



**Recycling value chain reality: Exploring the lived experiences of primary collectors in EThekweni Municipality**

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January 2018

Submitted in partial fulfillment of the requirement for degree, Master of Development Studies, School of Built Environment and Development Studies, Faculty of Humanities, University of KwaZulu-Natal, Durban, South Africa.

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## Abstract

Waste management is still a challenge for both developed and developing world. Municipalities find waste management difficult to manage. In South Africa, there are high rates of unemployment and poverty. The government is still trying to address these socio-economic issues, with no success. This has resulted people, especially the youth participating in the informal economy.

Recycling tends to be the only solution to the shortage of landfill sites. Primary collection of waste for recycling is informally practiced by individuals with the purpose of getting an income. Primary collectors are independent. This study focused on the recycling value chain by exploring the lived experiences of primary collectors in EThekweni Municipality. The study made use of qualitative research design. Data was gathered through both primary, secondary sources and through observations. Interviews with a sample of 20 participants were conducted. Participants were recruited through the help of the buyers of recyclable materials. The reason for this was to get participants who can provide necessary and rich information for the study.

The study revealed that there is a need for policy makers to do research on the effectiveness of informal collecting for recycling and incorporate primary collectors in policies. Awareness campaigns and training residents must be a priority for the municipality towards achieving being the green city with friendly environment in a health and peaceful manner. Primary collectors in the city experience abuse from the municipal officials, specifically the metro police, municipal security and the society. The study discovered that primary collectors only feel safe in the hands of their buyers (buy-back centres and secondary collectors). Primary collectors are aware of dangers associated with their work, which includes stigma and health issues.

## Declaration

I, Sanelile Bongeka Khumalo declare that this study is my own work; it has not been submitted for any degree or examination at any other university.

I also declare that all sources, references and borrowed ideas used have been fully acknowledged.

I am aware that using other's work without proper acknowledgement is a criminal offence.

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## Dedication

I dedicate this work to my mother and father, Buyisile and Lungani Khumalo, who first taught me the value of education, their words of encouragement and push for tenacity ring in my ears. I also dedicate it to my daughter uSbahlle and her brother uNhlelozikathixo Khumalo, I did this for you and I hope it serves as a motivation for you to do better, my sister Nosizo Khumalo thank you for the support.

I also dedicate to my friends (Mongi Mthembu, Thembeke Nkomo, Nelisiwe Mdadane and Nokwanda Mabanga), thank you for the support and love you have showed me. It was never easy, but you kept me sane. I love you all.

## ACKNOWLEDGEMENTS

Grace is God Himself, his loving energy at work in my life. My gratitude to my Lord and Saviour.

My utmost appreciation to my supervisor Dr. Mariam Seedat-Khan; this dissertation would not have been completed without your assistance and patience.

I gratefully acknowledge each and every respondent that participated, your profound contribution made a great impact. Thank you.

Finally, my heartfelt gratitude to NRF for funding my studies.

## List of Acronyms

CBD	Central Business District
DFID	Department of International Department
DSW	Durban Solid Waste
DTI	Department of Trade and Industry
IDP	Integrated Development Plan
EMA	EThekweni Municipality Area
EDGE	Economic Development and Growth in EThekweni
GNP	Gross National Product
HIV	Human Immunodeficiency Virus
IFC	International Finance Corporation
UKZN	University of KwaZulu-Natal
KZN	KwaZulu-Natal
ILO	International Labour Organization
MSWM	Management Solid Waste Management
MSE	Micro and Small Enterprises
MRF	Materials Recovery Facilities
NGO	Non-Government Organizations
PPP	Public Private Partnership
PRASA	Paper Recycling Association of South Africa
SWM	Solid Waste Management
TB	Tuberculosis
UN	United Nations
UP	University of Pretoria
USA	United States of America

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# Chapter 1: Introduction

## 1.1 Overview of the study

The value chain defines the complete variety of deeds which are necessary to take a product or service from the outset, over a diverse of stages of production, distribution to closing users, and final disposal after use. With the rising detachment of labour and the global dispersal of the production of components, value chain is important (Kaplinsky and Morris, 2001:4). For a recycling process to be successful, having a bulky, constant supply of recyclable material is important (Banerjee, 2015:53). Recycling starts with disposal of waste materials and the process ends with the re-use of value added materials and it is perceived to have both socioeconomic and environmental benefits (Freegard, 2017). The youth try in many ways to be economically active by participating in the recycling sector informally.

