedicated to those workers employed in an infant commercialized door-to-door municipal solid waste collection scheme earning lower than a statutory minimum monthly salary confronting a lot of challenges to win the existing costly life style.



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First of all, I want to praise the Almighty and Omnipotent God for the opportunities He is offering in my life and for the successful completion of the study in Addis Ababa University.

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Acronyms\Abbreviations

CBOs	Community Based Organization
CES	Code Enforcement Service
CGAA	City Government of Addis Ababa
ERM	Environmental Resource Management
Ha	Hectare
ILO	International Labor Organization
IPES	Institute of Peru Environmental Studies
Km ²	Square Kilometer
M ³	Cubic Meter
MSEs	Micro and Small Enterprises
MSWM	Municipals Solid Waste Management
NGOs	Non Governmental Organization
PSP	Private Sector Participation
SBPDA	Sanitation, Beautification and Park Development Agency
SWM	Solid Waste Management

Abstract

In an attempt to ease the burden and responsibility and achieve the best, the municipality is convinced by the involvement of private sector. For the same purpose, a new Agency had established since 2003. Moreover, policy and proclamation on the subject matter had endorsed at city and federal government level. And for their implementation, especially at city level, the Agency had prepared regulation and different manuals. The Agency further decentralized its duties and mandate to the kebele level. In response to these measures, a number of cooperatives and private MSEs started operating on door-to-door municipal solid waste collection activity.

To identify the salient features of door-to-door municipal solid waste collection scheme, and most importantly to investigate the possible challenges seen and opportunities accrued due to the involvement of cooperatives and private MSEs, the researcher collected primary and secondary data from the respective sources. Questionnaire, unstructured interviews, observation checklists, and different documents were used as data collection instrument. To this end narration was used to interpret the data.

Despite both the cooperatives and private MSEs faced similar challenges in the business, they were a bit distinctive. Absences of vehicles, for instance, were seen the toughest challenges to stay in the business. However, private MSEs are able to absorb the above shock at least by traveling the longest distance. Lack of acknowledgement and respect also discouraged workers due to negative attitude towards them. Inadequate user participation, Poor health and safety condition, and lack of designated transfer points were also of wider implications on the cooperatives and private MSEs. Moreover, capacity problem, lack of motivation and understanding also lag their performance.

The involvement of cooperatives and private MSEs in door-to-door municipal solid waste collection contributed a lot to the workers, municipality, and the clients at large. For instance, their engagement in the business attested to reduce the problem of unemployment and hence alleviating poverty. The municipality also admitted for the merits cultivated as a result of private MSEs and cooperatives participation in door-to-door municipal solid waste collection scheme. Despite the municipality did not calculate yet, it was found their contribution in reducing the municipal workers' load and up-scaling the performance. The ultimate beneficiaries also agreed that their compound and area gets relatively cleaner than the municipality was the sole provider of the service.

Therefore, some of the challenges which were faced by the cooperatives and private MSEs should get solution before environmental, health and socio-economic disruptions may happen. Since the challenges have been arisen from the clients, the businesses, and the municipality; they should also be part of the solution so as to sustain in the business and improve their livelihood.

Key words: *Door-to-door, municipal solid waste, franchising, cooperatives and private MSEs, residential house, commercial premises, the municipality.*

CHAPTER ONE

1. Introduction

1.1. Background

As urbanization continues to take place, solid waste management (SWM) becomes a major public health and environmental threat in urban areas of many developing countries. The threat is serious, particularly in the capital cities, which are often gateways to the counties for foreign diplomats, businesspersons, and tourists. Poor visual appearance of these cities will have negative impacts on officials and tourists' visits and foreign investments (Bartone, 1995).

A typical SWM system in a developing country displays an array of problems.¹ This includes low collection coverage and irregular collection services, illegal dumping on open lots, sewer lines and course of rivers, burning without due emphases to air and water pollution, the breeding of flies and vermin, the problem of handling and control of informal waste picking or scavenging activities (Bartone, 1995).

With the public sector being unable to meet the needs of expanding cities, small businesses are moving in to fill the gap. Such fledgling private sector initiatives have often prevented problems from becoming crises. Private enterprises have also an important role in delivering municipal services in general solid waste collection in particular. Small-scale private sector involvement and greater public-private coordination could actualize effective and sustainable MSWM service.

Thus, there is a trend driven by failing municipal systems and hence resulted to outsource the provision of services to the private sector. In many countries, private initiatives are of interest in providing Municipal Solid Waste Management (MSWM) service collaborating with government (Jayaraman, 2002). This is because partnership

¹MSWM system has the following basic components: collection, transportation, processing, and disposal. However, the paper entirely will focus on municipal solid waste collection in door-to-door basis. This is because the other elements have not yet developed well. Municipal solid waste collection is an area where a number of municipalities have shown interest due to its expensiveness unlike those of transportation, processing and disposal. For instance according to the 2004 cost analysis report by SBPDA, from 60%-65% of the total budget for MSWM goes to municipal solid waste collection.

approach has the advantage of incorporating the strengths of both government and private actors so as to provide efficient, effective and sustainable MSWM service.

As an alternative to large private companies, small-scale private sector such as Micro and Small Enterprises (MSEs), Community-Based Organizations (CBOs) or Non-Governmental Organizations (NGOs) can also provide much of the solid waste collection service for a city (Pfammatter, 1996).² The concept here is that citizens have also the right to entertain MSWM service either from the municipality or private enterprises. This fact has also been supported in the FDRE constitution art.44 (1), and states that "All persons have the right to live in a clean and healthy environment." Despite a lot is expected from the government as clearly stated in Art.92 (1), art.92 (4) has also confessed that "citizens shall also have the duty to protect the environment." Similarly, waste management is not merely a service delivered by urban authorities as stated in Environmental Pollution Control proclamation no.300/2002 to pay for what she/he/it polluted the environment, however by a cooperative undertaking as well.

Recognizing the far-reaching implications of MSWM service, the City Government of Addis Ababa (CGAA) took different policy measures. For instance, the Sanitation, Beautification and Park Development Agency (SBPDA) has been established, solid waste management policy, proclamations and regulation, and various manuals have endorsed at city and federal government levels.³ In all these documents, government invites the private sector ranging from micro to large to play their role in efforts to make the city clean and conducive for living and business activity. Hence, this study focuses on the status, opportunities accrued and challenges that may be faced by the cooperatives and private MSEs engaged in door-to-door municipal solid waste collection initiatives.⁴

² MSEs include service-based, commodity-based, and value-based enterprises. However, the paper will focus only on service-based MSEs. This is for the reason that all the cooperatives and private MSEs solid waste collection initiative pay due attention for profit by selling the service.

³ Since 2003 the MSWM responsibility shifted from the health bureau of CGAA to the newly established agency SBPDA

⁴ Door-to-door municipal solid waste collection is convenient for residents. As a result this initiative little waste may be seen on the streets. Nevertheless, residents must be available to hand over the waste. And it is not suitable for apartment buildings because of the amount of walking required (Haan et al., 1998).

1.2. Statement of the Problem

One of the challenges that the city of Addis has faced is the problem of sanitation in general and MSWM in particular. Even though the Agency has made some progress, quite large numbers of people are yet living in a haphazard environment. Despite the fact that SWM coverage has reached 70 percent (540, 266.91 m³), according to SBPDA (2006) report. 20 percent (154,362 m³) of waste generated was dumped illegally on open grounds, course of rivers and sewer lines.⁵ Only, 10 percent (5 % each i.e 77,181 m³), were recycled and composted informally.

The researcher strongly wishes to maintain 70 percent performance, if not able to increase the above achievements. Periodical and occasional sanitation campaign, and government efforts alone may not able to achieve to the level best.⁶ Cognizant of the fact that private sector involvement has a far-reaching environmental, health and socio-economic implication, the Agency has called for private sector to involve in this municipal sub-sector activity by commercializing the service. In response to such measure, there are about 175 private companies engaged in pre-collection related activities in Addis Ababa, and the figure is of an increasing trend (SBPDA, 2004)

The pre-collection companies have contributed a lot for a better SWM coverage, creating job opportunities hence reducing poverty and aesthetic environment minimizing health hazards, and they have showed to others that waste collection is one source of income. However, there are limitations that undermine the efforts of pre-collection companies. These include unreliable number and inadequate income source of customers, limited number of skips, and delay in transfer of waste to the dumpsite, capacity problem of both government offices and pre-collection companies, and shortage of waste trucks to transport collected waste to the final dump site, unreliable transport system, and limited support from the government (ERM, 2004).

⁵ One m³ is approximately equal to 330.5 Kg

⁶ Environmental Pollution Control proclamation no.300/2002 states that "Urban Administrations" are responsible for the provision of municipal solid waste collection service.

Even though, the cooperatives and private MSEs are based on simple equipment and labor-intensive method, they could not grow as much as expected.⁷ For instance, the number of cooperatives and private MSEs operating in door-to-door solid waste collection activities in Addis Ketema kifle ketema are not to the maximum required number.⁸ Rather, they are less by 44.4 percent. Resignation is also a common scenario in the business. Only for the last six months, 83 workers had left the job. Of which 59 (71.1%) and 24 (28.9%) were from the cooperatives and private MSEs, respectively

The number of service recipients accessed by the cooperatives and private MSEs were also the minimum. For example, from the total residential houses and commercial premises, only 28.9 percent of them were entertaining door-to-door municipal solid waste collection scheme in Addis Ketema kifle ketema. And there were also no new cooperatives and private MSEs joined into this business landscape except the previous ones started to operate two years before. As a result, such initiatives have left the majority of residential areas and commercial premises from the service.

Despite a lot of researches were made to investigate the municipality's efforts in managing the municipal solid waste, the researcher could not have the chance to look at any attempts to investigate cooperatives and private MSEs initiative engaged on door-to-door municipal solid waste collection activity in addis ketema kifle-ketema. Therefore, the researcher strongly believes that identifying the existing challenges that the cooperatives and private MSEs solid waste collection initiative may face are very crucial and timely. And identifying the opportunities that may be accrued from such small-scale businesses help to applaud and acknowledge the initiative.

⁷ In Addis Ketema kifle ketema a maximum of 72 (8 in each kebele) cooperatives and/or private MSEs are expected to operate in door-to-door municipal solid waste collection scheme.

⁸ Kifle ketema is the medium (second) administrative stratum in Addis Ababa city administration structure

1.3. Objectives of the Research

The general objective of this research is to assess the challenges and opportunities of cooperatives and private MSEs solid waste collection initiative in Addis Ketema kifle ketema. The specific objectives are:

1. To identify the characteristics of door-to-door municipal solid waste collection service provided by cooperatives and private MSEs
2. To identify the possible challenges that may affect the sustainability of cooperatives and private MSEs door-to –door municipal solid waste collection scheme.
3. To examine the opportunities that may be accrued by the involvement of cooperatives and private MSEs in door-to-door municipal solid waste collection initiative
4. To recommend alternative solutions based on the empirical finding(s)

1.4. Research Methods and Material

The researcher selected addis ketema Kifle-ketema purposively as a research setting. Due to its commercial character, the municipality bears additional burden compared to others. In 2006, approximately 27 percent of the total collected in the city, according to solid waste management division official, was from Addis ketema Kifle-ketema. Despite such burden, the municipality has not entertained any additional resources. So that cooperatives and private MSEs are of significant contribution for Addis Ketema Kifle-Ketema to minimize such burden. Thus, they make able to prevent the environmental crisis that may happen. Moreover, the researcher is very familiar with the research setting, and quite large numbers of residences have not yet benefited from such micro and small-scale initiative.

1.4.1. Study Design

This research employed qualitative and quantitative procedure as a general approach. The target population both from the cooperatives and private MSEs had been contacted crossectionally to collect the appropriate data. Thus, the researcher pursued a

comparative study to identify their challenges and opportunities in the efforts to provide commercialized door-to-door municipal solid waste collection service to the residences and commercial premises.

1.4.2. Nature of Data

The types of data used in this paper are both primary and secondary. The researcher collected first hand data through face-to-face personal interview with selected door-to-door solid waste collectors from both the cooperatives and private MSEs by means of questionnaire. For this purpose, the researcher employed four data collectors who had attended two days training session before they start collecting the data. And they ended up collecting the data on the 7th day of March.

Unstructured interviews were also conducted with selected service recipients (clients) from both the cooperatives and private MSEs and, official from SWM division. Moreover coordinators/managers are also included as a sampling element to collect appropriate data related to the same business. The researcher also employed an intensive field observation as part of the research in its entirety to collect a lot of related information. Documents, publications and annual performance reports were also used as a secondary source of information.

1.4.3. Sampling Design

Since the study concentrates only on door-to-door municipal solid waste collection activity by the cooperatives and private MSEs, the researcher collected first hand data from the municipal solid waste collectors in the study area. First, the researcher stratified the sampling population as workers from the cooperatives and private MSEs. Then the sampling units were selected using proportionate stratified random sampling technique using fishbowl method by taking individuals from the attendance list. All coordinators/managers from selected cooperatives and all private MSEs were also included. Furthermore, key informant was selected purposively from the respective

office related with the cooperatives and private MSEs door-to-door municipal solid waste collection activity. The researcher also selected clients randomly (both from the cooperatives and private MSEs) from the customer list.

1.4.4. Sample Size

In the study area, there are forty (40) cooperatives and private MSEs, which are engaged in primary solid waste collection activity. Of these 32 (80%) are cooperatives while eight (20%) of them are private MSEs. Before deciding the sample size 10(31%) of the cooperatives were selected using fishbowl drawing method, and eight (100%) of private MSEs were included in the sampling frame.

Then, as table-1 below shows, the researcher selected 80(19.4%) solid waste collectors from the total sampling unit, i.e. 412. Of the total population 50 (12.1%) and 30 (7.3%) solid waste collectors were selected both from the cooperatives and private MSEs, respectively. For this purpose 19.2% and 19.7%, as indicated in the table below, of workers are selected from each cooperatives and private MSEs, respectively. Moreover, all the coordinators/managers/owners from the cooperatives (32) and private (8) MSEs are also included in the sampling frame.

Table -1 Sample Distribution from the Respective Cooperatives and Private MSEs

No	List of Sampled MSEs (Cooperatives) (31%)	Number of Employees in Each Cooperatives	Selected Employees from Each Cooperative (19.2%)	List of Private MSEs (100%)	Number of Employees from Each Private MSEs	Selected Employees (19.7%) from each Private MSEs
1	Besu Fekade	11	2	Dan	40	8
2	Eshet Abeba	70	13	Green view	28	6
3	Nib	8	2	Hibir	18	4
4	Ras Ages	40	8	Kedir	12	2
5	Set Yetekenage	26	5	Roha	6	1
6	Tseday wubet & Tsidat	40	8	Tatek Lesra	6	1
7	Tsedey (Part-2)	32	6	Tibeb Birhan	17	3
8	Yenege Fire	12	2	Yetebaberuth Wetatoch	25	5
9	Yewbete Chora	12	2			
10	Wubet (part -1)	9	2			
	Total	260	50		152	30

Source: Kebele Sanitation, Beautification and Park Development Unit

Primary data were also collected from key official and selected clients. For this purpose, one key informant and thirty clients (fifteen from each) from selected cooperatives and private MSEs were interviewed.

1.4.5. Method of Data Analysis

The researcher employed both qualitative and quantitative research designs as a principal and supplementary approach, respectively. And narration (descriptive type) was employed to analyze and interpret the data. It mainly focused on data presentation, analysis and interpretation at a time using ratios, percentages and mean. The researcher also used photos, figures and frequency tables as adjuncts to the discussion.

1.5. Scope of the Study

In an attempt to address the research objectives, the study is delimited spatially and operationally. The study is limited to Addis Ketema kifle-ketema as a research setting. Whereas door-to-door municipal solid waste collection as part of MSWM system to identify the existing challenges faced by the cooperatives and private MSEs solid waste collection initiative, and the opportunities accrued due to the involvement of cooperatives and private MSEs were taken as a priori task of this study.

1.6. Significance of the Study

The cooperatives and private MSEs, which involve in collecting the municipal solid waste in door-to-door basis, are of significant contribution in MSWM endeavors. Yet the service accessed by such innovative scheme is approximately 28.9 percent of the total residential houses and commercial premises in the research setting. Thus, studying the possible challenges that the cooperatives and private MSEs face may able to perform well by come up with solutions. Hence, investigating their problems and the existing opportunities has far-reaching implications for the municipality, the public at large and for the businesses itself. Moreover, those who are of interest in this field may use this paper as a stepping-stone for further investigation.

1.7. Limitation of the Study

In an effort to investigate the possible challenges and opportunities seen in the cooperatives and private MSEs engaged in solid waste collection activity, there were a number of limitations. Since the scheme is a recent phenomenon, there was no a well documented information. The other problem was that the respondents were not confident enough to give the right information, particularly on their customer number and revenue. Moreover, the variation in the number of employees from time to time was also a problem in conducting this research.

1.8. Area Description

Addis Ababa, the capital city of Ethiopia is the largest as well as the dominant political, economic, cultural and historical city of the country. It is a seat of the African Union and a variety of international organizations. Addis Ababa has since 1886 been the centre of most of the country's commercial and industrial activities. The city with a population of 3,035,138 is considered a major metropolitan city by any developing countries standard. It is located in the heart of Ethiopia with an area of 540 km². And it lies between 2000 and 2800 meters above sea level.

Addis Ketema, as figure-1 below shows, is one of the ten (10) kifle Ketema in Addis Ababa and has held nine (9) administrative kebeles.⁹ Different socio-economic and infrastructural conditions, population size, settlement pattern, and service coverage are the distinctive features in each kebele. It has an area of 698 (6.98km²) hectare and its average population size is 300,000. Merkato, one of the biggest open markets in Africa, also located in addis ketema kifle-ketema. As figure-1 below shows. Arada surrounds Addis Ketema kifle Ketema from the east, Gulele from north and northeast. Kolfe-keranio from west, and Lideta from south and southeast.

⁹ Kebele is the lowest (third) administrative stratum in the CGAA administration structure. Despite the total kebeles are nine at the present classification, they were more than twenty before the city classified into the respective kifle-ketema.

Administrative Map of CGAA by Kifle Ketema

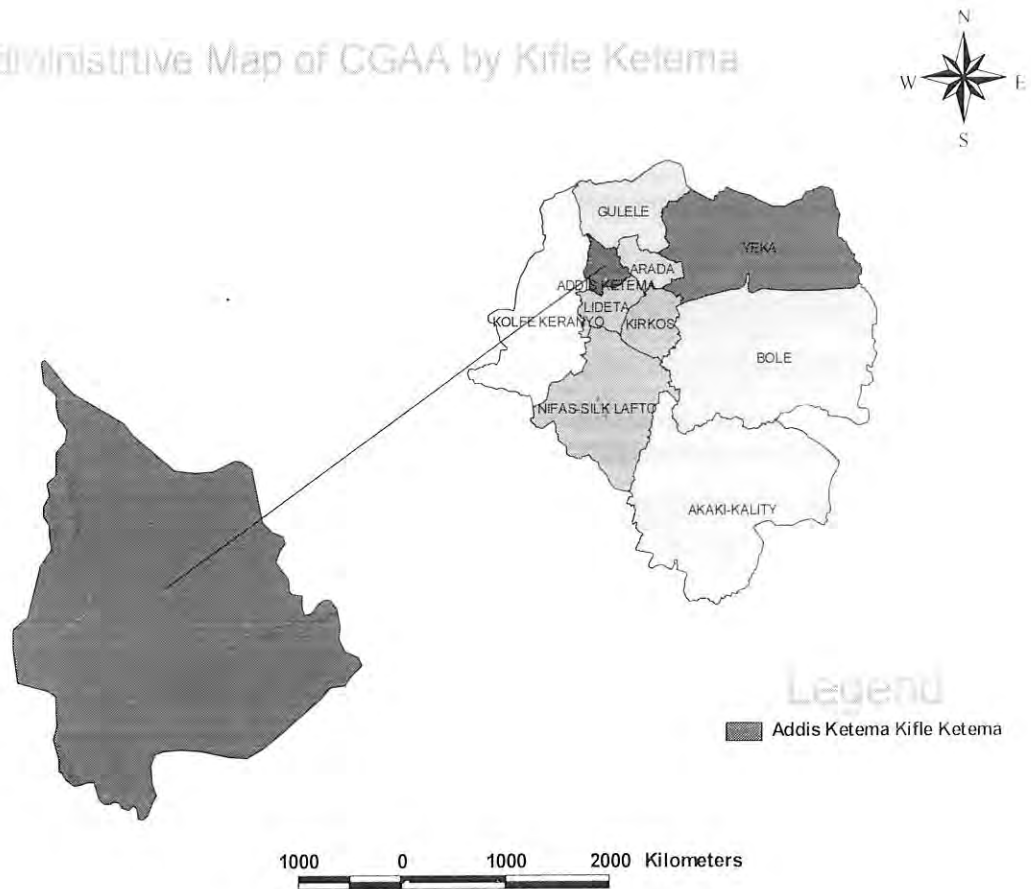


Figure-1: Shows the Study Area from the Administrative Map of the CGAA

1.9. Organization of the Paper

This paper has organized in four chapters. The first chapter is the introduction part. In this chapter, the research objectives and methods which attempted to address them are stated. Some of the literature on the problem, especially on the significance of MSWM, the possible actors and business arrangements were referred in chapter two (2). Results and discussions as the core part of the paper will be dealt in chapter three (3). In this chapter all the specific objectives are addressed. To this end, the same chapter has framed in three important themes i.e. respondents' and service characteristics, the challenges faced by the cooperatives and private MSEs, and benefits accrued from the same initiative. And conclusion and recommendation will be held in chapter four (4).

CHAPTER TWO

2. Review of Related Literature

2.1. Importance of MSWM

Municipal Solid Waste Management (MSWM) is a major responsibility of local governments. And it consumes between 20% and 50% of municipal budgets in developing countries. It is a complex task which depends as much upon organization and cooperation between households, communities, private enterprises and municipal authorities since it depends upon the selection and application of appropriate technical solutions for collection, transportation, recycling and disposal of municipal solid waste (Schübeler, 1996).