Primary collectors are landfill pickers and street pickers in the recycling sector. They gather recyclable materials door to door on foot. These people have casual and informal relationships with commercial businesses. Farid (2016:77) states that “South Africa’s transition to a green economy will lead to a number of investment incentives towards the creation of a large number of green jobs, up to 300 000 jobs over the next 10 years”. Similarly, within the EThekweni Municipality, the recycling sector accounts for an estimated 6400 jobs in the city (EThekweni Edge, 2016:16). Recycling is important as it progressively contributes to the growth economy of the country and it cuts-down the volume of waste going to the landfill.

Primary collectors play a crucial role in the process of recycling. However, they encounter sales challenges. Additionally, they lack recognition and support from the municipality and face poor treatment from law enforcement officers. It has been also recognised that poor knowledge of recyclable materials and pricing remains a challenge for primary collectors. Hence, the existing challenges for primary collectors further limit the potential of the recycling industry within the city. Also, the economic, social, and environmental benefits of recycling in EThekweni Municipal Area are restricted by these underlying challenges. It is therefore essential to conduct a study to unpack the lived experiences of primary collectors. Undoubtedly, this research will significantly contribute to innovative strategies to further develop the recycling industry within EThekweni Municipality. This research will explore the



reasons that led primary recyclers to participate in the recycling industry and the challenges that they face.

## 1.2 Theoretical framework

Development is meant to improve the lives of the people for the better to their full potential. Their human needs must be met, eradicate poverty and improve their access to services. The basic needs approach is used because it put priority to people's needs that they should be met including everyone such as the old and the sick (Streeten and Buri, 2001:413). The capability approach helps the researcher to look at the well-being of the primary collectors, their social arrangements and the policies that are meant to bring social change to the people. It also looks at what people can effectively do for themselves. Based on the capability approach, "the ends of well-being, justice and development should be conceptualised in terms of people's capabilities to function; that is, their effective opportunities to undertake the actions and activities that they want to engage in, and be who they want to be" (Robeyns ,2005:95).

The participatory approach is applied as it involves active participation and empowerment of the people. For primary collectors to participate in the economy, this empowers them to provide for themselves than to wait for government to make a difference in their lives. The study also makes use of the bottom up approach. The approach ensures that everyone, including the local actors (community) have a say in decision making with regards to activities that are meant to change their lives. The basic principle of sustainable livelihood is that development focuses to people and what matters to them and how they understand their livelihoods. People have the right and the ability to identify what important aspects of their livelihood (Peterson and Pedersen, 2010:6). The study finally seeks to use the social exclusion approach. Being socially excluded leads to poverty as people may be excluded from networking to improve their lives or to get employment opportunities. Everyone needs to be treated equal and with dignity.

## 1.3 Research problem

For local governments, environmentalists, and the community at large, sustainable solutions to the serious solid waste difficulties is an increasing concern. Solid waste management can be a strategy to benefit the environment in the conversion from waste to reusable resources, and can help individuals make earnings. Solid waste management addresses poverty, in a way it contributes to the achievement of Millennium Development Goal number one

(Singhirunnusorn, *et al.*, 2012:691). What is good about informal recycling in developing countries like South Africa is that it works in the municipality's favour as it believed to lessen the charge of formal waste management. It also helps in dropping the amount of collected waste and this has a positive impact on the amount spent on collection transport. Convincing municipal authorities to move away from their act of neglect the informal recycling sector to an effective engagement should not be the problem or a challenge for that matter. Firstly, the authorities must appreciate the benefits resulting from the informal recycling sector. I do believe that the challenge is to move away from negative attitudes, mostly of municipal authorities and the society at large towards primary collectors.

The main role players in the informal recycling value chain are primary collectors. However, they face many challenges; one of which is poor knowledge of recyclable material and pricing. Hence, they are vulnerable to price takers and "cherry pickers" (Urban-Econ, 2014:5). Consequently; they cannot afford to sustain their daily living. This study will investigate on the lived experiences of primary collectors in EThekwini Municipality CBD. The primary collectors in EThekwini, approximately 61% of them are homeless and are self-confessed drug users (Urban-Econ, 2014:5). The study will examine the city's control regarding material recycles, by looking at the policy, institutional arrangements, and the impacts of recycling. This aims to include the discussion of current and planned changes in legislation on value chain recycling. The focus is on organic waste streams (cardboards) which are likely for value added socio-economic activities, cost savings for municipality and reduces significant volumes diverted from landfills. This study will also investigate how the primary collectors became collectors, how long they have been collecting recyclable materials. The study will also look at the money they get from selling recyclable materials if it is enough for sustaining a living.

#### 1.4 Significance of the study

Recycling is the element of the current waste reduction and is the element of the "Reduce, Reuse and Recycle" waste chain (Banerjee, 2015:53). It is common to see primary collectors dragging trolleys of cardboards, cans and plastics. They are often regarded as street dwellers and they are victimized when trying to collect recyclable materials. The primary collectors work is often overlooked. Primary collectors serve as a gateway to recycling buy-back centres, drop off centres, garden sites and impact affiliated orange bag collectors (orange bag collectors are official city recyclers) in EThekwini Municipality (EThekwini Edge, 2016:16).

Primary collectors sell the recyclable material in exchange for money to sustain their livelihoods. Primary collectors exchange the content with secondary collectors who often sell all the accumulated content to manufacturing companies. The diversion of waste from landfills is important as the city is running out of landfill sites. In addition, raw materials are becoming expensive, and recycling extends resource supplies (Burn and Oskamp, 1986:29).

People in developing countries rely on recycling materials to sustain daily living. Integrating the informal sector to improve the lives and working conditions of primary collectors is a challenge for solid waste management (Wilson *et al.*, 2006:797). Ahmed and Ali (2004:467) provided an insight on how the two sectors (public and private) are active within the waste sector in developing countries. They stated that, “there is an emerging trend in encouraging the private sector to enter into solid waste management (SWM) operations, and attempts are being made to formally link the public and private sector operators. Such linkages may improve the efficiency of the sector and create new opportunities for employment” (Ahmed and Ali, 2004:467). To improve working conditions for primary collectors and for the recycling sector to be effective, the private sector needs to intervene into solid waste management the experiences of primary collectors on daily basis demand closer inspection. Their lived experiences, challenges and why they end up collecting recyclable materials makes this study significant and meaningful to knowledge creation for relevant members in the recycling value chain industry.

Montmasson (2012) examined the possible employment from green economy in South Africa, waste management (recycling) and natural resource management. The Blueprint (2006) report, demonstrates that the over-all value of green industries in 2004 was estimated between R14m and R24m, of which the waste management sector is estimated to account for 80% (Montmasson, 2012:10). According to a survey conducted by EThekwini Municipality, informal recyclers are the most vulnerable people in the city. Primary collectors operating in town are predominantly South African citizens. For most of primary collectors in EThekwini, recycling seems to provide a source of income. The survey further indicates that 86% of primary collectors are sole breadwinners of their households. However, primary informal collecting does not seem to be a long-term livelihood strategy for recyclers as they operate for less than 3 years in the sector (EThekwini Edge, 2016:17).

Formal and informal primary collecting has become a key source of livelihood worldwide. The informal economy involves informal employment without social protection. Informal initiatives include self-employment with unregistered initiatives (Chen, 2007:2). Informal recycling has an extended practise in the society and people in the global south nevertheless exercise it. In South Africa, people progressively perform the selective collection of materials, and commercialization of recyclables. According to Gutberlet (2012:24), in countries like India, Mexico and Brazil, 1% of the population sustain their living through this sector. Most of the primary collectors work under difficult, risky and harmful spaces (Gutberlet, 2012:24).