Furthermore, waste management is an essential task which has important consequences for public health, the quality and sustainability of the urban environment, and the efficiency and productivity of the urban economy (Schübeler, 1996). Cointreau (1994) also elaborated more as to what benefits can be accrued by MSWM. Although accurate measures of these benefits are not currently available, the following paragraphs highlight some of the most important benefits of investing for improved MSWM.

Improvement in Adult Health and Reduction in Child Mortality: In cities of developing country, ineffective MSWM systems cause health risks largely from direct and indirect contact with waste containing human faecal matter. Children, refuse collection workers, and scavengers are directly exposed to contaminated refuse. Excrete related diseases are responsible for one quarter to one-half of the deaths of children under the age of five. Important indirect health effects result from the breeding of flies, rats, and other disease vectors at dump sites and open garbage heaps and drains. Additional risks to public health are associated with exposure to toxic substances or hazardous materials that may enter the municipal waste stream.

Improvement in Water Quality: uncontrolled disposal of urban waste into water bodies, open dumps, and poorly designed land fills is a principal cause of surface and ground water contamination. In many cities of developing country, where local authorities lack adequate controls over toxic, industrial or other hazardous wastes may enter the municipal waste stream. Consequently, leachate from open dumps or uncontrolled land fills can cause large-scale, long term pollution of surface and ground water resources; and many of which are used for drinking or other economically important activities.

Improvement in Air Quality: Air pollution occurs due to inefficient local open air burning of waste, incineration in plants that lack effective treatment facilities for gaseous emissions, and through spontaneous combustion of refuse at dumps. Other causes of air pollution are the decomposition of urban waste and hence the vaporization and emission of chemical constituents into the atmosphere, and the dispersion of air borne particulates from open collection points.

Increased Urban Productivity: The impacts of inadequate MSWM systems on urban productivity are not well understood. However, the symptoms are evident throughout the city. For example, high rates of worker illness and absenteeism are attributed to poor hygienic conditions and the proliferation of disease carrying pests at open dumps. Moreover, poorly located and illegal dumps consume valuable land that could be better used for other purposes. These unsightly facilities also lower the value of land in the surrounding area. Refuse thrown into the drainage system blocks the flow of water that eventually causes flooding and consequent traffic blockages, road deterioration, and property damages.

Economic Development: in some instances, lack of adequate public or private solid waste services may inhibit industrial development. For example, small manufacturing firms may be forced to locate in alternative locations due to the prohibitive costs of supplying their own garbage trucks and haulers. Large firms by contrast may be able to afford these expenditures, but will suffer losses due to increased production costs. In

the absence of effective controls over industrial wastes, further costs may be imposed on the public and the natural environment due to the harmful effects of improperly disposed hazardous materials.

Since waste management is inadequate in most cities of developing countries, a significant portion of the population does not have access to waste collection service and only a fraction of the total waste generated in the respective cities are collected. Despite significant efforts are made, the majority of municipalities in developing countries can not manage the growing volume of waste produced in their cities by their own efforts alone. This inability to manage urban solid waste may attribute to inadequate budget, weak institutional structure, and misunderstand the complex system. So as to avert the possible cost of inadequate MSWM service, it seems sound to call for other actors for effective, efficient and sustainable service delivery in the municipalities.

2.2. Actors of MSWM

2.2.1. Local Municipal Government

According to Gidman et al., (1995) local municipal governments have a significant role in the set up and operation of waste management system. Most urban authorities in both industrialized and developing countries receive their powers and obligations from the central government authority to protect the rights of citizens to provide services, and to serve the common good.

Local governments have to implement laws and regulations. Firstly, in order to fulfill their statutory obligations. Secondly, a failure to provide a public service can result in risking the wrath of their constituents, the ridicule of the international community, and (at least in the case of democratically elected officials) ultimately their ability to get elected and enjoy the privileges of public office (Klundert, 1995).

Local municipal governments, by definition are charged to control living conditions and public health within this framework. Urban authorities around the world traditionally interpret their mandate to include the delivery of services including sanitation, waste removal and disposal within their political and geographic jurisdiction. This gives them formal responsibility for MSWM (Klundert, 1995).

Local government authorities become the legal owner of waste once collected or put out for collection. Besides their legal obligations, political interests normally motivate local governments. However, user satisfaction with provided services, approval of higher government authorities and financial viability of the operation are important criteria for successful solid waste management from the local government perspective. Besides MSWM, municipal governments are also responsible for the provision of the entire range of infrastructure and social services. So that needs and demands for MSWM must therefore be weighted and addressed in the context of the needs and relative priorities in all sectors and services (Schübeler, 1996).

To fulfill their solid waste management responsibilities, municipal governments normally establish special purpose technical agencies, and are also authorized to make contractual agreements with private enterprises to provide waste management services. In this case, local authorities remain responsible for regulating and controlling the activities and performance of these enterprises.

Therefore, according to Klundert (1995) the following are typical characteristics of the public sector in fulfilling its responsibility for waste management systems.

- Motivated by legal and political concerns, and sometimes by international prestige to perform activities because of the mandate and obligation; or because of the power and patronage they confer on the government or its representatives,
- Using resources generated from public taxes and/or fees for services to be rendered
- Regulating or contract out the service to the private sector.

2.2.2. Formal Private Sector

Formal private sectors include a wide range of enterprise types varying from micro to large business establishment.¹⁰ They involved in a wide ranging activities in waste management system. Waste collection, reusing and recycling, incineration, and landfill operation are the major areas where private businesses can involve. In general, the salient characteristic of formal private sectors is to generate a profit on a given investments. According to Furedy (1989), they may participate in waste management system in a number of ways including:

- Entering into contracts paid by the municipality to provide collection, processing disposal or cleaning services for compensation.
- Purchasing the right to deliver services and keep (all or part of) the income generated.
- Entering into contracts with individuals or businesses for collection services
- Functioning as a purchaser of recovered materials from the municipality or the collector.

As an alternative to large companies, MSEs have a special place in the MSWM efforts. MSEs do not have the problem of adapting to the local circumstances. They arise out of such circumstances and are mostly working with equipment, technology and approaches that fit the local condition. This is not to say that they cannot use help (Scheinberg, 2001). Hence, they are able to deliver door-to-door solid waste collection service to the area where large enterprises and/or the municipal governments did not reach yet.

As Haan et al.(1998) said, however, private MSEs are more concerned about their profit, rather than the needs of the community and protection of the environment. In some countries, such as Guatemala, private MSEs have operated with little relationship with the local government, and so they have been free to choose where to work. As a result, they tend to work in the areas where their profits will be the greatest,

¹⁰ Formal private sectors are business entities established on the basis of the procedure set by the competent authority. For this research purpose the set of criteria will be discussed latter in the analysis and discussion part.

i.e. the middle and high-income areas. Even if several MSEs are competent each other and keep to provide overlapping services, they prefer to stay in the more prosperous zones and avoid the low income areas .

Unfortunately, the co-operative movement, which is based on the principle of working together, has encountered in the past a large number of practical problems. Such problems affected a co-operative waste collection enterprise, which may split up after a few years following a "misunderstanding" among workers (Haan et al., 1998). Lack of business motivation is often reflected in a failure to adjust to market forces. As a result the operation started to depend on artificially cheap inputs or subsidized revenues, which in the end increases the risk of commercial failure (Carcellar, 1996).

Due to their profit orientation, private enterprises under appropriate conditions can provide MSWM services more effectively and at lower costs than public sector. However, private sector involvement does not in itself, guarantee effectiveness and low costs. Problems may arise when privatization is poorly conceived and regulated. This is true especially when there is lack of competition between suppliers (Schubeler, 1996)

Nevertheless, according to Klundert (1995) the following may be the potential benefits that can be accrued by the private sector involvement in MSWM. These potential gains whose realization depends not only on the quality of the private sector actors available but on the degree of oversight and control retained by the municipality. Examples of the gains to be made are listed below.

i. Potential Benefits to the Waste Managements System include:

- Greater efficiency and enhanced performance,
- Better management and accountability,
- Faster responses,
- Higher service ethics,
- Greater flexibility,
- Greater access to expertise and technology,
- Risk reduction.

ii. Potential Benefits to the Local Economy include:

- Creation of a more robust commercial sector in the country,
- Generation of sustainable employment in the private sector,
- The recovery of valuable materials from recycling activities can locally be used without loss of hard currency through foreign exchange.

iii. Social and Environmental Benefits include:

- The insulating of waste management activities from political patronage of civil service system,
- Conservation of resources when materials are recovered,
- Reduction in environmental damage from exploiting primary resources, including mining and deforestation.

2.2.3. Informal Private Sector

Informal sectors, in contrast with the formal ones in waste collecting and recycling, are often driven by poverty, and initiated personally and spontaneously (and sometimes haphazardly) in the struggle for survival (Lardinois, 1996). Due to the choice of materials and their ease to extract, handle and transport; paper, metals and plastics usually collected from more wealthy residential or industrial areas. As a result they tend to attract more attention than organic or biodegradable materials, despite the materials are present in much smaller percentages than organic waste or manures (Pacheco, 1992).

Informal waste workers usually live and work under extremely precarious conditions. Scavenging, in particular, requires very long working hours and often associated with homelessness. Besides social marginalization, waste workers and their families are subjected to economic insecurity, health hazards, lack of access to normal social services (such as health care and schooling) for their children, and the absence of any form of social security (Schubeller, 1996).

In general, the informal sector consists of two types of activities, individuals and families performing-activities which provide them with subsistence and small businesses

operating in much the same way as their larger and registered counterparts, but without the benefit of official registration. According to Pacheco (1992) the organization and structure of such activities is generally opaque to outsiders. This is true not only for waste pickers and itinerant waste buyers, but also for other groups such as small enterprises engaged in recycling metals or plastics. However, the role played by the informal private sector in waste management systems in general and as partners for municipalities in particular, is slowly achieving international recognition.

While informal-sector activities vary according to socio-cultural, religious and economic circumstances. Some generalizations about gender roles are possible. The least sophisticated forms of labor such as collection of waste from the streets and dumps, and primary sorting of the materials fall to the women and children. Most of them undertake any handling or sorting in their homes or yards. Men are more likely to involve in the processing or manufacturing of items and selling of recovered items and materials (Pacheco, 1994).

Schübeler (1996) also argues that the enchantment for the contribution of informal waste collection workers depend on improved organization among these workers. According to him support should aim to improve working conditions and facilities achieve more favorable marketing arrangements for services and scavenged materials, and introduce health protection and social security measures. So it is essential to recognize informal workers and that their activities be integrated into the planning of municipal collection and resource recovery services.

Klundert (1995) stated the following potential benefits accrued if informal sector are allowed to involve in MSWM activities. These include:

i. Potential Benefits to the Waste Management System:

- The successful recovery and return to productive use of materials that would otherwise end-up in the waste stream,
- The handling of large volumes of materials at no or marginal cost to the municipal government,

- Reduction of the amount of waste materials requiring collection and transport,
- Risk reduction, by transferring marginal activities, unpredictable costs or unreliable revenues to the private sector,
- Extension of the lifetime of capital investments such as environmentally appropriate sanitary land fills or compositing facilities,
- Provision of service at no cost to the municipality.

ii. Potential Benefits to the Local Economy

- The supplying of raw materials to the local manufacturing sector,
- To stimulating industrial production ,
- Providing of income- generating activity for a large number of people ,
- The availability of a tier products for poor people and able to improve the living standard of the poor at a price that they can afford.

ii. Social and Environmental Benefits include:

- Providing employment opportunities for a number of people who might otherwise not be able to survive,
- Supporting communities, and providing family and neighborhood cohesion,
- Improving health and safety conditions when informal activities are recognized and supported,
- Conservation of resources when materials are recovered,
- Reduction in environmental damage from exploiting primary resources, including mining and deforestation,
- Reduction in use of water in primary production.

2.2.4. Community Based Organization (CBOs)

Community based organizations (CBOs) represent another “home grown solution” to the problem of Urban Waste. They are often organized for the purpose of cleaning or improving the community, rather than as a means of survival (Sheinberg, 1998). The community and its representatives have a direct interest in waste management as residents, service users and taxpayers. Communities in the low-income areas generally

receive marginal or no services in terms of public transport, electricity, drinking water, sanitation, drainage, and waste removal (Klundert, 1995).

Communities sometimes take the initiative to organize themselves into CBOs with the direct goal of self-help and improving their wellbeing. Such CBOs may receive external assistance in the form of technical and/or financial from different agencies. Sometimes these activities may also take the form of direct participation in waste management, such as feeding organic materials directly to their stock. Usable materials like bottles are often reused by the members of the low-income community (Meyer, 1993)

Groups of citizens, including those from middle and high- income areas, may start CBOs aimed at improving the waste situation in their neighborhood. They may hire (informal or formal) waste collectors and make arrangements with local politicians for waste transfer points; and may also start waste separation experiments (Raman, 1994)

Middle and high income communities produce more valuable waste and hence attract low- income waste pickers where they are often assisted by watchman and domestic servants. Solving service problems in poorer areas is more likely to require intervention due to the materials have less value. CBOs mainly participate in primary waste collection systems, separation at source, experiments and implementation (Meyer, 1993).

Thus, CBOs speaking for the individuals or members involved to play an important role in waste management system development process. Organized communities have a stronger voice than individuals and bring about improvements more easily. They can also be organized along lines of gender or religion (Klundert, 1995).

2.2.5. Non- Governmental Organizations (NGOs)

Non- Governmental Organizations (NGOs) are intermediate organizations often not involved directly and continuously in community projects. NGOs not only advocate, they can also participate in awareness raising advocacy, and decision-making (Raman,

1995). They can act as intermediaries between grass roots initiatives and municipal governments, or serve the ideological, political, or altruistic interests of international organizations. They can advocate interests on a larger scale than the single community and provide support and advice to CBOs but also to marginal groups in the society, such as waste pickers at dump sites and street children (Raman, 1994).

The role of NGOs as partner organizations in waste management systems ranges from serving as the umbrella organization under which CBOs operate to provide a channel for donor financing. As partners, they can sometimes confer a degree of credibility and perspective on the informal sector in the eyes of the municipality (Raman, 1994).

Generally, the benefits and advantage resulting from the involvement of CBOs and NGOs, according to Klundert (1995) are summarized as follow:

i. Potential Benefits to the Waste Management System include:

- Contributing to solve problems at the local level, e.g., by setting up and supporting primary waste collection schemes,
- Mobilization of citizens and enhancing their participation in solid waste management schemes,
- Promotion of environmental awareness campaign,
- Provision of environmental health education, and
- Providing waste removal services to not served, marginalized or hardly accessible areas

ii. Social Benefits include:

- Supporting the poorer groups in the society, the low income communities as well as the waste pickers with technical assistance and advocacy,
- The provision of countervailing power,
- The stimulation of income generating activities for the urban poor, and
- The strengthening of organizational capacities of communities and informal individuals and entrepreneurs.

2.3. Forms of Private Sector Participation in MSWM:

The Private Sector Participation (PSP) most common to MSWM varies from country to country. Based on the financial status of private firms, municipal capacity and the country's prior policy agenda; one or many forms of PSP may be exercised. However, there are four major types of PSP: direct contracting, franchise, open competition (private subscription) and concession.

2.3.1. Direct Contracting

In this arrangement the government awards finite-term contract to a private firms for the delivery of service such as solid waste collection, street sweeping, collection of recyclables, transfer station operation, or fleet maintenance. The contract award is made after a competitive procurement process. The private firms are paid for service delivery by the government under the terms of the contract (Cointreau, 1994). The municipality can recover the cost by charging user fees through local taxation or by any other means (Haan et al., 1998).

Most experience in contract-out waste-related services by MSEs is found in South America. In Colombia, Peru and Bolivia, for instance, the municipalities contracted the majority of solid waste management services to small-scale businesses as an extension of the municipal solid waste system. MSEs work in places where municipal waste collection trucks are not able to go or in peri-urban areas with low population density where conventional municipal services are too expensive (Haan et al., 1998).

In Peru, for instance, well over a hundred public sanitation micro enterprises, most of which have contracts with local government for waste collection, street cleaning or park maintenance services (IPES, 1996). However, the municipality remains the main responsible body to supervise the services provided by MSEs. There is also a major role for the communities in monitoring the operations.

According to Haan et al (1998) direct contracting has advantages for both parties. For instance, municipalities can achieve a better coverage at a lower cost, whereas the contractors have a definite amount of work at an agreed price. There are also disadvantages for both parties. Such as the municipalities are responsible for the collection of fees often requires substantial personnel. And MSEs suffer if the payment from the municipalities is delayed. Moreover, MSEs are also dependent on the rate set by the municipality.

Directly contracted by MSEs has also been tried in Africa. For instance, in Dakar (Senegal) and Accra (Ghana, but with less success, according to Anoh, 1996 and Doucoure, 1996). According to them lack of success may attribute to the inability of some municipalities to pay regularly, and lack of sufficient organization in Africa that can provide support and training needed by MSEs. In Addis Ababa, the municipalities are not let to contract out the solid waste collection service yet, except vehicles from private (individual) enterprises.

2.3.2. Franchise Agreements

Franchising refers to awarding a local monopoly through competitive bidding to a private firm to deliver a particular service in a certain geographical area for a stipulated time (Haan et al., 1998). The contractor or franchisee (MSEs) pays the grantor (Municipality) and recovers the costs and profits by charging the beneficiaries (recipients) of the services. Thus, private firms themselves are expected to bear the costs of billing and collecting user charges (Dillinger, 1988). The cost of billing including costs of non-payment and late payment estimated to amount of 10 percent of the total cost of the consumer service. That is why franchise does not usually result in the same low cost as contracting (Ibid).

Formal franchising is not common for primary municipal solid waste collection service. Rather the de facto one through which municipalities authorize MSEs to provide the service in particular areas. In such arrangements MSEs are not supposed to pay for the municipality for its franchise (Haan et al., 1998).

For developing countries, however, franchise is applicable only in the areas wherein all of the households and establishments can be readily educated to pay concern about public cleanliness. Only in such areas would it possible for the private company holding the franchise to obtain full cooperation and cost recovery (Cointreau, 1994).

This particular form of franchising (the de facto one) is a typical zonal monopoly which is implementing and operating in all Kifle-ketema in the respective Kebeles since the end of 2005. All cooperatives and private MSEs are supposed to collect solid wastes only in their own-awarded jurisdiction. The directive allows these MSEs to deliver the service for the residential houses and only for those business premises with less than Birr 10,000 annual operating capital.

2.3.3. Open Competition

In open competition (also termed as private subscription) solid waste collection services, each household and commercial premise hires private collection firm and pays for solid waste removal service (PURSE,1991).

Generally, this form of privatizing solid waste collection service leads to substantially higher costs than incurred by the municipalities if contract-out to private firms, and often more costly than public service. When a number of competing firms operate in the same area along the same streets, each loses the "economies of contiguity" that would be received if one firm served the same area and picked up the waste from each establishment (Dillinger ,1988).

The main difference between open competition and franchise is that in the former arrangement, a number of contractors can compete with each other in the same areas for the same business, whereas for the latter one, the business entity appointed to work alone in the particular area or field without competition with other enterprises.

There are many cases of open competition which are not officially authorized by local governments and for which no license is granted and paid. According to Arroyo (1998).

some operate in such a way in parts of Central America and West Africa. And MSEs engaged in recycling activities compete each other without official permission. In the city of Guatemala, for instance, there are 300-400 MSEs which have been collecting household refuse without any kind of contract for the past 40 years, competing ferociously with each other, even following the same routes.

In Addis Ababa prior to the eve of 2006 private enterprises and cooperatives were collecting solid waste through open competition with and without licenses. However, few (six in number) private enterprises are providing solid waste collection service through open competition. The directive allows medium and large-scale enterprises to provide the service for those commercial premises operating with greater than Birr 10,000 annual capital. However, this is not the case so. Against the above rule, cooperatives and private MSEs deliver the service for quite a lot business enterprises with the above mentioned capital.

2.3.4. Concession

Under concession arrangements, the private sector finances and owns solid waste management facilities (Augenblick, 1991). In return, the government typically grants and enables access to a specified quantity and quality of solid waste and provides some form of tipping fees (Cointreau, 1994). However, concessions are not common with MSEs since it involves the purchase or construction of facilities hence can not be afforded by most MSEs (Haan et al., 1998).

In concessionary arrangement, the municipalities awarded the contract to private firms for the construction and operation of certain facilities such as large transfer stations or disposal sites (Cointreaus S.J., 1994). However, there are few examples of concessions involving MSEs in the waste sector. In Guatemala, for instance, a local NGO bought the Alameda Norte integrated waste treatment plant and able to derive income from the sale of recovered materials, such as plastics, clothes, glass and tin cans (Arroyo, 1998).