### 1.5 Objectives of the study

The study on recycling value chain reality has five key objectives. These include the following:

- To explore the lived experiences of primary collectors in the EThekwini Municipality.
- To explore the reasons behind being a primary collector and problems encountered by primary collectors within EThekwini.
- To explore methods of pricing the materials collected the impact of recycling on the well-being of primary collectors, and the support which primary collectors receive and need from government, private sector and civil society sector.
- To explore ways in which the government and the private sectors can make the recycling business economic benefiting and how primary collectors make a living out of collecting recyclable material.
- To explore major risk factors associated with waste recycling and societal perceptions of primary collectors and their work.

### 1.6 Research questions

The study on recycling value chain reality addresses the following research questions:

- What are the lived experiences of primary collectors in the EThekwini Municipality?
- What are the key reasons for becoming a primary collector?
- What are the key problems encountered by primary collectors?
- How do primary collectors price the materials collected and what factors affect their pricing?
- What kind of support from government, private sector and civil society sector is available to primary collectors?

- What are the major risk factors associated with waste recycling?
- What are the societal perceptions of primary collectors and their work?

### 1.7 Methodology

The study population involves 20 primary collectors within the EThekweni Municipality CBD. The study is guided by a qualitative research design which is mostly used in social sciences research to study people. Several methods to collect data are used, which includes semi-structured interviews with open-ended questions and direct observation. The researcher is using both primary and secondary data sources. Primary data refers to data that is new and have never been used before, also known as the first-hand data. Secondary data refers to data that was conducted by another researcher and have been used before. This study includes 20 participants of the same category who are already working as primary collectors in EThekweni.

Sampling that is chosen best fits the study, the purposive sampling. Tangco (2007:147) notes that “the purposive sampling technique is a type of non-probability sampling that is most effective when one needs to study a certain cultural domain with knowledgeable experts within”. The location of the study is EThekweni Municipality Area. EThekweni Municipality is one of the biggest metros and the largest municipality in the province of KwaZulu-Natal. Like any other big municipality, EThekweni Municipality has its own challenges when it comes to social and economic aspects. The population is constantly growing, making it hard for the municipality to provide services that will cover and satisfy everyone.

To analyse data, the study uses thematic analysis which uses codes and themes to analyse data before making the final judgement. Flexible thematic analysis is applied to address the research questions and objectives. Thematic analysis is done in six stages, which include familiarise with data; generate initial codes; search for themes; review potential themes; define and name themes and finally produce a report.

Participating in this study is not compulsory. Participants had a right not to participate and to withdraw. This will help the researcher to get rich and sound information to construct data analysis for the study. None of the participants names will be disclosed, they are presented anonymously.

## 1.8 Organisation of the study

### 1.8.1 Chapter 1

The chapter introduce the research study, research problem, research questions and research objectives, methodology and significance of the study.

### 1.8.2 Chapter 2

This chapter outlines the literature review on research problem.

### 1.8.3 Chapter 3

Chapter three presents the development theories that are relevant to the study. Theories include the basic needs approach, capabilities approach, social exclusion and the participatory approach.

### 1.8.4 Chapter 4

The chapter present the methodology in which the study will be conducted. It discusses the tools and techniques for data collection. The researcher is using primary and secondary sources to address the research problem. The study uses purposive sampling. To analyse data, the study uses thematic analysis.

### 1.8.5 Chapter 5

The chapter gives the data analysis and the findings using the information that was gathered during data collection.

### 1.8.6 Chapter 6

The chapter gives a summary of findings of the study, give recommendations and lastly draw on the overall conclusion of the study.

## Chapter 2: Literature review

### 2.1 Introduction

The foundation of the research explores the lived experiences of primary collectors in EThekweni Municipality. Information was collected through desktop from previous academic literature using various sources such as journals and professional reports. Literature revealed the crucial role which is played by primary collectors in the process of recycling, thus their role in the economic growth in developing countries cannot be underestimated. Primary collectors experience sales challenges. More so, they lack recognition and support from authorities and face poor treatment from law enforcement officers. The literature to be discussed looks on the conceptions and themes of the recycling value chain, municipal solid waste, globalisation and generation of waste, and solid waste policy.

### 2.2 Definition of value chain

Vermeulen *et al*, (2008:80) view the value chain as the “sequence of activities required to make a product or provide a service”. Value chain defines complete variety of deeds which are required to take a product or service from the outset, through stages of producing, distributing to finishing clients and final disposal after use. Considering the rising detachment of labour and global dispersal of the production of components, the value chain is important (Kaplinsky and Morris, 2001:4).

### 2.3 Primary collectors

Primary collectors collect recyclable materials straight from dumping sites. They are self-employed people, usually from urban informal sector and most of them live in slums. They earn their livelihood by selling recyclable material they have collected from streets, dumps, households to intermediate dealers. Before the material collected reaches the recycling site, there are many chains involved which is outlined in the below diagram. Primary collectors in most cases sell their materials to intermediate dealers, who sell the material in bulk to wholesalers. Intermediate dealers specialise in different materials, some in paper, cardboards, metals and plastics. Recyclable material is being goes for recycling as materials for production.

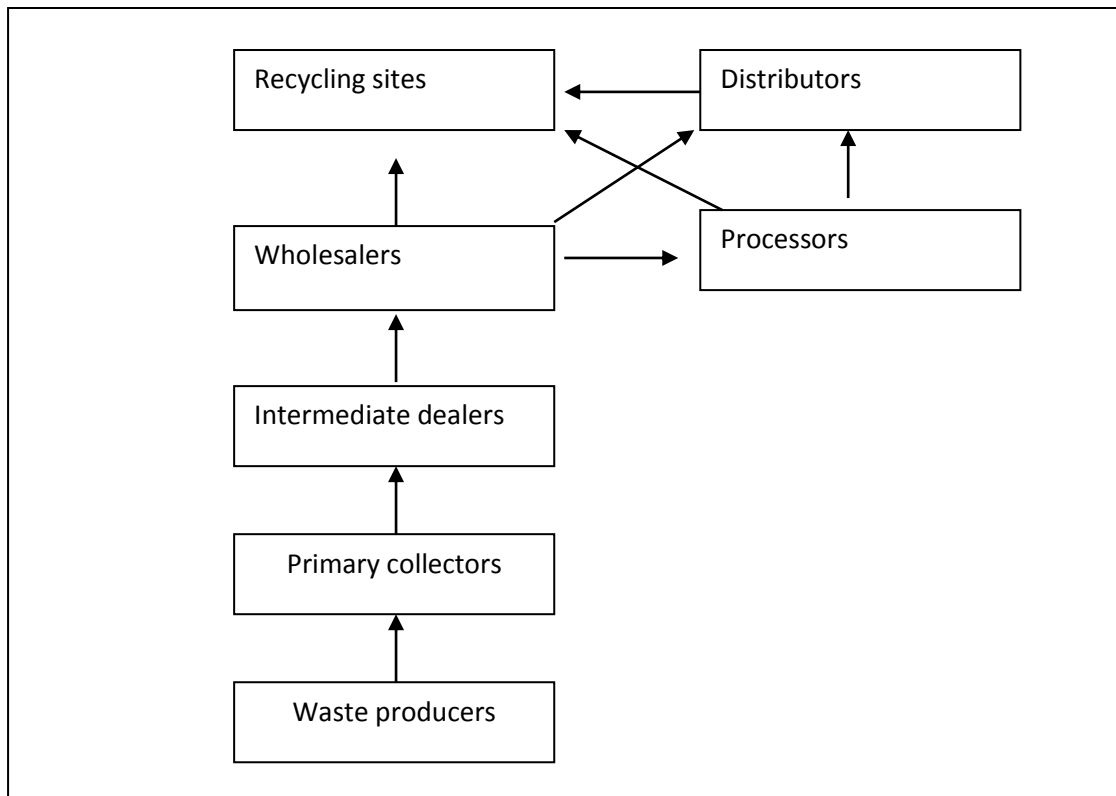


Fig 1: Channels of recyclable waste  
Source: Gerdes and Gunsilius (2010)

#### 2.4 Intermediate dealers

Primary collectors sell their materials to intermediate dealers. The recycling industry needs huge volumes of quality recyclable materials from suppliers. They do not buy materials from individual collectors. As a result, intermediate dealers buy from primary collectors and sell the items to small industries, traders, and main dealers who finally sell all these materials to the manufacturing industry.