2.4. Conceptual Framework

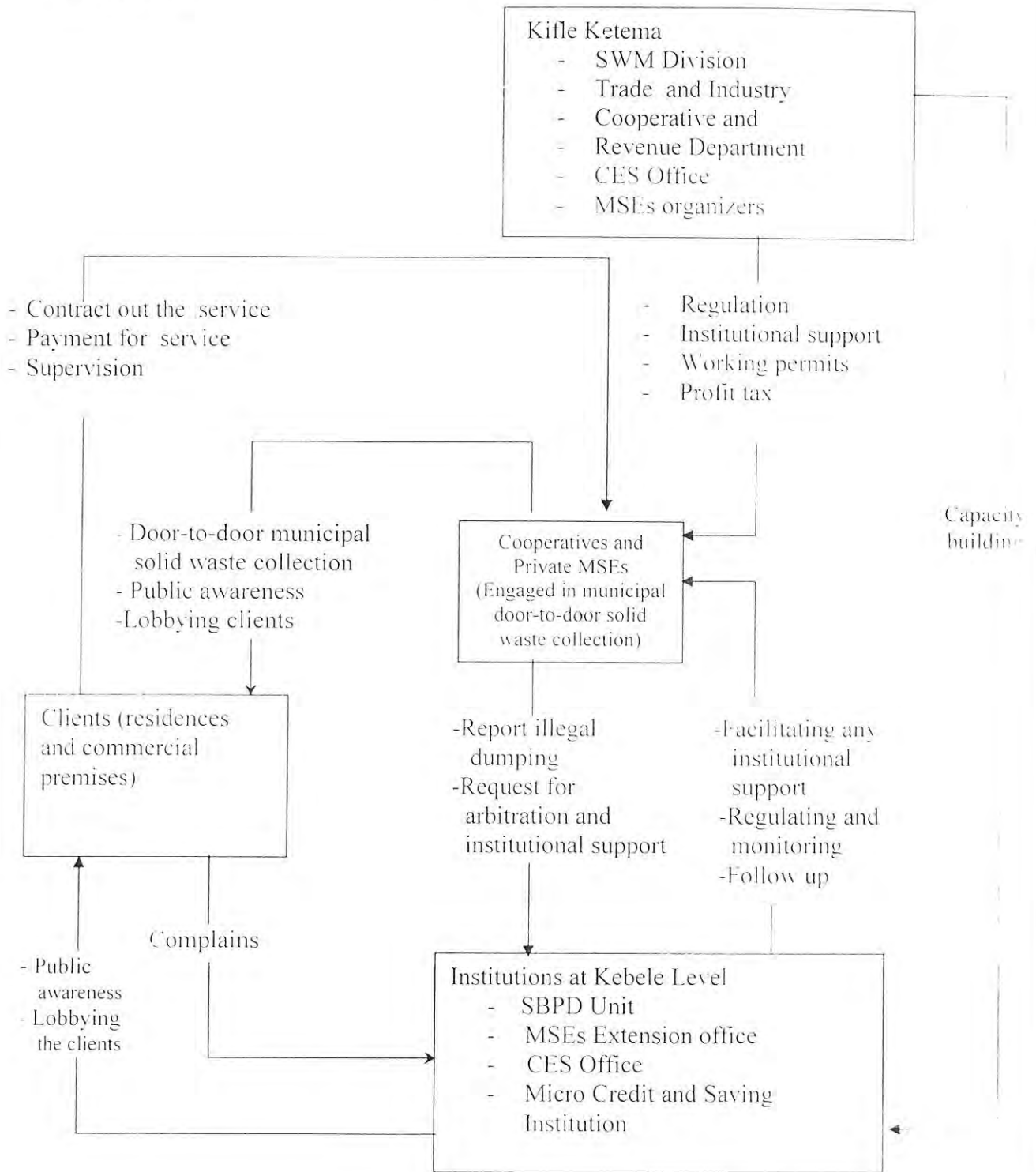
The diagram shown below reveals the concepts which are imperative to investigate the potential challenges and opportunities of door-to-door municipal solid waste collection scheme by examining the tripartite relationship among the municipality, cooperatives and private MSEs, and the clients. Thus their distinct relationship may determine the sustenance or failure of such innovative entrepreneurial initiative.

Such small-scale approaches often use simple equipment and labor-intensive methods and therefore, can collect municipal solid waste from places where conventional trucks of the municipality or large companies are not able to enter. MSEs also use additional advantage that their appropriate technologies allow them to provide low-cost services to those residences and commercial premises where large scale operations are too expensive. Moreover, MSEs contribute to the creation of jobs and income. Undeniably, such small-scale businesses will have the merits to the municipality.

Despite all the above merits, cooperatives and private MSEs may experience problems from three (3) sources. These are from the interaction (relationship) with the municipality, the internal management and administration arrangements of the cooperatives and private MSEs itself, and the clients.

For instance, lack of support (in different forms) from the government to solve the initial inefficiency may cause to frustrate in the business. Difficulties in accessing capital, lack of formal education and non-payment of sanitation fee, social disrespect to the solid waste collectors, and failure of clients to cooperate with cooperatives and private MSEs to make their waste available in a particular way and at a particular time. These aforementioned challenges may have their own impacts on the businesses who engaged in commercialized door-to-door municipal solid waste collection initiative.

Figure-2 A Franchised Approach to Investigate the Challenges and Opportunities of Cooperatives and Private MSEs in Door -to -Door Municipal Solid Waste Collection.



Source: Adapted from IPES, 1995 Cited in Haan et al., (1998)

2.5. Countries Experiences

Study of the PSP in Latin America showed that most of the firms were small to medium sized indicating that there were virtually no barriers to entry (Bartone et al., 1991). In Seoul (Korea) approximately 35 percent of the solid waste is collected by 85 private contractors, each of which is relatively small firm with an average of 6 vehicles (Conitreau, 1989). In Lagos, there are nearly 100 private contractors, most with only 1 or 2 vehicles and less than 10 with more than 5 vehicles (ibid).

Since 1990, a significant number of African countries have been implementing pre-collection schemes. The African examples include micro-enterprises set up by neighborhood youths in Abidjan (Ivory Coast) and Dakar (Senegal), by non-governmental organizations (NGOs) in Cotonou (Benin) and by private entrepreneurs in Conakry (Guinea) (Cointreau, 2000).

In Chennai, a major port city in Southern India, the French multinational Onyx won a contract with the municipal corporation to collect the waste and sweep streets in one area of the city (Jayaraman, 2002). Remuneration per ton of waste collected is significantly lower than the previous expenses of the municipality and Onyx has won many praises from many residents for good service.

In the five-year period from 1994 to 1998, by involving the private sector, Georgetown (Guyana) was able to increase the number of vehicles involved in daily collection operations from 4 to 18, more than double the frequency of service, and increase city-wide coverage from 50% to 85% (Cointreau, 2000).

In Indonesian cities, municipal governments have introduced and promoted the concept of organized citizen participation and involvement in primary collection schemes. In the city of Yogyakarta for instance, such schemes- using handcarts for house to house collection are managed by the community or neighborhood units and play a significant role in the city's solid waste management system (Yayasan, 1993).

In the case of Brazil and from similar neighborhoods in Sao Paulo and Rio de Janeiro indicated that refuse collection cost is lower and productivity is higher in Sao Paulo, where the private contractors provide the service. And Jakarta began to experiment with the private contracting for collection in 261 sub-districts (10 percent of the city's waste generating area) which comprised of middle to high income resident in relatively laid out development(Powell, 1991).

According to Contreau (1994), Bogotá (Capital city of Colombia) has also recently contracted for solid waste collection in two zones covering 40% of its service area. The competition between the private and public systems has led this city to streamline its roles by 30 percent largely through the attention of unproductive office employees.

For a comparable of service, tax payers in Rio de Janeiro, where a municipal enterprise provide solid waste services, pay at least twice the amount per metric ton of refuse collected as tax payers in Sao Paulo, where private firms are contracted to perform solid waste services. The higher productivity and efficiency of the private sector in Sao Paulo can be attributed largely to the higher labor and vehicle use efficiency of the private firms (Luiz, 1989).

While in Ethiopia, the private sector is not well developed in waste management. The majority of the main collection and disposal services are provided by the public sector administrations. However, there is an introduction and expansion of primary collection enterprises in the last 5 years in Addis Ababa and in a few other cities (ERM, 2004). These small enterprises provide collection services from households and commercial premises that are able and willing to pay for the service and the majority take the waste to the municipal collection point using handcarts or similar basic equipments.

However, the number of pre-collection companies in Addis Ababa has greatly increased in recent years and there are concerns that practice are not appropriately controlled and some companies are reported to illegal dumping. There are certainly inefficiencies in the system because of the freedom that the companies are given. For example, several companies might be collecting from different houses on the same street (ERM, 2004).

CHAPTER THREE

3. Result and Discussion

3.1. Respondents and Service Characteristics¹¹

3.1.1. Respondents Characteristics

3.1.1.1. Sex Composition

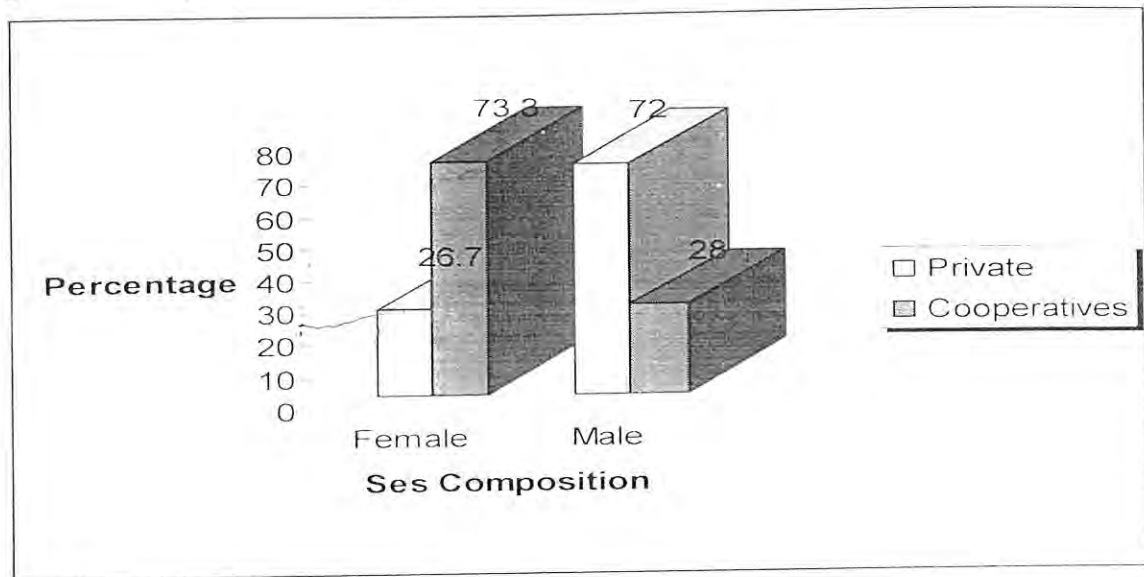
Respondents from privately owned enterprises and cooperatives are of quite different gender characteristics. As reveals below in figure-3, 56.2 percent of workers¹² are female while the rest 43.8 percent are male. However, 72 percent and 28 percent of workers from the cooperatives are female and male respectively. Nevertheless, majority of the workers (73.33%) from private enterprises are males whereas only 26.67 percent of them are females. Hence, as the figure below shows there is female-male dominance in the cooperatives and private MSEs, respectively.

However, the survey has found that workers' sex composition particularly from the cooperatives is somewhat different with what Inge Lardinois (1996) finding in El Salvador, Costa Rica, Guatemala, Colombia and Bolivia. In his publication the participation of females in waste collection activity in Central America is minimal, except in Peru. Nevertheless, the males' dominance in private enterprises is quite consistent with the same study by Inge Lardinois (1996) in the above-mentioned countries. The latter scenario may be true for the reason that private owners believe males are stronger than males to travel long distance pushing the carts searching for vacant containers. However, in general the survey result has shown that there is a possibility to change such traditional division of labor between male and female.

¹¹ Service in the entire paper refers to door-to-door municipal solid waste collection supposed to provide to the respective clients (residences and commercial premises).

¹² Refers to employees who engaged to collect the municipal solid waste from their respective clients in door-to-door basis. They are the ones selected so as to collect the first hand data as per the schedule.

Figure-3: Sampled Workers' (n=80) Sex Composition



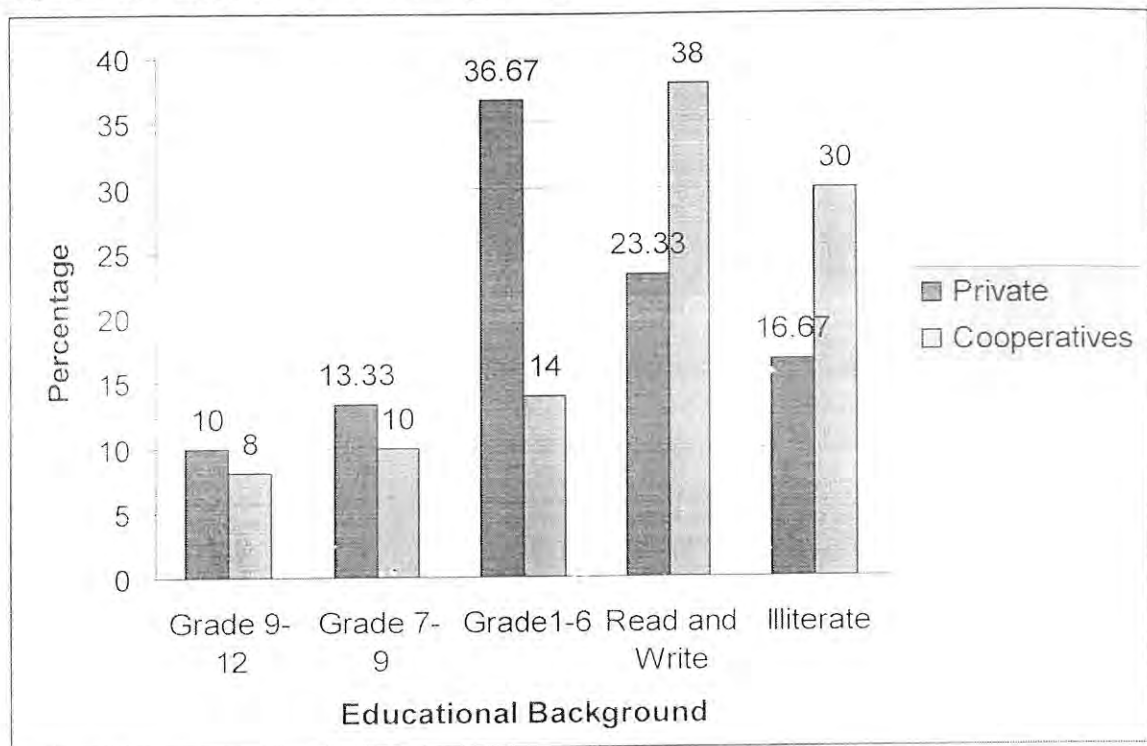
Source: Own Data (2007)

3.1.1.2. Educational Background of Workers

Based on the research conducted, the majority of them did not go far in their education. According to the field survey, 32.5 percent of the workers are at most capable of reading and writing. Whereas 22.5 percent, 11.3 percent and 8.7 percent of workers had achieved 1-6, 7-9 and 9-12 grade levels respectively. Nevertheless, none of them joined technical and vocational training institute.

While the field survey identified that 30 percent and 16.7 percent of workers from the cooperatives and private MSEs, respectively are illiterate. Whereas 14 percent and 36.7 percent of workers in the cooperatives and private MSEs are found in grade 1-6 in the same order. However, only 8 percent and 10 percent of workers from the cooperatives and private MSEs had reached high school grade level, respectively. As figure-4 reveals that workers from private MSEs are of better educational level than workers from the cooperatives are. Hence, this indicates that level of education is not required to be employed in such a business. However, according to Haan et al (1998), little formal education may result in poor financial management (i.e. inadequate bookkeeping, poor cash flow forecasts, and unrealistic pricing), and problems in complying with legal requirements.

Figure-4: Sampled Workers' (n=80) Educational Background



Source: Own Data (2007)

3.1.1.3. Age Composition of Worker

Table-2 indicates that there is a variation in age composition among sampled workers. For instance, 72.5 percent of workers range between the age of 15 and 30. Only 27.5 percent of workers are older than 30 years of age. However, 64 percent and 86.7 percent of workers from the cooperatives and private MSEs respectively lie between the age of 15 and 30. Whereas 36.7 percent and 36 percent of workers from the cooperatives and private MSEs belong to the age category of 21-26 and greater than 30 years of age in same order. Table-2 also vividly shows that workers from the cooperatives are older than private MSEs are. This result fits with the interview made with private owners and my filed observation. Accordingly, the private owners prefer to employ youngsters to do the job effectively and efficiently in multiple zones and under stressful condition.

Table- 2 Age Compositions of Workers (n=80)

Age of Workers	MSEs Workers (Cooperatives)		MSEs Workers (Private)		Total	
	F	%	F	%	F	%
15-20	5	10	8	26.7	13	16.3
21-26	10	20	11	36.7	21	26.2
27-30	17	34	7	23.3	24	30
>30	18	36	4	13.3	22	27.5
Total	50	100	30	100	80	100

Source: Own Data (2007)

3.1.1.4. Martial Status of Workers

The study also assessed the marital status of workers in the cooperatives and private enterprises. As clearly shown in table-3, the majority (32.5 %) of them are married while 28.8 percent of workers are single. Where as 18.7 percent and 20 percent of them are found widow and divorced respectively. The table has also shown a clear variation between cooperatives and private enterprises workers. For instance, the greatest (40 %) and the least (16 %) number of workers from the cooperatives are married and single respectively. However, 50 percent and 10 percent of workers from private enterprises are single and widow in the same order.

Table- 3 Marital Status of Solid Waste Collectors (n=80)

Martial Status of Workers	MSEs workers (Cooperatives)		MSEs workers (Private)		Total	
	F	%	F	%	F	%
Single	8	16	15	50	23	28.8
Married	20	40	6	20	26	32.5
Divorced	10	20	6	20	16	20
Widow	12	24	3	10	15	18.7
Total	50	100	30	100	80	100

Source: Own Data (2007)

However, the majority of workers are responsible for all of their family affairs. For instance, out of 20 married women, only a few (6) of them are supported by their husbands. The survey also identified that workers from private enterprises and cooperatives are of 0.38 and 1.52 children on average respectively. Except nine (18%) and two (6.7%) from the cooperatives and private MSEs respectively, all of them are residing either by renting house or on the streets respectively. Yet none of them has other formal means except trying their best to complement their income especially after they end-up the job. Therefore, the above table realizes how these segments of the community are striving for survival, and serve as a typical reference as to how such municipal service could also help as a means of livelihood for those having economic and social problems.

3.1.1.5. Religion, Ethnicity and Place of Origin

The field survey also assessed the ethnic and religion diversity, and place of origin of workers. As table-4 reveals, 25 percent, 23.8 percent and 13.7 percent of the sampled workers are from Amhara, Oromo, and Tigray and Guragie ethnic groups respectively. While only 12.5 percent and 11.3 percent of them are from Hadiya and Wolita ethnic group respectively. Whereas 34 percent, 22 percent, and 18 percent of workers from the cooperatives are from Amhara, Oromo, and Guragie ethnic groups respectively. Nevertheless, 33.3 percent, 26.7 percent, and 13.3 percent of workers from private enterprises belong to Hadiya, Oromo, and Wolita ethnic groups in the same order. However, only 10 percent, and 6.7 percent of workers from private enterprises belong to Amhara and Tigray, and Guragie ethnic groups respectively.

Table -4 Ethnic Composition of Workers (n=80)

Ethnic Group	MSEs Workers (Cooperatives)		MSEs Workers (Private)		Total	
	F	%	F	%	F	%
Oromo	11	22	8	26.7	19	23.8
Amhara	17	34	3	10	20	25
Tigray	8	16	3	10	11	13.7
Guragie	9	18	2	6.7	11	13.7
Hadiya	-	-	10	33.3	10	12.5
Wolita	5	10	4	13.3	9	11.3
Total	50	100	30	100	80	100

Source: Own Data (2007)

Except few, the majority of them told their place of origin by region and to which religion they belong to. As a result, 23 percent, 15 percent and 12 percent of workers from the cooperatives belong to Orthodox, Muslim and Protestant religions respectively. Whereas 33.3 percent, 23.4 percent, and 13.3 percent of workers from private MSEs belong to orthodox, protestant, and Muslim religions respectively. However, 30 percent of workers from private enterprises are not sure enough to which religion they really belong

As table -5 vividly shows those engaged in door-to-door municipal solid waste collection originally came from different administrative region. Accordingly, the majority (23.8 %) of workers are from SNNPR followed by Amhara (17.5 Percent), Oromia (16.2%) and Addis Ababa (15 %). Where as only 3.8 percent of workers are from Benishangul Gumuz regional state. So this result indicates that the majority (85 %) of them are migrating from different regions in search of better employment opportunities to the city of Addis.

Table -5 has also revealed similar result in the cooperatives and private MSEs. Except 14 percent and 16.7 percent of workers from the cooperatives and private enterprises respectively, almost all of them are migrants. For instance, 24 percent, 16 percent, and 14 percent of workers from the cooperatives are from Amhara, SNNPR and Oromia regions respectively. Whilst 36.7 percent, 20 percent, and 6.7 percent of workers from private enterprises came from SNNPR, Oromia , and Amhara Regional State, respectively.

Table-5 Workers (n=80) Place of Origin by Region

Workers' place of Origin	MSEs Workers (Cooperatives)		MSEs Workers (Private)		Total	
	F	%	F	%	F	%
Oromo	7	14	6	20	13	16.2
SNNPR	8	16	11	36.7	19	23.8
Amhara	12	24	2	6.7	14	17.5
Tigray	5	10	1	3.3	6	7.5
Benishangul	2	4	1	3.3	3	3.8
Addis Ababa	7	14	5	16.7	12	15
Gambella	4	8	1	3.3	5	6.2
No Answer	5	10	3	10	8	10
Total	50	100	30	100	80	100

Source: Own Data (2007)

3.1.2. Service Characteristics

3.1.2.1. Policy and Legal Framework

In cognizant of improper SWM has a serious health and environmental implications, the Ministry of Federal Affairs (MoFA) come up with a national solid waste management policy. In the same document active and vibrant private sector are called to involve in such municipal activity. Recently the House of Peoples' Representative (HPR) also endorsed proclamation on solid waste management. This legal paper also attested that private sectors are of irreplaceable role in an effort to manage the increasing volume of solid waste at national level. The above measures seem taken to support what is stated in art.44 of the FDRE constitution that "every body has the right live in a clean and healthy environment." And in art.49 in the same legal document "government bodies and citizens are responsible for the implementation of the above promises."

On top of the above measures taken at federal level, the CGAA has shown similar efforts on MSW sector. The establishment of new Agency (SBPDA), the promulgation of solid waste management policy and regulation, and a number of manuals directly related with municipal solid waste management and private sector involvement can be

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mentioned. For instance, art.21 (6) in regulation no.13/2004 "private investors, cooperatives, micro and small enterprises, non-governmental organizations and community associations are encouraged to take part in MSWM endeavors."