#### 2.5 The recycling value chain in South Africa

According to Schenck and Blaauw (2011), South African municipal waste management systems seem not prepared to consider waste pickers. Gerdes and Gunsilius (2010:5) indicate that in cities like Cairo, the waste management systems are successful through the collaborations with primary collectors. Primary collector's help with the collection services without the municipal authorities and residents having to pay them. Gerdes and Gunsilius (2010:5) emphasise that street waste pickers are "entrepreneurs who add value merely by collecting and then transforming waste into tradable commodities". The good thing about informal sector activities is that they are flexible. People in South Africa have been collecting waste to survive (Benson and Vanqa-Mgijima 2010:2).



Primary collectors need to be included within the formal waste management systems. Without waste generation, there cannot be waste collection (Schenck and Blaauw 2010). Primary collectors make a living when people make waste. According to Medina (2010:88), “the amount and characteristics of waste generated in first and third world countries differ markedly. Waste generation rates in industrialised cities are typically higher than in cities in third world countries, and the quantity of waste generated tends to increase as income increases”. This proves that waste in developed countries, communities creates income opportunities for primary collectors living in these communities.

## 2.6 Recycling

Recycling gives life to waste materials reduces air pollution and water pollution by decreasing the need for straight waste disposal. Recycling is important in reducing waste. Recycling is the third element of the Reducing, Re-using and Recycle waste hierarchy. Recycling is a multipart process starting with the removal of waste materials to deliver a set of customer benefits. The recovery process from where waste is created to re-using as part of a new product involves a bulky volume of waste collected, sorting and separation of waste. Materials pass through a complex process and operations before returning to a new life with the end user. Having a bulky and constant supply of recyclable materials is a pre-requisite towards achieving a successful recycling process (Banerjee, 2015:53). Hence, recycling starts with removal of waste materials, which is perceived to have both socioeconomic and environmental benefits (Freegard, 2017). There are many points occurring after the manufacturing of the product.

## 2.7 Manufacturing stage

Recycling happens at the manufacture stage. Waste can be passed on to collectors and re-processors for conversion to a raw material state for use in production of the same or other products.

### 2.7.1 Post production recycling

Materials recycled at this stage are high quality as they have not been contaminated during the consumption stage (Tischler 2013:33). At this stage, the not needed materials are rejected. They are then taken to recyclers for treating, where they are being processed to their new state.

## 2.7.2 Post consumption recycling

Diversity of role players occurs at this stage as presented on the recycling value chain on figure 2 below.