Decentralization is also another area the Agency shows the courage. Accordingly, except to provide some technical support and prepare operational manuals, the sub-cities have mandated to the duties and responsibilities of managing the municipal solid waste in their respective jurisdiction. For its implementation, they use their own budget and resources; organize themselves to execute their duties and responsibilities. For the same purpose, sanitation and beautification team assigns personnel by devolving the organizational structure to the Kebele level. So that they are considered the proxy unit and accountable to the sanitation and beautification team to the sub-city.

To this end different departments in the sub-city are expected to execute their duties. For instance, CES, MSEs and cooperatives office, trade and industry department, traffic and regular police contribute a lot for the success of effective and sustainable private sector initiative working in door-to-door municipal solid waste collection activity.

Coordinators/mangers were asked whether the legal procedure has caused any problem on their business or not. According to them, the legal procedure did not discourage them to start the business. However, the coordinators/mangers both from the cooperatives and private MSEs are not comfortable with the fact that lack of standardized service fee to be paid by the clients and binding forces for punishment schedule attached with regulation no.13/2004, were the gap seen in the legal document.

The absence of clear criteria to award a franchise to each cooperatives and private MSEs was also another shortcoming in the legal document.¹³ Furthermore, since some of the clients have already been paying for the government for the purpose of beautification and sanitation of the city, some of the beneficiaries resisted to do so for

¹³ As it is also observed in the field, there is no formal and well-studied set of criteria to award the zone to the respective franchisee. However, the demarcation has been conducted paying due emphasis only not to miss greater than 50 percent of their customers from the previous sphere of influence.

such small scale businesses. As a result clients request to be provided the service either by the government or the private sector. The cooperatives and private MSEs also suggested to directly contracting-out the service from the municipality rather than providing the service through franchising. This was due to the resistance for monthly payment from the potential service recipients.

3.1.2.2. The Nature of Service

Both the cooperatives and private MSEs have made agreements with the kebele sanitation, beautification and park development unit to provide the following service within their jurisdiction:

1. Primarily collecting the municipal solid wastes (MSW) from the residential houses and commercial premises operating with less than Birr 10,000 annual capital as a primary business.
2. Participating in regular and emergency sanitation campaign within their own jurisdiction,
3. Street sweeping and squares cleansing within their respective zones which are not addressed by the municipal street sweepers .
4. Collecting and taking dead animals' bodies to the place where containers are available,
5. Collecting municipal solid wastes dumped illegally in their franchised area . and
6. Keeping their respective jurisdiction as clean as possible

All of the cooperatives and private MSEs are supposed to collect solid wastes from residential houses and commercial premises that are willing and able to pay for sanitation service. The field observation also attested that they have been actively participating in regular and emergency campaign in their own zones. Except in rare cases the cooperatives and private MSEs do not give due emphasis to the rest of the responsibilities they are agreed to. This situation is quite consistent with Haan et al (1998) observation that pre-collection is the most common duty to be entrusted to MSEs

by local government. Arroyo (1998) has also strengthened the above facts the study conducted in Guatemala, El Salvador, Costa Rica, Colombia, Brazil, Bolivia and Peru.

However, except few, majority of commercial premises (even those with greater than Birr 10,000 annual operating capital) have been observed to entertain the service from the cooperatives and private MSEs. The reason behind such restraint, according to one of the official from SWM division, is due to the capacity problem to collect such quite large volumes of solid wastes from the commercial premises. The same official also said that, the municipality itself, and the existing businesses are not well-equipped to manage the potential large quantum of commercial wastes. This seems a strategic call for medium and large-scale enterprises to support the municipality. In this case, the municipality requires them to come up with their own waste trucks.¹⁴

Coordinators/owners of the cooperatives and private MSEs listed down the reasons why they did not comply with the agreement. Majority of the coordinators from the cooperatives said that 'lack of capacity' was a serious problem. Others still said, 'lack of motivation' due to inadequate monthly salary. Whereas some of the managers from private MSEs started by saying, "the above listed commitment contradicts with the very essence of franchising". It is also very ambitious, according to them, to expect all these duties from the cooperatives and private MSEs. The rest of them from private enterprises said that, among those duties mentioned above, specially the fifth one discourage the existing customers and promotes illegal dumpers. Parallel to this, Haan et al (1998) recommended that:

- MSEs should suit to tasks where there are no economies of scale,
- The effect of the economy of scale is easily compensated by increased efficiency, and
- MSEs are best suited to tasks that do not require any additional expensive equipment.

¹⁴ These enterprises may feel that MSEs might restrict their opportunities for expansion and undercut their charges, and for these reasons oppose the introduction of MSEs service. Such opposition might be avoided if the role of MSEs is clearly different-for example collection in areas where the larger enterprises do not wish to operate due to their vehicles can not go there and/or the people are not willing to pay for it (Haan et al., 1998).

While the level (frequency) of service provided largely depends on the agreement made between the cooperatives and private MSEs, and the respective clients, according to the interview made with the coordinators/manager. In most cases, such an agreement depends on the volume of waste generated from the respective client. However, quite large number of commercial premises in Merkato (Kebele 10/11/12, 01/02/03 and, partially in Kebele 13/15 and 04/05), require the service at daily basis. Nevertheless, the cooperatives and private MSEs agreed with household clients to collect the waste once or twice per week. Despite such agreement, as clients attested, most cooperatives did not deliver the service as per the schedule. As also evident in the field, the absences of vehicles complicate the relationship between service providers and recipients.

All the cooperatives and private MSEs collect the service fee per month. The cooperatives and private MSEs determined the sanitation fee primarily based on the volume and characteristics of waste, delivery frequency, and ability of customers to pay were considered. Then, both service providers and recipients will negotiate. Since there is no a predetermined price standard, disputes between both parties seem very likely. Nevertheless, households paid ranging from Birr five - Birr15 (an average of Birr 10). Whereas, cooperatives and private MSEs charged commercial premises ranging from 10 Birr- Birr 250 (an average of Birr 130). Hotels, fruit houses and chat shops paid the largest.

3.1.2.3. Public Awareness Programme

The most important aspect related to storage and collection is public awareness-informing citizens about services which tend to be provided, and their responsibilities; and motivating them to cooperate and develop a concern for the environment (Coad, 2005). Awaking the public makes able to cultivate better output in a project whereby the public are the ultimate beneficiaries. Art.92 (3) in the FDRE constitution also states that "people have the right to a full consultation and expression of views in the planning and implementation of environmental policies and projects that affect them directly." And a new commercialized door-to-door municipal solid waste collection initiative is not an exception.

Despite the above, the Agency seems consider it as a luxury. Not only had the previous system, the Agency implemented a new zonal monopoly approach without the consent of the public. Rather the SBPDA empowered the sub-cities to organize and give working permits, and freed them to try to their best. However, it should have been very logical if the Agency invited the ultimate beneficiaries to comment on the new system before implementation. Coad (2005) also confessed that whatever arrangements are made, the role of every citizen should not be forgotten.

Unlike the direct contractors, a lot is expected from the franchisees themselves to convince the public in their respective jurisdiction. According to the interview made with an official, Kebele MSEs extension workers are supposed to support the cooperatives in lobbying the public. Nevertheless, private enterprises have managed themselves by devising different marketing strategy. The former one may be due to the fact that workers from the cooperatives, according to the same official, lack of skill, motivation and endurance. He also said that, this was really the toughest challenge that the business faced to start the job.

As it was expected ignorance, apathy, and opposition by the public made solid waste collection much more difficult and challenging, according to the coordinators/managers from both the cooperatives and private MSEs. Thus, both the cooperatives and private MSEs had employed a number of strategies to customize the business in such a fatigue environment especially at its infancy stage. These include:

- Provide solid waste collection service freely for a few months,
- Provide the same service with low price as the service recipients wish and,
- Continuous public education in door-to-door basis.

Despite significant confrontation, 70 percent of the coordinators/managers (look at figure-5) attested that the market has shown progressive trend. However, as table-6 also vividly indicates, the cooperatives and private MSEs delivers only to 28.9 percent of the total residential houses and commercial premise. So this precisely reveals that there is a possibility to extend the market if the public had the chance to let them know the consequences of improper solid waste are managed.

3.1.2.4. Market Characteristics

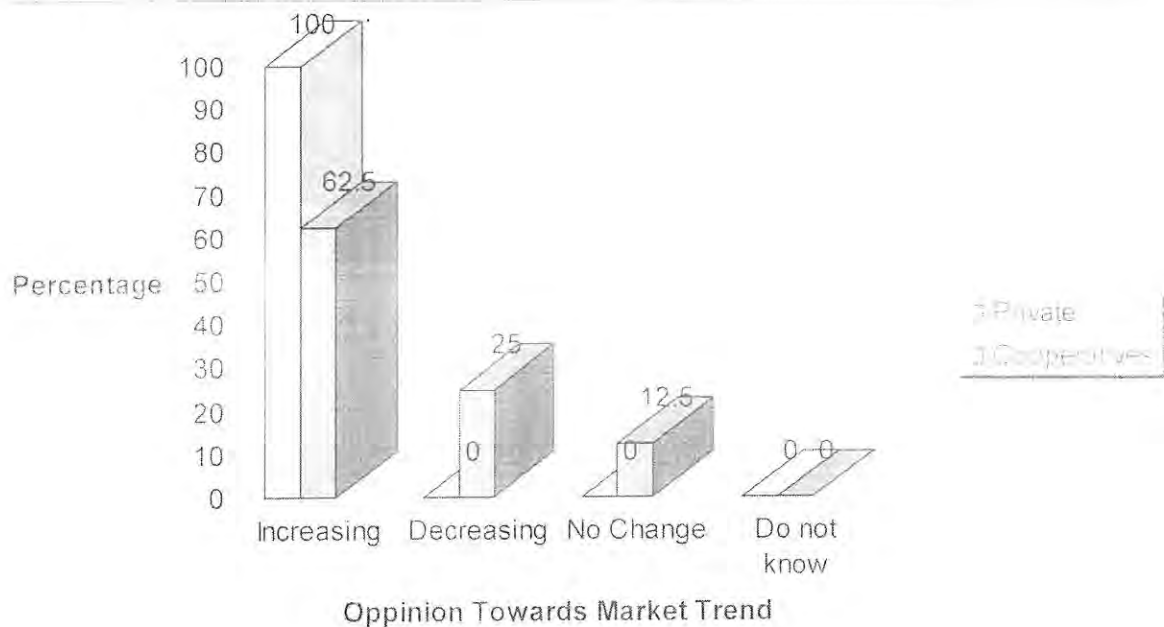
The existing cooperatives and private MSEs sell their service for those who are willing to pay for it.¹⁵ Market is known to be the most crucial component, may be the best in promoting micro and small scale business initiatives. For this purpose, the market trend was assessed by interviewing coordinators / managers. Accordingly, 70 percent of coordinators/managers said that the market had an increasing trend. Whereas 20 percent of them said that, the market was rather decreasing from time to time. The balance (10 %) replied that there was no significant market change.

As clearly indicated in figure-5, 62.5 percent and 100 percent of the coordinators/managers from the cooperatives and private MSEs, respectively said that the market has remarkably shown an increasing trend. While the rest 25 percent and 12.5 percent of the coordinators/managers from the cooperatives said that, there was a decreasing and no change market trend, respectively. Thus, the above statistical figures unconcealed that, despite some variation, market does not seem their serious problem. Thus, the result seems inconsistent with what is stated in MSEs Development Programme (2007) Bulletin that market is a serious problem in door-to-door municipal solid waste collection business.

The survey also identified the secret behind the success story of market. Accordingly, the provision of quality service, working in a great sense of motivation, devising different market promoting strategies such as provision of commission for workers who came up with additional customers, providing incentives to workers, undertaking self-motivating cleaning campaign in their respective zones, and by establishing a good relationship with customers were mentioned by the coordinators/managers. The field observation has also evidenced that coordinators from the private enterprises would pay occasional visit to their clients and collect complaints (if any). However, this is not the case in the cooperatives. This may indicate how the cooperatives are less motivated to scale up the business than private MSEs are.

¹⁵ There is no rule or by-law which forced individuals to be a client in this municipal service provided by small-scale initiative. Rather, the clients are expected to pay as per the agreements with the cooperatives or private enterprises

Figure-5: Coordinators/Managers' (n=40) Opinions toward Market Trend



Source: Own Data (2007)

However, 25 percent of the coordinators/managers from the cooperatives shifted the blame to the following reasons.

- Lack of properly paved roads which shortens the life span of the pushcarts and wheelbarrows ,
- Lack of ability to pay (since the zone is inhabited predominantly by the poor people who in most cases do not care about sanitation). Cointreau (2000) also said that each zone should have a similar level of difficulty to the service and opportunity for generating income. In other words the problems and opportunities should be equitably shared or distributed.
- Lack of open lots to use them as a temporary transfer points and the farthest location of containers, hence demands to travel the longest distance.
- Some of the residences prefer to dump the solid waste on open lands, sewerage and rivers than delivering the waste to MSEs for the reason that there is a challenge to implement the regulation. This, too, would discourage those who are supposed to benefit from MSEs scheme.

- The municipality itself; according to the coordinators/ managers, since the municipal vehicles themselves provide door-to-door municipal solid waste collection service, (though rarely) which attributed to customer reduction.

Despite the majority of them are satisfied by the market trend, a large number of residences and commercial premises have not been addressed. As table-6 below indicates, on average, only 28.9 percent of residences and commercial premises are benefited by the cooperatives and private MSEs initiative. However, the majority (71.1%) of residential houses and commercial premises dump their wastes either to communal (shared) containers or illegally on open lots, sewerages and/or course of rivers. Thus, such gross information may reveal the potential to scale up the existing service market. Despite this opportunity as observed in the field, lack of vehicles could be a bottleneck to expand their market.

Table-6 also shows customers' variations among Kebeles accessed by the cooperatives and private MSEs. Accordingly, 59.9 percent, 37.7 percent, and 26.9 percent of residential houses and commercial premises have benefited from such small-scale scheme in Kebele 10/11/12/, 13/15, and 04/05, respectively. Although Kebele 01/02/03 is largely known of its commercial character, only 16.5 percent of residential houses and commercial premises were benefited from such initiative. However, 47.5 percent of residential houses and commercial premises in Kebele 14/21 have got the service from the cooperatives and private MSEs. As indicated in table-6 and evidenced by the field observation, the majority of the cooperatives and private MSEs are more inclined towards commercial areas and prosperous residences where regular service payment has no longer been a serious problem. This is quite consistent with Haan et al (1998) observation that service-based MSEs prefer to stay in more prosperous zones and avoid low income areas.

Table -6 Service Gap by the Cooperatives and Private MSEs

Kebeles	Number of MSEs by type		Total number of residential houses and commercial premises	Residential house and commercial premises(served)		Residential houses and commercial premises (not served)	
	Cooperatives	Private		In number	In percentage	In number	In percentage
01/02/03	2	3	9577	1577	16.5	8000	83.5
04/05	1	5	4576	1231	26.9	3345	73.1
06/07	2	3	2548	670	26.3	1878	73.7
08/09/18	2	4	4365	547	12.5	3818	87.5
10/11/12	4	4	5928	3550	59.9	2378	40.1
13/15	1	7	4024	1514	37.7	2510	62.3
14/21	1	2	2399	1140	47.5	1259	52.5
16/17	2	4	4377	720	16.4	3657	83.6
19/20	1	1	2401	416	16	2185	84

Source: Kebele sanitation, beautification and park development unit, and finance bureau.

Apart from customer variation shown in each Kebele in the above table, the number and types of MSEs also varied. As table -6 has clearly revealed, the number of private MSEs in each Kebele are greater than those of the cooperatives. Moreover, out of the nine Kebeles, the maximum numbers of cooperatives and/or private MSEs are seen only in two Kebeles (10/11/12 and 13/15). And followed by Kebele 04/05, 08/09/18 and 16/17. Whereas in Kebeles 14/21 and 19/20, there are only two and three cooperatives and private MSEs. Despite only three cooperatives and/or private MSEs in Kebele 14/21, 47.5 percent of the total residential houses and commercial premises are accessed to the service.

3.1.2.5. Contractual Arrangement

Amongst various contractual arrangements as discussed in the literature part, except medium and large enterprises all micro and small-scale enterprises are providing the service through the de facto franchising arrangement since November 2006/07. Prior to the eve of 2007, however, open competition was the commonest arrangement to provide door-to-door municipal solid waste collection service. Due to lack of accountability and conflicts among the business actors in the same area, the Agency forced to come up with a new business arrangement by revising the previous one.

To implement the new arrangement, each Kebele divided into eight franchises (zones). Accordingly, eight cooperatives and/or private MSEs assumed to be the maximum limit in each Kebele.¹⁶ The Agency designed such a local monopoly with the intent to create accountability and conflict-free zones among the cooperatives and/or private MSEs. Such restriction on the number of cooperatives and/or private MSEs also helps to create an opportunity for all residences and commercial premises, which are able and willing to pay additional sanitation fees.¹⁷

Despite the Agency was confident enough to achieve the above core objectives by introducing a local monopoly approach, these could not be realized in many jurisdictions. Some workers particularly from the cooperatives were heard of saying that "zone breakage" by private MSEs is a common tragedy. This is true especially when the absences of vehicles reach at a crisis level. Despite, cooperatives and private MSEs are granted a franchise to provide the service for all residences and commercial premises in the respective zone, the sanitation, beautification and park development coordinators denied the fact that the franchisees rather pretty much calculative and provide the service selectively. Moreover, the field observation has also evidenced that there seem no cooperatives and private MSEs in some zones.

In accordance with Polluter Pay Principle as stated in Environmental Pollution Control proclamation no.300/2002,"the cost of disposing waste must be borne by the holder who has waste handled by a waste collector or the previous holders or the producer of the product from which the waste came." Article 25(1) in regulation No.13 /2004 also states that "any person residing in the territorial jurisdiction of Addis Ababa City Government shall pay sanitation fee for the sanitary service she/he/ it receives by considering her/his/its income status."

¹⁶ When international contractors are involved, a zone should have populations of approximately 400,000 to spread the cost of foreign expertise for supervision of planning and operations (Cointreau, 2000). However, in our case the above population size expected to entertain the maximum of 72 cooperatives and/or private MSEs.

¹⁷ Despite insignificant, the majority of the public are paying directly for sanitation and beautification of Add:s Ababa. All business owners are supposed to pay ranging from Birr 25 to Birr180 based on the amount he/she paid for license renewal. Moreover, since June 2005 the CGAA Water and Sewerage Authority had introduced an additional 5 percent tariff from monthly water consumption for sanitation and beautification of the city.

Despite the above regulation, majority of the clients complain for the 100-300 percent sanitation fee increment compared to the previous arrangement. The majority of them shifted the blame to the new system introduced by the Agency. This may be quite true as Cointreau (2000) stated that individuals paying for a service under franchised arrangements have limited individual bargaining power with the franchisee and little influence on the quality of service since the franchisee has a zonal monopoly. As a result of it, majority of the clients negotiate the price while the rest of them revoked their customer ship and shift to use shared (communal) containers using yard collectors.¹⁶

3.1.2.6. Licensing of the Cooperatives and Private MSEs

Each public organization which supposed to contract out some of its responsibilities has requirements to give a working permit that contractors must fulfill if they are eligible to undertake the work. These requirements are set up to minimize/avoid the risks that might be availed in contracting, to ensure that the contractor has enough resources capable of doing the job, and has operated satisfactorily and fulfilled his/her duties in the past. However, the licensing requirements vary from country to country depending on the situation in a given municipality. This is also true depending on the type of contractual arrangement that the municipality supposed to exercise.

Since the very commonest contractual arrangement in Addis Ababa in general and in all Kifle-ketema in particular is franchising/ de facto zonal monopoly/, there is no as such a bureaucratic procedure which may be considered as a barrier to a new MSEs. For instance, private MSEs are registered under the trade law procedure. Hence, they apply to trade and industry, and get temporary and permanent certificate as per the schedule. However, according to an officer from the cooperative department, the following are required from the cooperatives to get a legal status by referring proclamation No. 147/1998;

- Minutes of the founders meeting
- The by laws of the cooperatives in three copies

¹⁶ Collection laborer enters property to remove wastes. It is very convenient for residents. As a result no waste may be seen on the streets. However, it is the most expensive system, because of the walking involved, cultural beliefs, security considerations or architecture styles may prevent laborers from entering properties (Haan et al., 1998)

- Names, address and signature of the members
- Plan of the cooperatives
- Documents showing that the amount of capital of the cooperatives and the capital has been collected and deposited in a bank account
- The description of the land on which the cooperatives operates

According to the private sanitation service provision manual prepared by SBPDA (2004), in addition to above registration procedure, all the cooperatives and private MSEs are required to purchase the following equipments:

For micro solid waste collection service providers:

- Purchasing equipments such as pushcarts, wheelbarrows, brooms, spades, and forks in sufficient number,
- Providing sacks for their clients, which can able to hold 20-25 kg of solid waste,
- Providing door- to – door solid waste collection service two(2) times per week from residential houses, and all week days from commercial premises as per the volume of wastes generated,
- Permanent addresses, and
- Fulfilling workers safety (protective) clothes.

For Small Scale Solid Waste Service Providers:

In addition to the above requirements, small-scale enterprises are required to have the following inputs;

- Two (2) vehicles that is suitable for solid waste collection and transportations
One of the vehicles is required to be skip vehicles.
- If the firm uses a communal solid waste collection approach; it is required to have sufficient space and put in place 7-8 (m³) container with appropriate can
- Furnished permanent office, bath room, toilets and parking.
- Regular medical check up and treatment for workers.