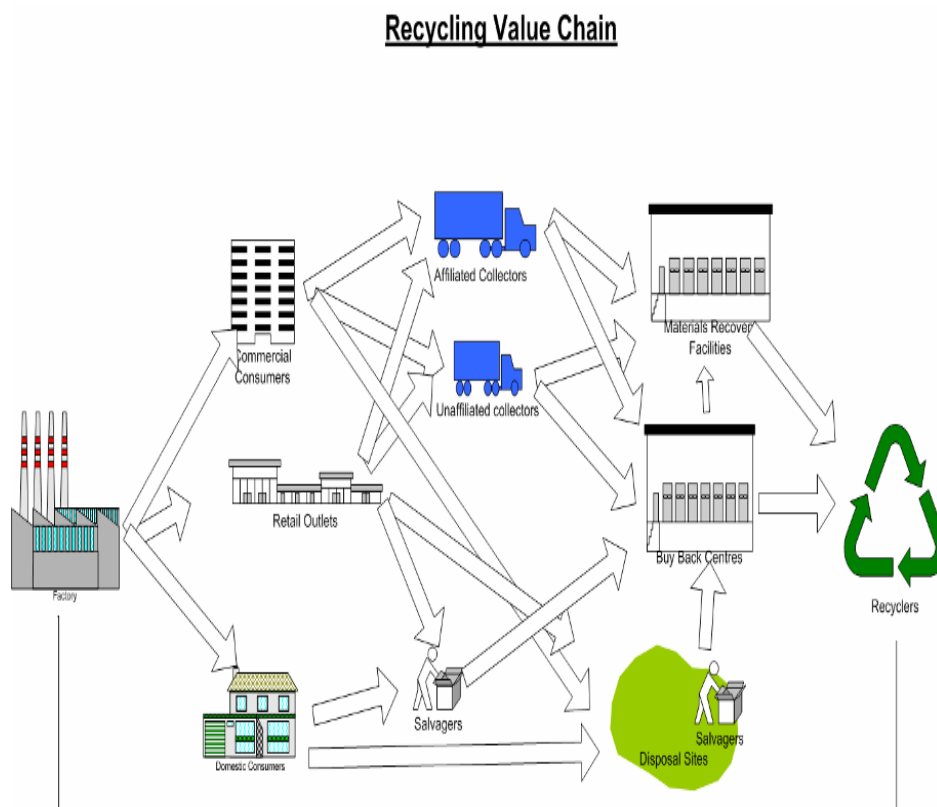


Fig 2: Recycling value chain

Source: Tischler (2013)

The volumes of recyclable materials are generated at this stage. Materials involve packaging materials, consumer goods and faulty products. There are four categories of waste generators: the retail sector, the commercial sector, industrial sector and domestic generators. Several role players are involved in the collection of these materials. Primary collectors play a role in the process (DTI, 2009:7). According to the DTI (2009:8), in South Africa, recovery is done in two facilities:

### 2.7.2.1 Buyback Centres

- The biggest organisers for materials.
- Centres include local and extensive countrywide operations.
- The centres are situated where recyclable materials are plentiful to keep a buy-back centre operating.

### 2.7.2.2 *Materials Recovery Facilities (MRF)*

- MRFs are large facilities, they recover and sort waste.
- MRFs are regarded as clean or dirty facilities.
- Clean facilities take materials that have been sorted.
- Dirty facilities take waste that is unsorted.

## 2.8 PRASA recycling rates

The Paper Recycling Association of South Africa (PRASA) recovers volumes of paper each year helping to the protection and preservation of the environment. Muzenda (2013:88) emphasise that “less energy is required to make products from recycled materials compared to virgin materials. Production of recycled paper uses 80% less water, 65% less energy, and produces 95% less air pollution compared to virgin paper production. Energy saving through recycling is a significant environmental benefit”. This means that the production of virgin materials, the energy is expended to process the material; this involves the burning of fossil fuels. Whereas if the manufacturing includes recycled materials, the need for virgin materials is reduced and less energy is used. In South Africa, there are three major players namely the paper and fibre recycling industry such as Sappi, Mondi and Nampak, are PRASA members.

## 2.9 Recycling initiatives in South Africa

According to Department of Trade and Industry of South Africa’s study, in South Africa waste recycling is not being taken serious (DTI, 2009:9). It has been further stated that “there are un-coordinated initiatives with no standard mechanism for implementing and funding recycling. The majorities of existing recycling initiatives in South Africa have been developed on an ad hoc basis and have been funded by the private sector with minor financial inputs from local authorities” (DTI, 2009:9). There is no formal and reliable system of waste separation in South Africa. However, municipalities have tried to implement some initiatives (for example, the Cape Town, Think Twice project).

## 2.10 Recycling informal sector in developing countries

People in developing countries rely on recycling waste materials to sustain their livelihood. Looking at the Millennium Development Goal of poverty reduction and waste reduction approaches that promoting recycling, solid waste management remains a problem as how to best work together with the informal sector to sustain the livelihoods of the people. Even though informal recycling has both health and social problems, it delivers economic benefits.