However, as observed in the field, there is no small-scale enterprise fulfilling the above criteria. Micro-enterprises too, are not doing their job as per the above requirements. For instance, except few cooperatives and private MSEs, majority of them were working without protective (safety) clothes, insufficient number of equipments, and lack of permanent addresses. A good experience is that in most of the time face-to-face interviews were conducted at designated transfer points. Moreover there were cooperatives which transported wastes using local tools known by the name "ብረብ". It is also evident in the field that there were cooperatives doing the business with less than ten members as shareholders. MSEs extension workers had faced a serious confrontation, despite, they were expected to take some corrective measures.

Nevertheless, the positive side with respect to the licensing procedure is that it is pretty less bureaucratic to start the business. The competent authority, for instance, did not require experiences and bank account. Rather the cooperative office, and trade and industry department would give work permits to the cooperatives and private MSEs respectively without any complication. What exactly expected from both the cooperatives and private MSEs is to pay Birr 50 and 135 for registration in the same order. On top of it private MSEs shall be forced to renew their license annually paying Birr 60. Whilst the cooperatives are only supposed to pay 60 Birr once and for all to hold permanent certificate. However, government exempted both the cooperatives and private MSEs from profit taxes. Despite such ease bureaucracy to certify them, there were no cooperatives held permanent certificates. Moreover, except two, the rest of private MSEs did not renew their trade license. Therefore, this may indicate that there is less monitoring and supervision towards cooperatives and private MSEs. Cointeau S.J. (2000) also confessed that most private agreement signed during the last decade, was poorly done.

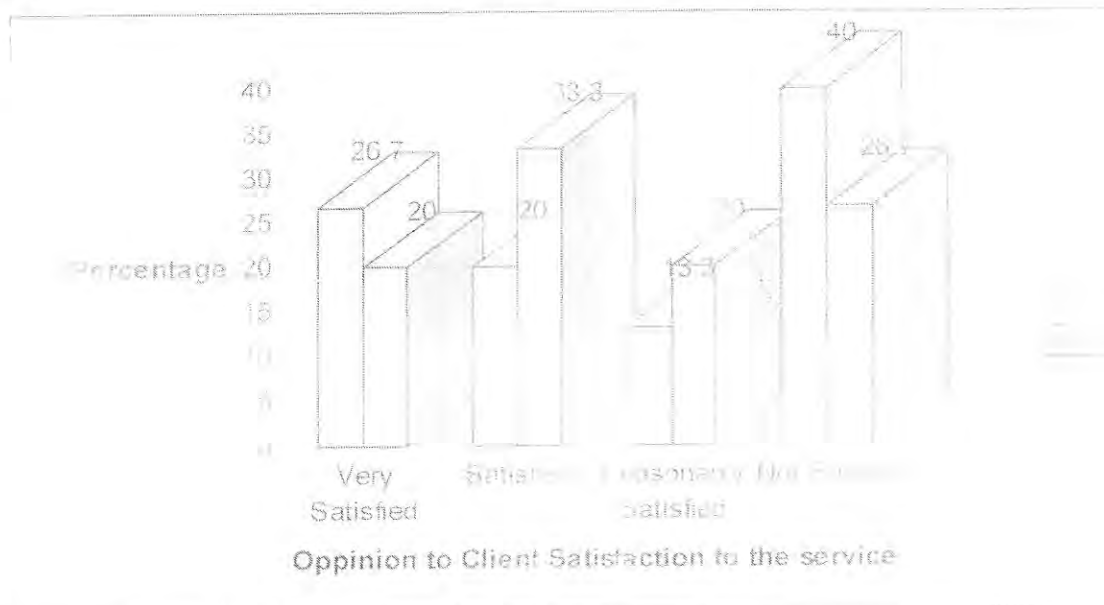
3.1.2.7. Client Satisfaction/Dissatisfaction

Since clients are direct beneficiaries of micro and small-scale initiative, they were also part of the study. Clients from both private and cooperatives described their satisfaction/dissatisfaction towards cleanings of their compounds, monthly fee, and their

relationship with businesses. Thus, status of client satisfaction/dissatisfaction upon the cooperatives and private MSEs was a bit different.

Based on the interview result, the majority (66.7%) of the clients both from the cooperatives and private MSEs are satisfied with the service. Whilst the rest (33.3%) of them are dissatisfied of it. However, as figure-6 clearly indicates almost 73.3 percent and 60 percent of clients from the cooperatives and private MSEs, respectively, are at least satisfied. Whereas only 26.7 percent and 40 percent of them are completely dissatisfied.

Figure-6: Clients' (n=30) level of Satisfaction towards the Service



Source: Own Data (2007)

The reasons for client dissatisfaction upon the cooperatives and private MSEs were a bit different. The problem of reliability and unfair service fee were the major reasons for clients' dissatisfactions on cooperatives and private MSEs, respectively. Hence, their dissatisfaction narrated in the following two cases;

Cases-1: One of the clients in Merkato is very dissatisfied by the payment requested by the private solid waste collection enterprise. The client shifted the blame to the type of business arrangement devised by the competent authority. Prior to zoning, according to him, he was paying only 75 Birr per month. Now he supposed to pay Birr 250 (increased by 233.2%) after a thorough negotiation with the Kebele sanitation, beautification and park development coordinator and CES officers.

Case-2: According to one of the commercial premise owners, everybody should have a freedom to select a competent service provider. He also said that, in most of the time cooperatives are not reliable enough. Despite some technical and institutional problem may happen, according to him, the contractor should remove the solid wastes generated in his business compound as per the schedule. Nevertheless, in most cases the cooperatives came up with a number of reasons, and shifted the blame to the municipality. Therefore, he is now on the verge to hire an individual who would be willing to do this job.

Such distinctive reasons behind client dissatisfaction were quite consistent with field observation. Whatsoever the situation might be, private MSEs remove the waste from their respective clients as per the schedule. Cooperatives, however, try to convince their customers to wait them until the municipal vehicles would come. Therefore, it seems very difficult to rely on cooperatives as compared to private MSEs. Clients were also disappointed by the amount paid per month for the service. This was quite significantly seen upon private MSEs than the cooperatives are. Since negotiation is the only means to solve such disputes, the problem may keep on if both parties engaged only in short-term way-out.

3.1.2.8. Institutional Support

Cooperatives and private MSEs need support in a number of fields. These supports may help them to avoid frustration due to initial inefficiency. Hence, they are requiring assistance from any recognized authority. According to the coordinators/managers, both

the cooperatives and private enterprises require supports from governments, NGOs and any other organizations to win initial inefficiency.

For instance, the municipality provides vehicles freely for the cooperatives and private MSEs to transport solid waste collected from their respective clients. For this purpose, in addition to three or four vehicles (depending on the technical status of vehicles), the municipality contracted two other vehicles paying of Birr 35 /m³ to transport solid waste to the land fill site from the designated transfer points.

The number of trips covered by these vehicles per day varies. According to the official from MSW division, such variation mainly depends on the technical status of the vehicles. However, on average, they cover four trips per day. Only for the past five months, the municipality paid Birr 70,000 on average per month for the contactor

As stated in art.29 (4) regulation No. 13/2004, government also pledged to provide credit facility for all MSEs as a start- up capital with almost no collateral. However, as clearly revealed in figure-11, the entrepreneurs (except 15.6 % of them) are not tempted to receive such service from Addis Credit and Saving Institution. Rather the problem here is lack of credit facility which makes able to scale up the business due to lack of collateral.

Sub-articles 1 and 2 in regulation No.13/2004 of article 29 also states that "those cooperatives and private MSEs engaged in private sanitary service shall be exempted from any profit tax and custom duties imposed by the city government on inputs imported in accordance with the directive issued by the concerned bodies for limited period of time; and micro and small enterprises engaged in sanitary service shall also obtain the service of land fill owned by the government free of charge for limited period of time."

NGOs are also assisting cooperatives and private MSEs in different ways. For instance, NGOs are supporting them by providing equipments such as wheelbarrows, brooms, spades, forks and uniforms. However, such provisions are rare and have been done

under special attachment, according to the operators from the cooperatives. They strengthen the fact by referring some cooperatives that were destined to merge and/or cease up the business. Hence, some NGOs prefer to privilege those well standing cooperatives and/or private MSEs rather than the weak ones.

Training is also another area where NGOs were contributing a lot. In order to improve the service and management of the enterprises, NGOs were known to offer training for the past six months on themes such as enterprise management, organization of technical and operational aspects, financial management and marketing activities. On top of such institutional support, coordinators/managers' views are narrated in the following cases:

Case-1 Mr. Alemayehu, who is the manager in one of the private solid waste collection enterprises, is satisfied by the support provided by the municipality. The owner extended his acknowledgement to the municipality providing vehicles and open lots freely. However, he is dissatisfied by the fact that he was denied of the promise made to buy the compost by the municipality. Though he has been looking for the market since then, he has not yet found any. Now he is preparing a proposal to produce "Local Sendel" from the solid wastes. This man suggested to promote such innovative projects as they would allow reduce municipal solid wastes which were supposed to be transported to the land fill site. Therefore, such waste reduction also helps the municipality not to incur additional transport cost.

Case-2 Mrs. Alemthehay said that their cooperatives started the job by assuming that they would enjoy all the institutional support and incentives promised by the government. They were convinced and looking forward, according to her, to get free medical service, condominium houses, open lots for composting and transfer points. Since their livelihood did not change and the government could not keep its words, no new cooperatives and private MSEs were motivated to join in this municipal business in the research setting

The institutional support is very crucial for the sustainability of both cooperatives and private MSEs, at least until they get well equipped. As clearly seen from the above information the cooperatives and private enterprises seem entirely to depend on supports. Due to the municipality's limited capacity, however, it is very difficult to depend entirely on the municipality.

3.1.2.9. Monitoring and Supervision

The extent of monitoring and supervision varies depending on the type of contractual arrangement made by the competent authority. It is less likely to have strong and tough monitoring and supervision procedure for businesses conducted on a franchising arrangement. This may be due to the fact that the grantor does not pay to the franchisee as the case of direct contracting. Rather, the cooperatives and/or private MSEs themselves are supposed to absorb all the risks associated with franchising arrangement. So that monitoring and supervision activity is limited to control clandestine dumping by the businesses and the public at large to the service agreed. However, according to Coad (2005), monitoring and supervision activity should pay attention to whether service standards are maintained or not. This is due to, according to Coad (2005), clients do not pay if they are not satisfied with the service.

According to the interview made with municipal SWM division official, inadequate training (if no) and the assigning of only one supervisor at Kifle-Ketema level, and one coordinator in each Kebele has made monitoring and supervision activity very challenging. All of the coordinators at Kebele level agree with the above facts, and suggest to prepare regular and holistic training on MSWM, and increasing staff number due to the bulkiness of the responsibilities.

Code Enforcement Service (CES) office has the responsibility in controlling illegal dumping as stated in regulation No.13/2004. This office assigns code enforcement persons who are responsible to ensure that sanitary service of the city is duly respected; and those who dispose unlawfully and make the city dirty and to cease their unlawful activities. Art. 22-sub art.1 (b) of regulation No.13/2004 states that the code

enforcement personnel shall impose penalties in accordance with penalty schedule attached with the regulation for implementation. Hence, the office has mandated to charge penalty of Birr 5 to Birr 7000 upon those dumping on an unauthorized lots.¹⁹ While those of the cooperatives and private MSEs held committing illegal dumping will be revoked from the business landscape.

However, all of the CES officers complained for lack of sufficient staffs (who are not greater than 20 in each Kebele) as compared to their responsibilities (since they are also mandated to control illegal trading and construction). And the timing at which the act of illegal dumping is another challenge to control it. The CES officers stressed on the need to raise the awareness of the public, negotiation between service recipients and providers on monthly service fee. And most importantly everybody should act as a guard to prevent the environment from illegal dumpers, according to CES official.

Police is also due to prevent any person from removing waste in unauthorized places and take corrective measures on any violation. According to regulation no. 13/2004, art.22 sub-art. 2(d), "police is also responsible to bring such illegal acts to justice." However, according to the interview made with Kifle-ketema police department public relation officer, "there is no any report in relation to such illegal act." This may be due to police did not recognize that it was his/her responsibility to get them into justice. And they may also be indifferent for such illegal act.

Clients too, as disclosed in an interview made with them, said that they did not know where exactly the solid wastes are dumped. They only want to make sure that the solid wastes were removed from their compounds as per the schedule. Cointreau S.J., (2000) also said that in private subscription and franchise, the residents pay for their wastes to remove from their neighborhood but do not pay attention to where the businesses take the wastes for disposal.

¹⁹ Anyone who does not keep clean the household or organization or areas especially 20 meters away from their respective compound are supposed to be penalized 5 Birr; whereas those dumping solid waste in unauthorized place from the industry are fined Birr 7000 (Regulation No. 13/2004).

The field observation has also further proved that problem of illegal dumping is very common during the night and along the adjacent Kebeles. Most of the time, these Kebeles are known to complain each other for the problem related to the latter one. Unfortunately, the former one becomes the all days' tragedy and has far-reaching implications on the business and local environment. Despite everybody is responsible for such malpractices, the cooperatives and private enterprises point their fingers on each other.

Coordinators/managers both from the cooperatives and private MSEs argued that such malpractices would affect the business in two ways. Firstly, it would create a fertile ground by discouraging and promoting clients and non-clients, respectively. Secondly, it becomes an additional burden to the cooperatives and private MSEs.

3.2. Challenges of the Cooperatives and Private MSEs Solid Waste Collection Initiative

3.2.1. Lack of Vehicles

The subsequent haulage of solid waste that would be collected by the cooperatives and private MSEs are transported by the municipality to the disposal site. This secondary collection activity has far-reaching implications upon the cooperatives' and private MSEs' solid waste collection activity. The implication, by far, depends on the presence or absence of vehicles. Accordingly, all the sampled workers (both from cooperatives and private MSEs) give due priority to lack of vehicles as their major predicaments to stay in the business.

According to the information from an official from the municipality, the limited number of vehicles increased the impossibility of the intended coverage to achieve. Despite the efforts by the cooperatives and private MSEs as clearly shown in figure-7, the municipality could not cope with the increasing volume of waste in the sub-city. Since all of the cooperatives and private MSEs are entirely dependent on the municipal vehicles, they get shocked whenever such institutional support has failed.

Figure-7: Indicates the Scenario when Vehicles are Absent



Source: Field Photo (2007)

Despite other challenges, the majority of the coordinators/managers agreed that shortage of vehicles was their major headache. Thus, absence of vehicles in sufficient number, according to them, discouraged the initiative to sustain in the business. It was also argued that such institutional failure has not only a livelihood implication, but environmental and health-related risks as well.

According to, the field survey conducted on workers' as to how vehicles availability is sensed in relation to their job. They perceived and explained it in more or less similar ways, despite described differently.

According to the opinion stemmed from sampled solid waste collectors, also shown in table-7, the majority (26.2 %) of them said that vehicle availability would mean "survival", and also added such economic and poetic phrases as "Rescue not to die early", "Start to live in a confined room," "Freed from dependency syndrome" by 18.8 percent (each). Whilst only 10 percent of the respondents have attached the presence of vehicles to "Clean environment." Thus, the table below brings into picture how they were oriented to maximize their own economic and social benefit rather than to create a clean environment. Hence, this makes the business service-based by type.

However, 28 percent, 18 percent, and 16 percent of representatives from the cooperatives said vehicle availability configured as "Survival", "Rescue not to die early" and "Freed dependency syndrome", and "Start to live in a confined room" respectively. Where as " survival" and " start to live in a confined room", and "Rescue not to die early" and " Freed dependency syndrome" in response to how they perceived vehicle availability appropriated by 23.3 percent and 20 percent each from private MSEs respectively.

These situations vividly show that they thought the job as the last resort and did not have any other opportunity. And very importantly, how they get stressed and worried whenever the vehicles are absent. As clearly seen from the table, none of the workers from private enterprises related vehicles availability with children welfare. However, 12 percent of workers from the cooperatives said "we can bake bread for our children if and only if the vehicles are not absent as per their schedule." They also said, "Our children may drop out from school if the vehicles do not come as per the schedule." Meanwhile, 16 percent and 23.3 percent of workers from the cooperatives and private enterprises, respectively, associated vehicle availability with one of the basic needs of human beings, i.e. housing.

Table -7 Meanings Given for Vehicle Availability by Workers (n=80)

Meanings given for vehicle Availability	MSEs workers (Cooperatives)		MSEs Workers (Private)		Total	
	F	%	F	%	F	%
Survival	14	28	7	23.2	21	26.2
Children can go to the school	6	12	-	-	6	7.5
Clean environment	4	8	4	13.4	8	10
Rescue not to die early	9	18	6	20	15	18.8
Start to live in a confined room	8	16	7	23.3	15	18.8
Freed dependency syndrome	9	18	6	20	15	18.8
Total	50	100	30	100	80	100

Source: Own Data (2007)

The majority of workers, particularly in private enterprises were street boys, they were spending the night on the streets. Now they began to live in confined rooms renting a house for which they are due to forego some amount of their monthly salary. According to them "now we do not care whether rain comes or not as far as we are doing this job".

According to my field observation, the probability of facing the challenge due to the absence of vehicles is very high. Though the municipality has 9 vehicles, only 4 vehicles on average are functional per day due to their old age (greater than 10 years in service) and the frequent mechanical failure. To this end, the municipality has been contracted vehicles from private company to fill the gap. However, their old age (the owner purchased them through bid from one of the municipality), and late payment by the grantor prevented to achieve best in MSWM coverage. And this institutional problem gets even more serious during rainy season. All of these incidences in effect increased the threat that such efforts may not have a result as expected.

These hard facts let us know the very complications may happen if a single institutional element (Vehicle availability) fails down; and how strong the repercussion might upon the workers' future livelihood. Moreover, such institutional failure may also cause environmental problems as a matter of fact that cooperatives and private MSEs would never stop collecting the waste from their clients even in the absence of vehicles. Though unethical, according to workers, this would mean not to miss the existing customers. So, the situation flicks the importance to strengthen the municipality until the business entities stand by themselves and get well-equipped at least to lessen the social disruption may arise otherwise. That is why Haan et al (1998) strongly stressed on the need to support such small business enterprises to revert the unwanted destination they might come up and prevent any environmental hazard due to their initial inefficiency.

3.2.2. Transfer Points

The success of primary solid waste collection scheme also depends upon the design and location of transfer points. According to the interview made with workers, transfer points are significant particularly in places where large number of customers are found, huge volume of wastes are generated, fewer number of communal containers on unreasonable distances, and most importantly inadequate labor forces and solid waste collection equipments. As evident in the field, primary collection and storage procedures are often poorly suited to the operational requirements of the city.

The size, number and distribution of transfer points must be carefully chosen to facilitate primary solid waste collection. Moreover achieving efficient transfer operations, minimum transport distances and cost, and, most importantly, without accentuating local pollution problem and loosing aesthetic value (Scübeller, 1996). Art.15 in regulation 13/2004 also states that "Before a transfer station is organized, the threat or fear and opinion of people, living in the selected area shall be taken into consideration and properly studied."

In my field visit, I came to realize that the municipality often builds temporary transfer points that are easily accessible only to the municipal vehicles. As a result, the cooperative and private MSEs are exposed to a strong confrontation with neighbors. Neighbors resist locating temporary transfer depots near to their compounds. This is quite consistent with the principle of NIMBY (Not In My Back Yard), according to Coad (2005). In his publication, it is stated "no one is willing to see solid waste treatment or disposal facility close to his/her home." According to workers from the cooperatives and private MSEs, they are always clashing with neighbors adjacent to temporary transfer depots. The conflict gets even more serious when the municipal vehicles are absent.

Even though the sub-city has seventeen container-based transfer points, the municipality admitted for the inadequacy of size, number and distribution of transfer points. However, the sub-city SWM division shifted the blame to lack of open land as an

obstacle to resolve this problem. And hence the division extends the blame to land administration department.

Those temporary transfer points established along the main roads and where people are resided, as shown in the figure below, has negative scenic impacts on the environment and hazardous for health. To tone down the problem, the municipality prioritized transfer points having stronger conflicts as upper hand agenda to deal with. To this end cooperatives and private MSEs, according to the interview made with coordinators/managers, were obliged to take away the wastes from such conflict zone to places where open containers are available. Hence cooperatives and private MSEs solid waste collectors strongly argue that conflict free transfer points are also important element to stay in the business.

Figure-8: Shows Transfer points established adjacent to the residences, business center and along the main road



Source: Field Photo (2007)

In relative term, the problems associated with transfer points have different implications on cooperatives and private MSEs. As distinctively seen in the field, private MSEs showed more efforts in removing the waste as much as possible from the conflict zone. This has usually been done;

- By traveling long distances and dumping on the vacant containers,
- Through illegal dumping especially during the night, and
- By keeping the pushcarts along the side of the road.

However, the challenge proved to be more evident on the cooperatives. This was due to the fact that workers from the cooperatives were not taking any measure except praying for the waste truck to come as per the schedule.

3.2.3. Socio-Cultural Constraints

The understanding of social-issues is important since any change will largely depend upon people -how and what they think. Traditionally, households have received little attention in solid waste management projects, with the exception of the question of how much they are willing to pay for a proposed service. Bad attitude may be formed by prejudice and ignorance, or by experience and evaluation. The attitude towards collectors may be based on the society's system of values, particularly concepts of social class or caste (Coad, 2005). According to him social barriers could cause problems for MSEs workers in seeking to collect fees for waste collection, cross the boundary (property) to collect waste, negotiate with residents or employers, complain, and assert their right.

Cooperatives and private MSEs solid waste collectors are often facing a strenuous socio-cultural problem in course of their job. This has by far had its own implications on the overall MSWM endeavors. The fact that the scheme itself is at its infant stage combined with the hierarchical attitude towards the undertaking made the job more challenging. Hence, the field survey has identified peoples' attitude towards solid waste collectors. As shown below in the table, 50 percent of workers were totally dissatisfied with people's attitude towards them. Whilst 21.3 percent of them were pretty much comfortable by peoples' attitude. But, 17.5 percent of them were halfhearted. However, 11.2 percent of them had no any knowledge about it. And all of them are from private MSEs. This could be for the reason that they have had little (if any) attachment with the community to sensitize the perception towards them.

As it is clearly shown in table-10, 68 percent of workers from the cooperatives are completely dissatisfied by peoples' attitude towards them. Whereas 18 percent of them are pretty much conformable with peoples' attitude towards them. In contrast to this, only 12 percent of workers from private MSEs are dissatisfied by peoples' attitude. But

50 percent of them are comfortable enough with peoples' attitude, however, 30 percent of them are kept reserved to comment on it. This presupposes the potential that may force them to leave the job. So such negative perception towards them may have wider implications not only on workers' livelihood but also upon the environment and the MSWM effort. Coad (2005) also said that the opportunities for jointly solving problems would be few, and hence, the problems may find grounds to persist.

Table - 8 Attitude towards Workers (n=80)

Level of Attitude	MSEs Workers (Cooperatives)		MSEs workers (Privates)		Total	
	F	%	F	%	F	%
Extremely good	3	6	4	13.3	7	8.8
Very good	6	12	4	13.3	10	12.5
Good	7	14	7	23.4	14	17.5
Bad	21	42	6	20	27	33.8
Very bad	13	26	-	-	13	16.2
Do not know	-	-	9	30	9	11.2
Total	50	100	30	100	80	100

Source: Own Data (2007)

The field survey also assessed where workers had been confronting to peoples' attitude towards them. According to the workers, it is not uncommon to hear/see people reflecting such belittled feelings in any social gathering and at working hours. The following are some of the cases unconcealed workers' dissatisfaction that they experienced in their undertakings.

Case-1: This case reported that cooperative workers' had been given a nickname and so called as "Koshashoch" which would have a literal meaning of "Dirty people." This made them annoyed. He was about to burst into tears while expressing his feelings. They would get angry at the time of collection when residents shout at them saying 'Koshashoch metu' –literarily to mean "Dirty people has come". And some of them said that they had been psychologically tortured by the nickname, which creates a fertile ground to outcast ourselves from the community and even to resign the job.

Case-2: Mrs. Tsehay who is also working in one of the cooperatives told me her unforgettable experiences in relation to her job. Her soul father not only warned her to leave the job the moment he heard but also threatened her not to come back again to her home otherwise. Surprisingly he has not come yet and she missed him since then.

Case -3: Mrs. Yehualashet, 33 told me the worst experience she had ever encountered. According to her, two years before, she lost her lovely boyfriend when he knew that she had been doing this job. Due to traumatic effect, she has not had a boy friend so far and does not wish to have any until she changes this job.

The above cases (experiences) might be collaborative enough to indicate the extent of the problem. Despite their contribution, many people seem hardly to acknowledge them. However, the problem is sensed a bit differently by the cooperatives and private MSEs workers'. This may be due to the fact that majority of workers from the cooperatives have better attachment to the society. Therefore, such social plights have stronger implications on the existing cooperatives than private MSEs.

3.2.4. User (Client) Participation

Both the cooperatives and private MSEs solid waste collection activities seem meaningless without active and live involvement of service users. The survey tried to draw conclusions on workers' expectations from the respective clients. Accordingly, the survey has found that 31.2 percent of workers needed their clients to prepare their wastes as per the schedule. Out of which about 12.5 percent were from private while 18.7 percent workers were from the cooperatives. On the other hand, 28.8 percent of the workers required their clients to 'tolerate service interruption' to collect the solid wastes from them. This duty was required by 23.8 percent and 5 percent of workers from the cooperatives and private MSEs, respectively. Such expectation by and variation between the cooperatives and private MSEs also fit with what is observed in the field and previous discussions.

The possible explanation for the above percentage variation so observed in the case of private MSEs is that the majority of them are temporary and casual employees and

are rather more concerned to 'prepare the wastes' as per the schedule. Because the workers are ready to travel the longest distant point where vacant containers are available, and they do not hesitate to dump the waste on the course of rivers or open lots during the night. To the contrary workers from the cooperatives are found to be more worried if their customers are not willing to 'tolerate service interruption'. This may be for the reason that cooperatives can not avoid the wastes as private enterprises do. This is especially true when vehicles are absent. This problem may result in cancellation of already secured customers, and they tended to shift to the reliable cooperative or private MSEs.

On the other hand, as it is revealed in table-9 below that, 21.2 percent of the workers were worrying to collect monthly service charge from their clients. The majority (16.2%) of workers are from the cooperatives while 5 percent of them are from private MSEs. This may be due to the fact that the majority of the cooperatives do not have saved capital to pay for their temporary and casual employees, and also to finance their daily expenses. To the contrary, private workers do not care much about clients' on time payment. This stems from the fact that workers are confident enough for the salary even if the private owners will not collect monthly service fee as early as possible.

Table- 9 Types of Duties Expected from Clients by Workers (n=80).

Duties Expected from clients	MSEs Workers (Cooperatives)		MSEs workers (Privates)		Total	
	F	%	F	%	F	%
Sorting wastes	8	16	7	23.4	15	18.8
Prepare wastes	10	20	15	50	25	31.2
Tolerating service interruption	19	38	4	13.3	23	28.8
On time payment	13	26	4	13.3	17	21.2
Total	50	100	30	100	80	100

Source: Own Data (2007)

The field survey has also assessed the level of satisfaction by workers in users' participation. In this respect, the table below shows that 65.1 percent of workers expressed their level of satisfaction between good and bad inclusive. Out of which 23.8

percent of them were completely dissatisfied by user participation and only 16.2 percent of workers were completely satisfied. On the other hand, 30 percent of workers from the cooperatives were completely dissatisfied, and only 13.4 percent of private enterprise workers agreed to such level of user participation as “bad”.

Table -10 Level of Satisfaction from Clients Participation by Workers (n=60).

Level of Satisfaction	MSEs Workers (Cooperatives)		MSEs Workers (Privates)		Total	
	F	%	F	%	F	%
Extremely good	6	12	7	23.3	13	16.2
Very good	9	18	6	20	15	18.7
Good	13	26	6	20	19	23.8
Fair	7	14	7	23.3	14	17.5
Bad	15	30	4	13.4	19	23.8
Total	50	100	30	100	80	100

Source: Own Data (2007)

Workers were also asked to propose the possible reasons behind inadequate user participation. The table below shows the analytical data to this end. As a result the majority (25 %) of workers were found to point out lack of vehicles as the major factor attributable to poor user participation and 21.2 percent and 18.3 percent of workers forwarded lack of ability to pay and awareness as the second and third reasons for inadequate user participation, respectively.

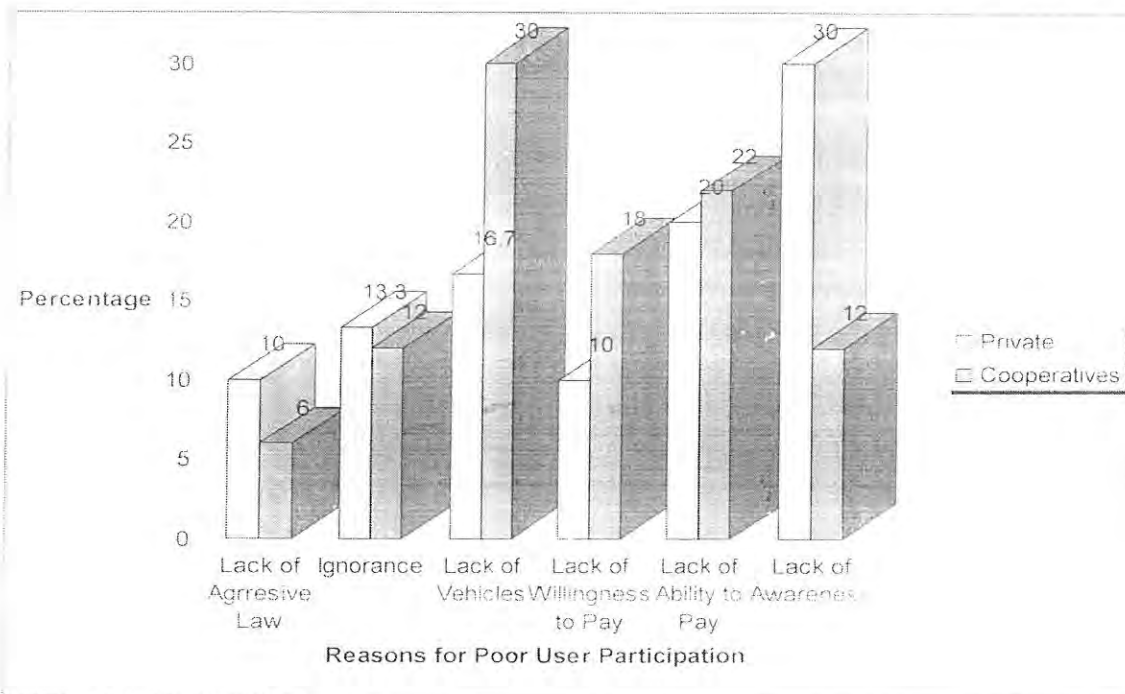
However, in particular to workers from private MSEs and cooperatives, the priorities were a bit different. For instance, it is well established in figure-9 that 30 percent of workers from the cooperatives said that lack of vehicles was the prior reason for poor users' participation. Whereas, 22 percent, and 18 percent of workers from the cooperatives forwarded that 'lack of ability to pay' and lack of willingness to pay as the second and third reasons for poor user participation respectively.

There is still strong evidence reached by the field survey that 30 percent of MSEs workers from private ones prioritized lack of awareness among users as a major

predicament. Whereas lack of ability to pay, lack of vehicles and ignorance were considered by 20 percent, 16.7 percent and 13.3 percent as the second, third and fourth reasons, respectively.

As observed in the field, workers from private MSEs were traveling more than 1 km in search of vacant containers whereby wastes would be compiled. In contrary to what happened to the cooperatives, private enterprises were not of faced significant client reduction. The figure below tries to identify how private enterprises can sustain in the business, even in the hardest environment than cooperatives are. The figure also confirms how important user participation for the success and sustainability of the scheme as is stated in Schubeler's (1996) publication. He stressed that that users' cooperation would be essential in such activities as proper storage of household waste and its separation, placement of household containers and discipline in the use of public collection points, and payment for the service to be provided.

Figure-9: Reasons for Poor User Participation by Sampled Workers (n=80)



Source: Own Data (2007)

3.2.5. Workers Health and Safety Condition

Data from high-income countries show that laborers in solid waste management face a relatively high risk of disease and injury. In Denmark, solid waste workers are six times more likely to have an occupational infectious disease compared to other workers, and 2.6 times more likely to have allergic pulmonary disease. In the USA, solid waste collectors are 10 times more likely to be killed (mostly by vehicular accidents) than other workers (Cointreau S.J., 2000).

According to a medical doctor, some of the adverse health impacts due to engagement in commercialized door-to-door municipal solid waste collection include:

- respiratory infection from bio-aerosols while loading collection vehicles
- dust related asthma and diminished pulmonary function while sorting the waste,
- lower back and joint injury associated with heavy lifting.

In addition to the above health related problems, vehicle accidents are also known to be the threat (though rare) of the job. Particularly, the health risks are hazardous enough, as the figure below indicates, due to the fact that it is not common to use safety clothes. Even if SBPDA's (2005) Quality Award Manual enforces the laborers to have gowns, gloves and shoes (both made from leather), and respiratory masks to protect them from health related risks. And art.27of regulation no.13/2004 also stated that "Notwithstanding the provisions as regards to safety and health of online workers provided for other relevant laws, any sanitary organization shall have the responsibility to take care the safety and health of online workers."

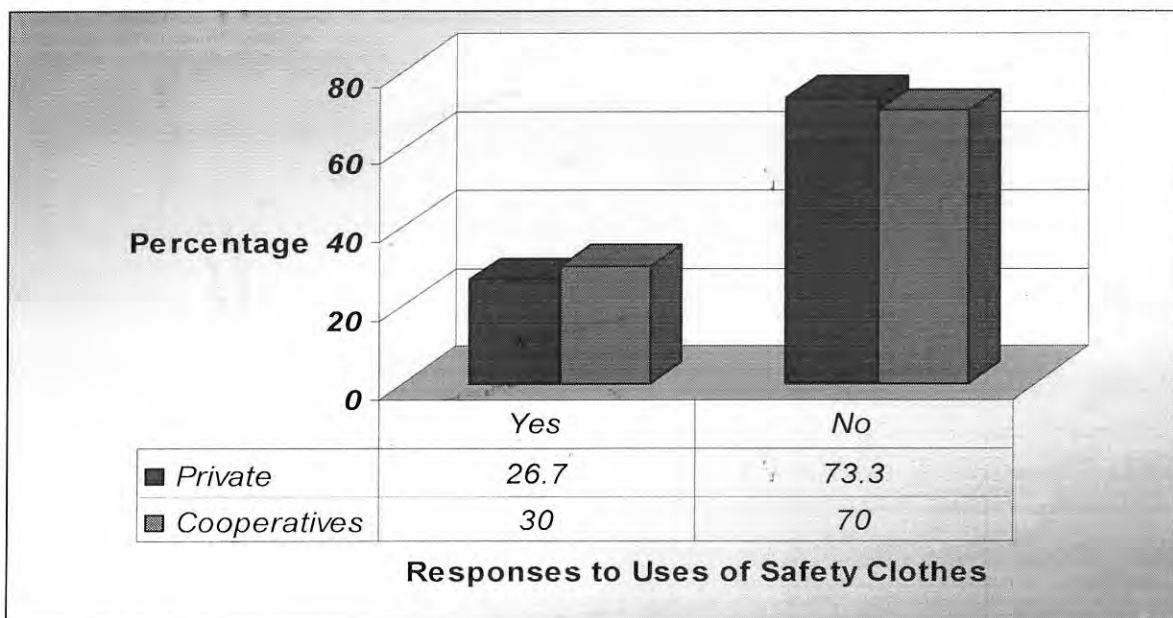
Figure-10: Shows how the workers are prone to health hazards and traffic accidents



Source: Field Photo (2007)

The majority of them (71.2 %) were working without protective clothes whereas 28.8 percent of workers were doing their job with incomplete clothing. As the figure below indicates, 70 percent and 73.3 percent of workers from the cooperatives and private enterprises, respectively, were attending their job without protective uniforms. While 30 percent and 26.7 percent of workers from the cooperatives and private MSEs were doing their job with protective clothes, despite incomplete. This might lead to the concluding remark of how the competent authority that mandated to control unauthorized procedure, according to the directive, was lenient.

Figure-11: Responses to Use of Protective (Safety) Clothes by Sampled Workers (n=80)



Source: Own Data (2007)

The following are some of the reasons why they were doing the job without protective clothes.

- Some of them believe that it is not the protective clothes rather God that keep them healthy,
- Workers particularly from private enterprises said that the owners were careless enough about their health condition even if they did have interest.
- Some business owners put preconditions to use protective clothes. There are instances, where workers are required to pay for protective clothes from their monthly salary and hence, they prefer to work in an unsafe condition.
- Some also said that they were unaffordable specially those which are durable.
- They can not purchase them as frequent as needed due to financial problem, and
- Some also said that the protective materials were not as handy to work the job as without them.

The workers were also asked whether they ever visited clinics and/or hospital for the last six months. Based on the response, as shown below 66.2 percent of workers did not visit any health stations, clinics or hospitals. On the other hand, 33.8 percent of them had visited health stations for medical treatment. As can be seen from table-11 below 62 percent and 73.3 percent of workers from the cooperatives and private MSEs, respectively, were not of any opportunity to visit the health stations. In their response as to why, lack of money and not facing serious health problems were the reasons not to visit health institutions for medical attention. However, those having shortage of money treat their health problem through traditional means. For all discomfort in this regard, they shifted the blame to the government for denying its promise to provide them full health service coverage as an incentive.

While 38 percent and 26.7 percent of workers from the cooperatives and private MSEs had the opportunity to visit health stations, respectively. The majority of them associated whatever health problem they had with the job. Of the cases under investigation, 7.5 percent and 10 percent of them were asthmas respectively, and thus, told to stop their

job. The rest of them were also recommended to do the job by applying strict protective measures. Since the job has health related risks, they require the government to support them giving free and full health service coverage. Hence, the above statistics attest how workers from both cooperatives and private MSEs are exposed to health related hazards.

Table – 11 Responses of Workers (n=80) who Visited/not Visited Health Institutions

Responses by workers	MSEs Workers (Cooperatives)		MSEs workers (Privates)		Total	
	F	%	F	%	F	%
Yes	19	38	8	26.7	27	33.8
No	31	62	22	73.3	53	66.2
Total	50	100	30	100	80	100

Source: Own Data (2007)

3.2.6. Job Insecurity

The survey also assessed whether or not workers are confident enough to stay in this business even in stressful situation. Accordingly, it was found that 43.5 percent of workers from each category were quite confident enough to stay delivering sustainable service. However, only 13 percent of workers were not sure to forecast whether the business will be sustainable or not at the present status.

While 53.1 percent of managers/coordinators from the cooperatives are deadly sure that it is very difficult to stay in the business at the present status. However, 25 percent of them from private enterprises are not quite sure whether they will stay in the business or not. Whereas 34.4 percent of managers/coordinators from the cooperatives and 75 percent of managers /coordinators from private MSEs were pretty much sure of the sustainability of the business. Only 12.5 percent of managers/ coordinators from the cooperatives cannot be sure to stay/not to stay in the business.

The field survey also examined the reasons why the managers/ coordinators felt insecure in the business. Accordingly, 50 percent of managers/coordinators said that capacity problem might be an upper hand cause to get out of the business. Of this

figure, 34.6 percent and 15.4 percent were attributable to the cooperatives and private enterprises managers/coordinators, respectively. From this, we can easily derive that capacity problem is more of a concern of cooperatives than private MSEs are. Whilst the majority (62.5%) of managers/coordinators from private enterprises said that repeated zone adjustment was their headache to stay in the business with full confidence.

On the other hand, 25 percent of managers/coordinators from the cooperatives said that they were afraid of being engulfed by strong competitors in the future. And 12.5 percent and 6.2 percent of managers/coordinators from the cooperatives said repeated zone adjustment and complete privatization, respectively would also matter to survive in the business or not. While none of private enterprises' coordinators/managers were threatened by the possibility to be competed out by large enterprises, and complete privatization of such municipal activities.

Table -12 Reasons for Job Insecurity in the Future by Coordinators/Mangers (n=40)

Responses by Coordinators/Managers	MSEs Coordinators/Managers (Cooperatives)		MSEs Coordinators/Managers (Privates)		Total	
	F	%	F	%	F	%
	Possible zone adjustment	4	12.5	5	62.5	9
Capacity problem	18	56.3	2	25	20	50
Absorption by large enterprises	8	25	-	-	8	20
Complete privatization	2	6.2	1	12.5	3	7.5
Total	32	100	8	100	40	100

Source: Own Data (2007)

Both the cooperatives and private MSEs look insecure to stay in the business, however, the problem seems more serious upon the cooperatives than the private MSEs are. This is due to the fact that majority of the cooperatives are known to have capacity problem.

They do not even have sufficient number of equipments used to collect and transport the solid waste. Surprisingly it is not uncommon to see some carrying it using sacks and locally-made instrument (known by the name "ባረባ"). As indicated in table -2, quite large numbers of them are also old enough. They are also not disciplined and lack motivation. Other than the problems so far mentioned unavailability of vehicles to the required level and tough competition made them feel insecure. In spite of the fact that some of the problems so mentioned are common to private MSEs, it may no longer to be threats to cease the business.

3.2.7. Organizational Problem

3.2.7.1. Division of Labor

The field survey identified that there was division of labor in all private MSEs and cooperatives. Chairperson, fee collectors, treasury, and solid waste collectors were the sole division of labor seen in the cooperatives. Where as in private MSEs, owner/manager/treasury, coordinators/ fee collectors, and solid waste collectors were the major elements in their organizational make-up. However, the level of and reason for dissatisfaction from the prevailing division of labor vary from enterprise to enterprise cooperative to cooperative, and within cooperatives and enterprises.

Table-13 below shows that majority (56.3 %) of workers are not satisfied by division of labor in their job. Whilst only 2.5 percent of them are very satisfied. However, 11.2 percent of them refrained from commenting on it. Table -13 also shows that 60 percent and 50 percent of workers from the cooperatives and private MSEs, respectively are dissatisfied. Nevertheless, only 4 percent of workers from the cooperatives are very satisfied by division of labor. It can also be derived from the table that no respondent from private enterprises is very satisfied by division of labor.

Table -13 Level of Satisfaction with Division of Labor by Workers (n=80).

Level of satisfaction	MSEs Workers (Cooperatives)		MSEs workers (Privates)		Total	
	F	%	F	%	F	%
Very satisfied	2	4	-	-	2	2.5
Satisfied	7	14	5	16.7	12	15
Reasonably satisfied	6	12	6	20	12	15
Not satisfied	30	60	15	50	45	56.3
Do not know	5	10	4	13.3	9	11.2
Total	50	100	30	100	80	100

Source: Own Data (2007).

Disagreement that may arise due to division of labor is known to come up with far reaching implications on the business. This has been quite usual especially in the cooperatives. Due to such disagreements, according to Kebele MSEs extension workers, absenteeism, forming team, and attacking their own rules and ideas, resignation, and liquidation have become the commonest symptoms of such misunderstanding. This is quite consistent with what has been stated by Guene (1996) in his case study made in Ogadugou (Burkina Faso), as some "misunderstanding" between president and treasurer would possibly cause to split up the cooperatives. According to some Kebele officials, "sometimes we may go through a month or two dealing with their internal problems that mostly arise due to disagreements in the division of labor prevailing among workers."

According to Haan et al (1998), such small frictions and problems may arise in connection with leadership, accountability, and distribution of responsibility. However, these kinds of conflicts are not prevalent in private MSEs. This is because of the fact that majority of the workers are temporary or casual employees and, hence, the owners may fire those workers responsible for the incidence before causing problems that cannot be reversed. This is one of the advantages of private MSEs to be able to fire

and hire employees when needed. Hence, the rise of such internal problem more affects the efficiency and effectiveness of the cooperatives than private MSEs are.

The survey has also tried to investigate the possible reasons behind the conflicts. In the attempt so made, workers from the cooperatives came up with such reasons as ignorance, lack of transparency, exploitation, and partiality as the major ones. However, almost all workers from private MSEs forwarded that exploitation was the major reason for dissatisfaction by division of labor. Nevertheless, few of them added that lack of transparency and ignorance was among the reasons behind dissatisfaction from division of labor.

Unlike private MSEs, cooperatives are loosely organized. Workers from the cooperatives disrespect each other. Majority of them lack confidence on treasurer and fee collectors. In most of the cases, conflicts among workers have arisen due to lack of transparency and accountability. According to one Kebele official, since majority of the workers in the cooperatives are not educated, it is very difficult to rotate responsibility (leadership) to minimize the risk of conflicts.

3.2.7.2. Working Days and Hours

The majority of the cooperatives and private MSEs operating their business from Monday to Saturday if and only if there are no religious holidays. The above response seems contradict with art.18 (2) of regulation no.13/2004 that "the person shall have the obligations to make special preparation and provide efficient services in times of holidays and special celebrations when hedge waste, different from daily encounter is generated." However, as also evident in the field, it is rare to see them in their job in the time of religious holidays. According to the coordinators/managers both from the cooperatives and private MSEs, they would not make any special preparation for the reason mentioned above.

Few enterprises and cooperatives are supposed to provide the service on Sundays too. This is true especially for those cooperatives and private MSEs providing the same

service for hotels, fruit houses, and chat suppliers. Hence, they are required to remove the wastes at daily basis without bonus/overtime payment. Majority of them, however, are complaining that spending all days on the job increases the risk of health-related problems and decrease their leisure time. However, except few, majority of the cooperatives and the private MSEs end up their job before noon.

Table -14 also clearly reveals workers' starting time. The survey did not give due emphasis to the time at which the job would be ended up. This was due to its direct attachment with the punctuality of the municipal waste truck. However, the SBPDA has recently introduced a new schedule to end-up the job before noon. However, few cooperatives and private MSEs have been complaining for it.

The Agency has been arguing for such development for the following reasons. Firstly it would be hazardous enough to pedestrians and workers themselves to carry and transport solid waste at high temperature usually known to experience after this time. Secondly, vehicles should get ready and prepared for the next day as early as possible. However, few of the cooperatives and private MSEs were seen transporting wastes in search of vacant containers. As observed in the field, some cooperatives and private MSEs kept the waste along the pedestrians' roads. So, such malpractices were against SBPDA's former argument.

The majority (55 %) of the workers start their job from 4:00 to 5:00 AM. Unless the sub-city has problem of vehicles, the same percent of workers may finish the job before noon. As revealed in table-14 below, 11.2 percent and 20 percent of workers start their job in the late afternoon and evening, respectively. Workers justified that they had started the job at this time because they would not have enough time to prepare and collect waste from their clients (particularly from commercial premises) for the next day as per the schedule.

However, workers from the cooperatives opposed the line of argument held by the private workers who started their job during the afternoon and night. Rather, they

preferred this time to get ready the waste for illegal dumping. And most of the time, they were accused of dumping the wastes into the course of rivers, and open lots outside their working zone. This situation seems pretty much consistent with the fear of Cointreau S.J., (1994) that government may be blamed for the illegal act committed by private business entities. Cointreau S.J., (1998) also extends her hesitation on the success of privatizing such municipal service unless strong monitoring system is established.

Table -14 Workers' (n=80) Starting Hours

Starting Hours	MSEs Workers (Cooperatives)		MSEs workers (Privates)		Total	
	F	%	F	%	F	%
4:00 Am	13	26	9	30	22	27.5
5:00 Am	18	36	4	13.3	22	27.5
6:00 Am	9	18	2	6.7	11	13.8
During late Afternoon	4	8	15	16.7	9	11.2
During the evening	6	12	10	33.3	16	20
Total	50	100	30	100	80	100

Source: Own Data (2007)

The levels of comfort with working hours were also assessed. As a result 41.2 percent of workers were not comfortable with the time scheduled, while 30 percent of the workers, to the contrary, were satisfied with the time schedule. But only 3.8 percent of them were very much comfortable and all of them were from private MSEs.

Similarly 46 percent and 33.3 percent of workers from the cooperatives and private MSEs, respectively were not comfortable by the time schedule. Nevertheless, 36 percent and 20 percent of workers from the cooperatives and private MSEs were comfortable by the schedule. On the other hand, 18 percent and 23.3 percent of workers were reasonably comfortable. But, 13.3 percent of workers from private MSEs reserved to comment on it. So, the above statistical information would imply that most of the operators, particularly from the cooperatives were satisfied with the schedule.

The field survey also tried to come up with the possible reasons why some of the workers were not comfortable by the time schedule. The problem of security was a major threat particularly for women working in the cooperatives. Death, harassment, physical attack and theft were still among some of the challenges they had mentioned attributable to inconvenience at the working schedule. I came across a private enterprise where one woman found dead. Since then, the working schedule was changed to 6:00 Am. "One death, heavy and simple wounding by traffic accidents are unforgettable according to one worker. Except the first tragedy, all were a hit and run cases."

The workers were also asked to suggest the possible way outs to minimize the problems most frequently happen to take place. The recommendations forwarded by workers, however, were a bit different between the cooperatives and private MSEs. Accordingly, it was found that most workers from the private MSEs inclined to adjusting their payments whereas those from the cooperatives stressed on the need to give due emphasis to rescheduling the working hours.

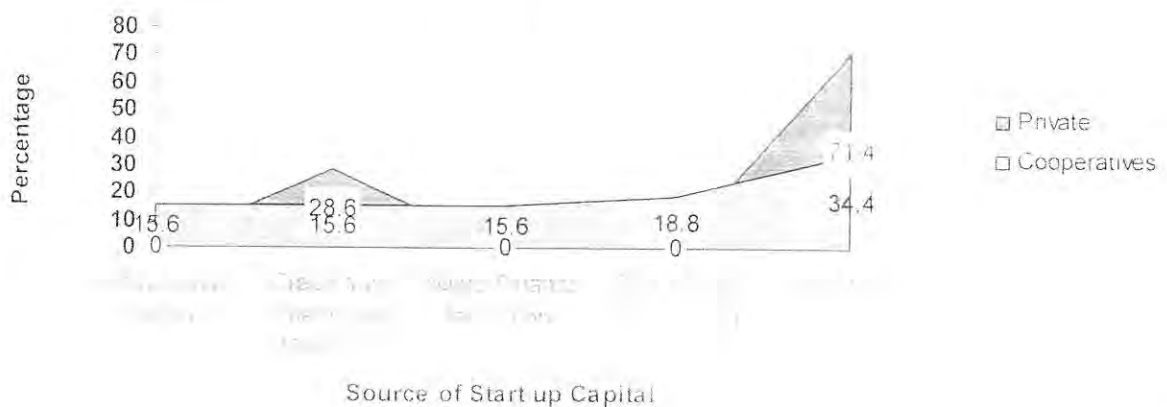
3.2.7.3. Lack of Financial Accessibility

The survey result has revealed that the source of capital to engage in solid waste collection is a bit different between the cooperatives and private MSEs. As per the findings of the survey indicated below in figure-12, 42.5 percent of coordinators /managers said that they had started the business using their own capital. However, 15 percent, 12.5 percent, and 17.5 percent of them were accessed their start-up capital from gifts from friends and relatives, micro finance institution, and credit from friends and relatives respectively. However, 12.5 percent of coordinators/managers had begun solid waste collection activity without initial capital. This group/ category was not confident enough to take credit and/or did not have any other means than credit institution and thereby started the business with local-made equipment or "ብረብ" and sacks (Locally known by the name "ማዳበሪያ").

On the other hand, 34.4 percent and 71.4 percent of the cooperatives and private MSEs, respectively, use their own saving account to commence this business. Whereas, gifts

from friends and relatives, microfinance institution, credit from friends and relatives were used as sources of start-up capital by 18.8 percent, and 15.6 (each) percent, respectively, by the cooperatives. The other important thing worth mentioning is that only 28.6 percent of private enterprises had started the business by accessing credit from friends and relatives. However, none of the private MSEs is known to start the business without initial capital unlike those (15.6%) of the cooperatives.

Figure-12: Responses to the Source of Start up Capital by the Coordinators/Managers (n=40)



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Source: Own Data (2007)

Though the majority of owners from private enterprises demanded credit to purchase their own vehicles, they could not access it due to lack of collateral. However, none of the private enterprises, as shown in the above figure, showed interest to take credit from micro- credit and saving institution. Except few (15.6 percent), the majority of the cooperatives did not either. The main reason, according to the coordinators from the cooperatives, went to the volatile nature of the market. According to them, since there is no binding force except negotiation, there is a high probability of client ship cancellation. Hence, it is very difficult, they said, to take credit in such ambiguous situation. This may attest that cooperatives did not take any financial risks.

Therefore, the survey result has shown that there is no problem of financial capital to start up the business. Rather, where the problem lies on is lack of entrepreneurial skill to

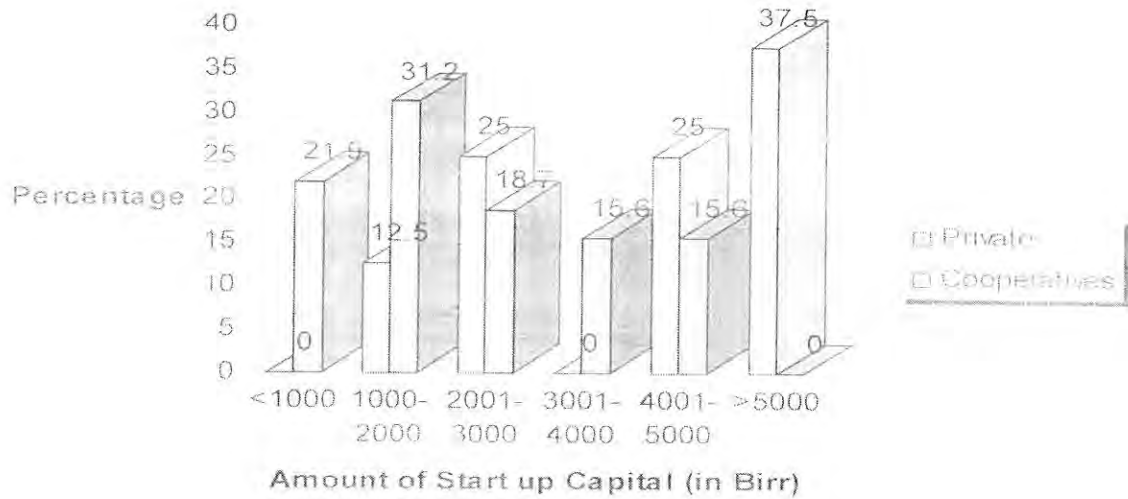
use the credit as efficiently as possible. Therefore, the finding seems contradicting with Klundert and Lardinois (1995) who said that MSEs are of limited financial accessibility to start-up the business.

The amount of capital to start the business has also been identified.²⁰ In a related development, figure-13 indicates that 17.5 percent of cooperatives and private MSEs started their business using less than 1000 Birr. And all of them were from the cooperatives. However, there were no private MSEs known started the business with less than 1000 Birr capital. However, this capital is less by 68.9 percent than with the minimum municipality requirement as a start-up capital. Whilst 37.5 percent of coordinators/managers from the private MSEs started this business with a capital amount greater than 5000 Birr. Nevertheless, 75 percent of them commenced their business with a capital amount ranging between 1000 Birr to 5000 Birr.

Figure-13 also clearly shows that there are no cooperatives with the start up capital greater than 5000 Birr. Rather, the majority (71.8 %) of them started the business with a capital amount less than 3000 Birr. To the contrary, 62.5 percent of private MSEs have started the business with greater than 4000 Birr. Therefore, the survey result is found to be consistent with what Cointreau S.J. (1994) clearly stated that there would be a possibility to start this business with little amount of start up capital. So, from the result found at the end of processing the survey data combined with literature on the subject, it is possible to draw on such a conclusion that that there is no significant barrier to start this job from the view point of the minimum start up capital.

²⁰ According to MSEs Development Programme (2007), it is possible for the cooperatives to start commercialized door-to-door municipal solid waste collection service with 4835 Birr capital. However, this start up capital refers only to those cooperatives with 10 members (this is the minimum requirement to be a cooperative, according to proc.No.147/1998) and to use only three pushcarts and other supplementing tools.

Figure-13: Responses to the Amount of Start up Capital (in Birr) by the Coordinators/Managers (n=40)



Source: Own Data (2007)

3.3. Opportunities Accrued

3.3.1. Employment Opportunity

In most developing countries, MSEs development sector has been known to create employment opportunities for about 30-80 percent of the urban labor force. This implies that MSEs are assuming by far more important as a source of jobs than the modern industrial sector and the government service rendering institutions combined. It was the intent initially its potential to absorb new comers to the labor markets (including "drop outs" and graduates), recently arrived rural migrants, and 'retrenched' public servants help them to earn an income when they are unable to find work in modern industrial sector or government service. The flexibility of working arrangements (e.g. part-time work, home-based activities, low educational and capital requirements), make it also possible for large numbers of women to work in MSEs (Haan et al., 13:1998).

Thus, in its attempt to find the opportunities made available, the survey identified the number of jobs created in such innovative MSEs solid waste collection activity.

Furthermore, the employment opportunities generated, as indicated in table -15, are compared between selected cooperatives and private MSEs.

Table-15 vividly indicates that a total of 412 people are employed in cooperatives and private MSEs solid waste collection initiative. Of which 60.2 percent and 39.8 percent are females and males, respectively. This implies that there is only a 20.4 percent gap between females and males who benefited from the commencement of MSEs Solid waste collection scheme. Nevertheless, a 64.6 percent and 55.2 percent gap has been registered in the cooperatives and private MSEs, in the same order.

However, of the total employees absorbed by the cooperatives, 82.3 percent and 17.7 percent are females and males, respectively. Similarly, 77.6 percent and 22.4 percent of workers hired in private MSEs were males and females, respectively. So, there was female-male dominance in the cooperatives and private MSEs. Such female dominance observed in the cooperatives is due to, according to the coordinator, male employees were not confident to do this job in the cooperatives. As a result, the respective cooperatives decided to do the job by their own staff. On the other hand, the males' dominance prevailed in the private MSEs went to their physique strengths and thereby able to do the job in any stressful situation.

Table –15 Employment Opportunity by Sex

Sex	MSEs (Cooperatives)		MSEs (Private)		Total	
	F	%	F	%	F	%
Female	214	82.3	34	22.4	24.8	60.2
Male	46	17.7	118	77.6	164	39.8
Total	260	100	152	100	412	100

Source: Own Data (2007)

The above table also shows how MSEs, in general, and MSEs solid waste collection scheme, in particular, have the potential to create a large number of jobs with small amount of capital investments. As Haan et al (1998) stated in his study, most governments of developing countries discovered that it would be better to be largely

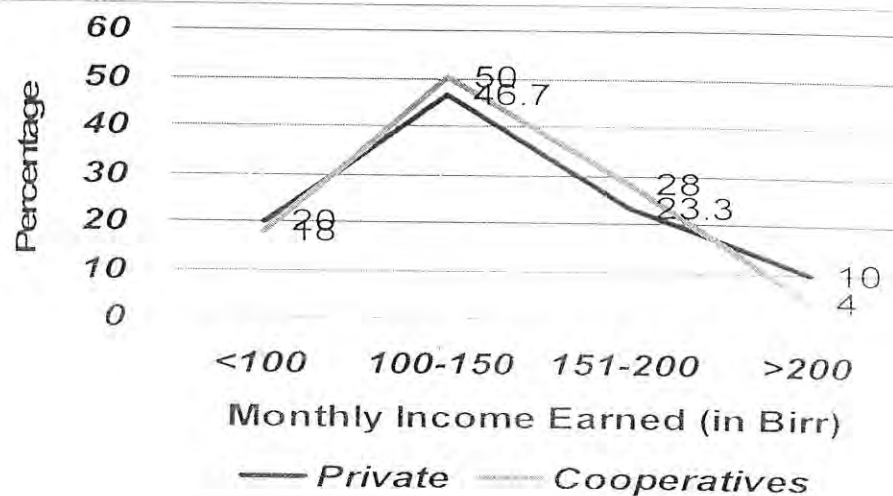
dependent on micro and small scale sector for the absorption of their rapidly expanding labor forces. This is due to, according to Haan et al (1998), the average investment required per job in the modern sector is too high i.e. US \$ 10,000 or more

3.3.2. Income Generation

As to the income currently being generated, figure-14 below shows that, 48.8 percent of workers are earning an amount of income ranging from 100-150 Birr per month. Whilst, only 6.2 percent of them are earning a monthly salary greater than 200 Birr. However, 8.8 percent of them are let to earn a monthly salary less than 100 Birr. Figure-14 has also found that there has been similar income distribution pattern between cooperatives and private MSEs. For instance, the majority (50% and 46.7%) of workers from the cooperatives and private MSEs are known to earn 100-150 Birr per month, respectively. Whereas 28 percent and 23.3 percent of workers from the cooperatives and private MSEs, respectively, earned ranging from 150-200 Birr per month.

As can easily be seen from figure-14, only 6.2 percent of workers have earned income greater than a statutory minimum wages. Where as 78 Percent and 70 percent of workers from the cooperatives and private MSEs have earned monthly salary less by 0.25 times the minimum wage, respectively. Nevertheless, 18 percent and 20 percent of those from the cooperatives and private MSEs have earned less by not less than 0.5 times the statutory minimum wages. The above hard facts stand in contradiction with the income level being earned by some of the Latin American countries. According to Inge Lardinois (1996), MSEs solid waste collectors in Guatemala, Peru, Colombia and Bolivia receive 3.03, 2.07, 1.94 and 2.09 times their statutory minimum wages, respectively.

Figure-14: Monthly Income Earned by Sampled Workers (n=80)



Source: Own Data (2007)

3.3.3. Benefits to the Clients

Since clients are the ultimate beneficiaries of micro and small scale door-to-door municipal solid waste collection initiative, they were also questioned how benefited from the scheme. Except 26.7 percent and 40 percent of the clients from the cooperatives and private MSEs, respectively, as indicated in figure-6 the rest (73.3 % and 60% in the same order) of them were satisfied with door-to-door municipal solid waste collection initiative. Thus the benefits accrued by the clients are summarized and narrated as cases:

Case-1: Mr. Wondwossen who is the owner of the big garage in the research setting. He has been working as a mechanic for the last 30 years. However, only 10 years in this specific place since he owned the business. The garage owner remembered very well the sanitation status which was discouraging and challenge full to continue his job. However, the moment one of the private MSEs awarded the same zone where the garage is found, the franchisee made a tremendous effort to clean the area. According to the garage owner, the private solid waste collection initiative changed the image of his business enterprise. Now the status of the garage has increased in terms of number of employees in the garage, market size (customer number), revenue and tax paid

to the revenue department in the sub-city. So the client proved how urban sanitation problem can affect urban productivity and economic development by decreasing the value of the land and reducing production cost as stated in Cointeau S.J. (1994) publication.

Case-2: one of the clients from the residence described the benefits accrued in the following manner. Since she was far from the communal container, according to her, the family was suffering from frequent common cold. Now thanks to the private initiative, the problem is a bit minimized. As a result, door-to-door municipal solid waste collection scheme by private initiators, all wastes generated from her yard removed two times per week paying 15 Birr per month. Now children are less exposed to any waste-related diseases. This is quite consistent with Cointeau S.J. (1994) in that effective MSWM can improve adult health and reduce child mortality.

Case-3: a group of clients in a village want acknowledge to one of the private enterprise working in their residential area. According to them, previously they were not accessed to such municipal service even by the municipality. As a result of it our village named as “ዘምብ ተራ” literally to mean that “where flies are collected.” But now thanks to private initiative, the nickname given to our village becomes history. Now, according to them, our village becomes a model, and proved how it is possible to see a beautiful environment if we work in partnership. As also observed in the field, the village has shown a tremendous change and the resident has began to use the vacant place (where it was used to dump their wastes) for some community purpose such as Edir. So this particular case vividly indicates how an aesthetic and disease-free environment can also be built up if there is a common understanding to work in coordination with such initiative.

3.3.4. Benefits to the Municipality

Cooperatives and private MSEs solid waste collection initiative are also of a direct contribution to the municipality in that the municipal solid waste is taken to the appointed collection point where easily accessible to the municipal waste vehicles.

Hence, this has far reaching implications on vehicles productivity, municipal workload, and fuel consumption and MSWM performance. Cornelissen et al (1993) as cited in Klundrt (1995) stated that a truly successful partnership reserves important roles for the municipal government.

For instance, according to waste vehicles drivers from the municipality, a single trip from solid waste collection point to land fill site can be ended up within 1:00-1:130 hours. This is true specially if there is no traffic jamming and no queue at landfill site (which is very common during rainy season). And in each trip 8m^3 or 10m^3 solid wastes are transported depending on the type of vehicles used. Everybody of us, according to them, is supposed to transport 56m^3 and 50m^3 solid wastes per day. Since the wastes are made ready and collection points are accessible enough, there is no wastage of time. As a result we may end up our job no later than 4:00 PM local time. The drivers agree unanimously on such finishing time attributable to the cooperatives and private MSEs scheme. Because, according to them, finishing the job later than 4:00 PM if not stopped before one or two trips were left, was the common phenomenon prior to such small solid waste collection initiative came into the business.

An official from the municipality also agrees to the merits accrued in reducing the municipal staff work load due to the introduction of cooperatives and private MSEs in municipal solid waste collection activity. For instance, the supervisor from the municipality has a field visit only in every seven days. Since the cooperatives and private MSEs were pre-informed to which and at what time the waste vehicle will come, the supervisors did not necessarily come to the field. Hence, the cooperatives and private MSEs themselves used as a controlling mechanism. Therefore, the supervisor may have more time to devote to other duties.

Moreover, the cooperatives and private MSEs solid waste collection scheme plays indispensable role in preventing illegal dumping. Despite CES officers are responsible for such duties, cooperatives and private MSEs watch and control each other. Since the establishments of such small businesses, according to CES officers and sanitation

coordinators, the job burden has reduced. This is also true for those of driver assistants. According to them, there are few more day-off per week due to such small-scale business came into this municipal activity.

Undeniably, the cooperatives and private MSEs involvement in municipal solid waste collection activity are of a positive contribution on the municipal waste vehicle fuel consumption. An official from the municipality said that quite a lot Birr saved due to the municipal waste vehicles stopped door-to-door solid waste collection except in rare cases. This also contributed a lot to keep on the vehicles providing the service and reduces the potential maintenance cost. Despite not documented, according to the official, the frequencies to technical difficulties that the municipal waste vehicles may face were also minimized.

For the last three years, the municipality managed 71,811.4m³, 75,354.03 m³ and 77,125.7m³. Official from the municipality also agreed to MSEs' contribution for such progressive performance, despite, difficult to know by how much exactly is. But if they were not come to this business, some amount of the wastes had not been collected and thrown illegally to unauthorized lots. One of the interviewee who was dumping the waste in the river due to lack of access to service facility strengthens this solid fact. Yayasan Dian Desta (1993) also agrees on the contribution of such small scale initiative in the city's solid waste management system as indicated in his case study conducted in one of the cities of Indonesia, Yogyakarta.

CHAPTER FOUR

Conclusion and Recommendation

4.1. Conclusion

Both the cooperatives and private MSEs are supposed to deliver the service through the de facto franchising business arrangement. In a situation whereby government is not capable, willing, or ready to contract out directly the MSW collection service, such initiative may be able to fill the increasing demand gap. However, yet some clients are complained for the monthly service fee. The majority of the beneficiaries shifted the blame to the monopoly system introduced by SBPDA. Even though these cooperatives and private MSEs solid waste collection business are expected to deliver the service in a fair price, however, they are cost conscious and prefer to concentrate around the prosperous residential areas and commercial premises. Hence, both the cooperatives and private MSEs left the poor unserved.

Cooperatives and private MSEs solid waste collectors are doing this job confronting some challenges which desperate them to stay in the business. For instance, lack of vehicles and transfer points are the toughest challenges which always make them insecure to stay in the business. Despite such challenges are also the problems of private MSEs, they are able to absorb the shock traveling long distances where vacant containers are available. Negative perception towards solid waste collectors is the other challenge which frustrates this small-scale initiative. These problems are more evident among the cooperatives than private MSEs are. Hence, such challenges may have far-reaching implications on the MSWM effort in general and their livelihood in particular.

Cooperatives and private MSEs solid waste collection activity is contributing a lot to the collectors themselves, environment (especially to the beneficiaries), and the municipality. Such a small-scale entrepreneurial scheme has created job opportunity for large number of unemployed. Cooperatives and private MSEs solid waste collectors are of a special place for a better MSWM coverage and to create a clean and disease free environment. The municipality may also be benefited in that by reducing workload, increasing vehicles productivity, fuel consumption, and vehicle maintenance

cost. The merits that may be accrued from such cooperatives and private MSEs can create a fertile ground to promote and upscale this small-scale initiative.

4.2. Recommendation

Based on the findings the researcher has recommended the following which may contribute a lot to sustain such small scale solid waste collection initiative.

In cognizant of cooperatives and private MSEs solid waste collection are of significant contribution in an effort to have a clean city which is a wish of every citizens; so that every body should recognize, acknowledge and respect their job.

In majority of the cases such cooperatives and private MSEs solid waste collection activity are doing their job in a very traditional manner i.e. their management style, working procedure, type of equipment used, the way they approach the clients etc. Hence, they may not achieve what they want to achieve. Therefore, strengthening and upgrading their capacity so as to able them to sustain in the business is not the assignment left for tomorrow. This is not only for the clean environment that every body wishes to see it but also for the livelihood of workers.

Organizing and get them into the business landscape may not be a panacea by itself. Supporting them specially to avoid initial inefficiency is very crucial. The service recipients are also of an indispensable role for the sustainability of the cooperatives and private MSEs solid waste collection scheme, since they are the ultimate market for the service. Therefore, a strong tri-partite partnership among service recipients, service providers, and the municipality should be established.

Strengthening and up scaling MSEs alone may be a one sided solution. Thus, the municipality is also expected to develop new skills and functions that are related to preparing documents, regulating, monitoring, and financing of the service until such cooperatives and private MSEs solid waste collection scheme gets well-equipped and independent. So the capacity of the municipality should also be strengthened.

Despite cooperatives and private MSEs solid waste collection initiative has a positive environmental and livelihood implication; the opportunities accrued by the municipality are not well calculated yet. So that calculating the merits attributed to the municipality will create a fertile ground to upscale and promote such micro and small-scale initiative. So that further research should be conducted on the merits that may come for the municipality due to the involvement of cooperatives and private MSEs door-to-door municipal solid waste collection schemes.

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Glossary

Block collection: collector sounds horn or rings bell and waits at a specified locations for residents to bring waste to the collection vehicles (Haan et al., 1998).

Collection: an act of gathering, sorting and/or mixing of for the purpose of transport to the recognized dumping site (ERM, 2004).

Communal (shared) container: a material made from metal or strong plastic with the size of 1.1m³ and/or 8m³ used for temporary secondary solid waste collection point (SBPDA,2004).

Community-based MSEs: enterprises that get their income by selling profit materials or products, which they have salvaged, produced or bought (Schniberg,2001).

Concession: the government awards a concession to a private firm to set up a facility that utilizes the government-owned resources—refuse (Cointreau S.J., 1994).

Contracting: the government awards a finite-term contract to a private firm for the delivery of solid waste collection service (Cointreau S.J., 1994).

Cooperatives: a group of people established by individuals on voluntary basis to solve their economic and social problems (Proclamation No.147/1998).

Curbside collection: in this method of collection waste is left outside property in a container and picked up by passing vehicles, or swept up and collected by sweeper (Haan et al., 1998).

Designated transfer points: temporary disposal depots used to collect the municipal solid waste removed from the respective clients by the cooperatives and private enterprises.

Door-to-door municipal solid waste collection: a mechanism through which solid wastes are collected by going from house-to-house k on using labor or any kind of vehicles and/or pushcarts (SBPDA, 2004).

Effectiveness: the situation at which the service is provided within the required time.

Efficiency: the condition whereby providing the maximum service with the available resources.

Formal private sector: refer to corporations, institutions, firms, and individuals business with official business licenses, an organized labor force governed by labor laws, some degree of capital investment, and generally modern technology (Furedy, 1990).

Franchise: the government awards a finite-term zonal monopoly (franchise) to a private firm for the delivery of solid waste collection service (Cointreau S.J., 1994).

Informal private sector: refers to unregistered, unregulated, or casual activities carried out by individuals and/or family or community enterprises that engage in value adding activities on a small-scale with minimal capital input, using local materials and labor-intensive technique (Furedy, 1990).

Landfill: it is the final dumping lots found in Nifas Silk Lafto sub-city locally known as Reppi (also known by the name Koshe) and administered by SBPDA (SBPDA, 2004).

Micro and small-scale enterprises (MSEs): are enterprises with fewer than 20 employees and only a small amount of capital. They often rely on low-cost technology (Haan et al., 1998).

Micro solid waste service enterprise: a business entity, which engages on door-to-door municipal solid waste collection from residences and commercial premises (with less than 10000 Birr annual capital) to temporary transfer points (SBPDA, 2004).

Municipal solid waste: are defined to include refuse from households, non-hazardous solid wastes from industrial and commercial establishments, refuse from institutions (including non-pathogenic waste from hospitals), market waste, yard waste and street sweepings (Cointreau S.J., 1994).

Municipality: shall mean urban administration which particularly refers to kifle ketema (sub-city).

Non-Governmental organizations (NGOs): refer to such diverse organizations as churches, donor organizations, environmental organizations and lobbies.

Open competition: the government freely allows qualified private firms to compete for refuse collection (Cointreau S.J., 1994).

Primary municipal solid waste collection: if waste is collected in two or more stages –first transported in one vehicle and latter transferred to another –the first stage is known as primary collection (Haan et al., 1998).

Private MSEs: a small private company in which an owner or entrepreneur organizes employees and resources so that he/she can generate a profit from this activity (Haan et al., 1998)

Productivity: a measure of the amount of work that a man or a machine does in a particular time (Haan et al., 1998).

Public-Private partnership: the linking of government inputs with private sector inputs for a particular goal (Haan et al., 1998).

Recycling: the process of transferring recovered and sorted materials into intermediate materials (such as crushed glass or ground or extruded plastics) or into final product for consumer or industrial use (Haan et al., 1998).

Secondary municipal solid waste collection: if waste is collected in two or more stages-first transported in one vehicle and later transferred to another-the second stage is known as secondary collection. It is usually accomplished by a motorized vehicle and ends at the disposal site (Haan et al., 1998).

Serviced-based MSEs: enterprises that get their income from performing a service paid by the clients (Schniberg.2001).

Small-scale solid waste service enterprise: enterprise, which suppose to provide door-to-door municipal solid waste collection to commercial premises and residential houses using their own vehicles to landfill site (SBPDA, 2004).

Solid waste management (SWM): refers to the discarding of used materials, collection, transfer, recovery (including recycling), and disposal of municipal solid waste (Cointreau S.J., 1994).

Solid waste: means any solid or semi-solid waste generated from different sources and discarded as unwanted or as useless (Addis Negari Gazeta, Regulation No.13/2004).

Source separation: the separation of solid waste at the point of generation so that it is passed to the first collection stage as two or more streams (Haan et al., 1998).

Transfer point: the place at which transfer takes place. It may be a designated place where waste is unloaded from primary collection carts or where a secondary container is placed (Haan et al., 1998).

Transfer: the relocation of waste from one means of transport to another. It is a necessary stage between primary and secondary collection (Haan et al., 1998).

Value-based MSEs: entities that serve a social, religious, environmental or cultural purpose, whose primary goal is some form of social or cultural change or strengthening environmental protection in their chosen areas of focus (Schniberg,2001).

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Questionnaire Scheduled for Sample Cooperatives, and Private MSEs' Door-to-Door Municipal Solid Waste Collectors

Addis Ababa University

Institute of Development Research

Introduction

This questionnaire is prepared for an academic purpose for the fulfillment of MA Degree for Development Studies in the Institute of Development Research. The objective of the study is to assess the challenges and opportunities of the cooperatives and private /MSEs/ solid waste collection initiative and to recommend the possible institutional arrangement (s). So that your genuine response is very crucial for the success of the research. Thus I would like to thank in advance for your cooperation.

1. Sex

A. Male

B. Female

2. Age

A. 15-20

C. 27-30

B. 21-26

D. >30

3. Educational background

A. Illiterate

D. 7-9

B. Read and write

E. 9-12

C. 1-6

F. Technical and vocational training

G. Other please describe (if any) _____

4. Marital status

A. Single

C. Divorced

B. Married

D. Widow

5. Ethnicity

A. Amhara

D. Oromo

B. Guragie

E. Tigray

C. Hadiya

F. Wolita

G. Other please describe (if any) _____

6. Religion

A. Catholic

C. Christian (Protestant)

B. Christian (Orthodox)

D. Muslim

E. Other please describe (if any) _____

7. Place of origin by region

A. Addis Ababa

D. SNNPR

B. Amhara

E. Tigray

C. Oromia

F. Other Please describe (if any) _____

8. Family size _____ (in number)

9. When do you start this job?

A. Six months before

C. One year and six months before

B. One year before

D. Two years before

E. Other Please describe (if any) _____

10. Do you have any other previous work experience?

A. Yes

B. No

11. If the answer for item 10 is "A", where have you been working at?

A. Private organization

B. Government organization

C. Personal business

12. What did motivate you to start this job?

13. Do you have any other supplementary job now?

A. Yes

B. No

14. If the answer for item 13 is "A" will you describe it?

15. To which MSEs do you belong?

A. Cooperatives

B. Private

16. On what terms do you employ?

A. Casually

C. Temporarily

B. permanently

17. What criteria are you requested to be employed in this business on the above terms of employment?

A. physical strengths

C. Work experience

B. level of education

D. Jobless confirmation paper

E. Other Please describe (if any) _____

18. How do you hear for the first time before starting the job?

A. Personal attachment

C. Government invitation

B. Vacancy announcement

D. Other Please describe

(if any) _____

19. What was your first impression towards the job?

A. Extremely good

D. Bad

B. Very good

E. Very bad

C. Good

F. Do not know

20. If the answer for item 19 is "D" or "E" what was the reason for that?

21. To which area your working zone belongs to?

- A. Market center
- B. Residences
- C. Mixed

22. What special privileges or disadvantages do you come across in the above working zone? _____

23. How do you describe being working in this zone?

- A. extremely good
- B. Very good
- C. Good
- D. Bad
- E. Very bad
- F. Don't know

23. What is your responsibility in the cooperative or private MSEs?

- A. Solid waste collector
- B. Monthly fee collector
- C. Complaint desk
- D. Coordinator
- E. Other Please describe (if any) _____

24. How do you describe the level of satisfaction towards item 23?

- A. Very satisfied
- B. Satisfied
- C. Reasonably satisfied
- D. Not satisfied
- E. don't know

25. What do you think the possible reasons, if the answer for item 24 is "D"?

26. What experience do you have due to such disagreements in division of labor?

27. How many days do you work per week?

28. Do you have any opinion (s) with regard to item 27?

- A. Yes
- B. No

36. If the answer for item 34 "D" or "E", what do you think the possible reason (s), according to their priority?

- | | |
|---------------------------------------|--------------------------------|
| A. Unable to implement the regulation | D. Lack of willingness to pay |
| B. Lack of vehicles | E. Lack of ability to pay |
| C. Ignorance | F. Lack of awareness |
| G. Other | please describe (if any) _____ |
-

37. How do you describe peoples' attitude towards you due to your engagement in this job?

- | | |
|-------------------|----------------|
| A. Extremely good | D. Fair |
| B. Very good | E. Bad |
| D. Good | F. Do not know |

38. If the answer for item 37 is "E", what experience do you have?

39. How do you perceive the presence of vehicles as per the schedule?

- | | |
|------------------------------|--|
| A. Survival | E. Start to live in a confined room |
| B. Children can go to school | F. Freed dependency syndrome |
| C. Clean environment | G. Other please describe
(if any) _____ |
-

40. What experience do you come across due to lack of transfer points at reasonable distance?

41. What do you recommend to resolve such conflicts?

42. Do you use protective clothes?

A. Yes

B. No

43. If the answer for item 42 is "B", what is/are the reason/s?

44. Have you visited clinics or any other health institution for the last six months?

A. Yes

B. No

45. If the answer for item 44 is "B", what is/are the reason/s for it?

46. To which income category your monthly salaries belong to?

A. Less than Birr 100

C. From Birr 151-200

B. From Birr100-150

D. Greater than Birr 200

47. Are you satisfied with the above monthly salary?

A. Yes

B. No

48. If the answer for item 47 is "B", what is/are your recommendation (s)?

49. Do you have bonus except your monthly salary?

A. Yes

B. No

50. If the answer for item 49 is "A", are you satisfied with it?

A. Yes

B. No

51. If the answer for item 50 is "B", what is your recommendation?

52. Do you want to continue in this job?

A. Yes

B. No

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Interview Schedule for Sampled Cooperatives' Coordinators, and Private MSEs' Managers/Owners

Addis Ababa University

Institute of Development Research

Dear respondents,

I am doing a research entitled "Status, Challenges and Opportunities of the Cooperatives and private MSEs" operating commercialized door-to-door municipal solid waste collection in Addis Ketema kifle ketema. So that your genuine response would have a valuable importance for the success of the study. Thank you in advance for your cooperation!!

1. How do you describe the role of such initiative in MSWM effort?

2. What service does your cooperatives/enterprise provide?

3. For whom does your cooperatives/enterprise suppose to deliver the service?

4. How do you select the service recipients group in your working zone?

5. What challenges did you come across in lobbying the public to benefit from your cooperative/private MSEs?

6. Is there any agreement to start the job?

A. Yes

B. No

7. If the answer for item 6 is "A", with whom have you made an agreement?

8. How did you get the line of agreement to do this job?

9. What was the source of capital to start the business?

A. Self-owned

D. Credit from friends and relatives

B. Gifts from friends and relatives

E. Without initial capital

C. Micro finance institutions

10. If the answer for item 30 is "C", what experience do you have?

11. What amount your cooperative/private enterprise used to start the business?

A. Less than Birr1000

D. From 30001-4000

B. From Birr 1000-2000

E. From Birr 4001-5000

C. From Birr 20001-3000

F. Greater than Birr 5000

12. How frequent the service is provided per month?

13. What is/are the basis for the level of service supposed to provide?

14. How frequent the service fee is collected?

15. On what basis the service fee is determined?

16. How much, on average, the clients are supposed to pay for the service?

A. House holds _____

B. Commercial premises _____

17. Is your cooperative/private enterprise satisfied with the service fee paid by the clients?

A. Yes

B. No

C. Do not know

18. If the answer for item 14 is "B", what do you recommend to solve such dissatisfaction?

19. What is/are the commonest complaint your cooperative/private enterprise came across?

20. How do you evaluate the market since your cooperative/private MSEs started this business?

A. Increasing

C. No change

B. Decreasing

D. Do not know

21. If the answer for item 16 is "B", what is /are the possible reason/s?

22. If the answer for item 16 is "A" what special marketing strategy did your cooperative/private enterprise employ?

23. Do you think that zoning gives you a good opportunity?

A. Yes

B. No

C. Do not know

24. If the answer for item 19 is "B" would you describe some of the problem (s)?

25. What support does the municipality provide to your cooperative/private enterprise?

26. Did the incentive motivate you?

A. Yes

B. No

27. If the answer for item 22 is "B", why?

28. Is there any other institution or organization which supports your effort?

A. Yes

B. No

29. If the answer for item 22 is "A", what and from whom did you get such support?

30. Does this support package motivate you?

A. Yes

B. No

31. If the answer for item 26 is "B", what is/are the reason(s)?

32. What major challenges does your cooperative/private enterprise face, according to their priority? Mark (√) them accordingly.

Possible challenges	1 st	2 nd	3 rd	4 th	5 th	6 th	7 th
Insufficient user participation							
Job insecurity							
Lack of vehicles							
Organizational problem							
Poor health and safety condition							
Socio-cultural problem							
Transfer points							

33. What measures did you take to reconcile the above major challenges?

34. Are you confident enough to stay in the business?

A. Yes

B. No

C. Do not know

35. If the answer for item 28 is "B", what is/are the possible reason (s)?

A. Possible zone adjustment

C. Engulfed by large enterprises

B. Capacity problem

D. Complete privatization

E. Other (please describe if any) _____

33. What measures did you take to reconcile the above major challenges?

34. Are you confident enough to stay in the business?

A. Yes

B. No

C. Do not know

35. If the answer for item 28 is "B", what is/are the possible reason (s)?

A. Possible zone adjustment

C. Engulfed by large enterprises

B. Capacity problem

D. Complete privatization

E. Other (please describe if any) _____

9. What challenge(s) does your office come across due to item 7?
10. What steps does your office go so far to aware the public towards the introduction of a local monopoly service provision by the cooperatives and private MSEs?
11. How does your office evaluate the reaction by the public?
12. How does your office inspect and supervise the cooperatives and private MSEs?
13. What does your office experience in the course of monitoring and regulating the cooperatives and private MSEs?
14. How does your office resolve the conflicts that may arise between the cooperatives and private MSEs, and your office and the clients?
15. What efforts does your office exert to promote the cooperatives and private MSEs solid waste collection scheme?

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Interview Schedule for Solid Waste Management (SWM) Division

Official in Addis Ketema Kifle Ketema

Addis Ababa University

Institute of Development Research

1. How does your office evaluate the solid waste management status in addis ketema kifle keema
2. How does your office explain the role of cooperatives and private MSEs on municipal solid waste management service in addis ketema kifle ketema?
3. What challenges does your office confront due to the involvement of cooperatives and private MSEs in MSWM service?
4. What measures does your office take to resolve the challenges?
5. What support (s) does your office provide to the cooperatives and private MSEs?
6. How does your office evaluate the results attained by the cooperatives and private MSEs due to such institutional support?
7. What support does your office get from the city government, NGOs or external body to strengthen the cooperatives and private MSEs solid waste collection initiative?
8. What criteria does your office set to award the franchise to the cooperatives and private MSEs?

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Interview Schedule for Sampled Clients
Addis Ababa University
Institute of Development Research

1. How did you first aware about such small scale solid waste collection scheme?
2. How did you evaluate the service delivered by the cooperatives and private MSEs?
3. What challenges do you face while the cooperatives and private MSEs providing door-to-door municipal solid waste collection service?
4. What mechanisms do you employ when conflicts arise?
5. What do you expect from the government so as to maintain your best interest?
6. How do you describe the relationship with your service provider (cooperative or private enterprise)?
7. Do you think that cooperatives and private enterprises better than the government?
8. Do you want to continue being a customer of your present service providers?
9. If the answer for item 8 is "No" how are you going to remove the wastes generated in your yard?
10. What do you suggest to continue such micro and small scale initiative in providing door-to-door municipal solid waste collection service?

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Observation Checklist
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1. The status of cooperatives and private MSEs.
2. The availability of technical materials.
3. The extent of motivation by service providers.
4. The bureaucratic line to start the business.
5. Vehicle availability and its implications.
6. The frequency of emptying containers.
7. The location of transfer points (depots).
8. The status of sanitation during the day and night.
9. The prime responsible body for clandestine dumping.
10. The reaction of the responsible body to avoid illegal dumping.

Declaration

I, the undersigned, declare that the thesis is my original work, has not been presented for a degree in any other university and that all sources of material used for the thesis have been duly acknowledged.

Declared by:

Getachew Agwot



Candidate

Confirmed by:

Yizremew Adde



Advisor