The informal sector is made up by “small-scale, labour-intensive, largely unregulated and unregistered, low technology manufacturing or provision of services” (Wilson, Velis, and Cheeseman, 2006:798). Usually people involved in the informal sector do not pay taxes, do not have trading licenses and are largely unregulated and unregistered. In the Management Solid Waste Management, the informally recycling sector looks at the actions of collecting and recycling waste materials by primary collector’s also known as waste pickers or scavengers. Socio-economic problems prevail in developing countries, which includes population growth, migration and unaffordable services. Solid Waste Management (SWM) tends to be unreliable and waste in some of the areas is not collected. Insufficient collection of waste by the municipalities and open dump spaces allow waste to be readily available to primary collectors. The informal sector is negatively perceived by the formal sector. The informal sector is considered unhygienic, backward and not deserving recognition within the modern waste management.

Informal waste recycling is practiced by underprivileged and poor group of the society who collect recyclable materials for income purposes and to sustain their livelihoods for everyday survival. Wilson *et al* (2006:789) states that it has been reported that “up to 21% of the population in Asian and Latin American cities depend on waste picking to earn their livelihood”. This proves how the poor respond to their circumstances by trying to make a living out of waste collection. In cities where there are municipal waste collection systems, usually there are three categories that form part of the informal waste recycling.

- Primary collecting- they collect waste thrown on the streets and bins.
- Primary collecting from dumps- primary collectors collect material from open dump spaces prior before material is covered. This is usually done by people living in shacks. See Fig 4.
- Waste buyers- they buy the materials from householders and domestic servants and transport to the intermediate dealers where they sell their materials. This process is shown in Fig 3.

In the developing world, the informal collection of recyclable materials is practiced in areas where there is no formal waste collection that is taking place.

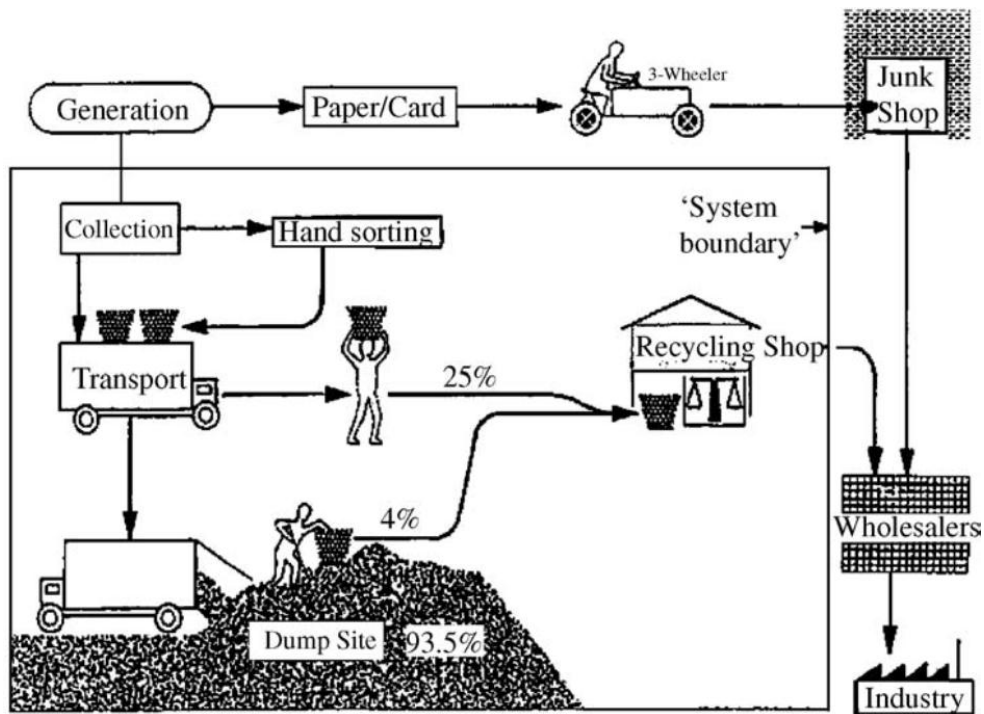


Fig.3: Value chain of an informal recycling system  
 Source: Wilson *et al* (2001)



Fig.4: Primary collectors sorting through waste at an open dump  
 Source: Wilson *et al* (2001)

### 2.11 Recycling hierarchy

If the informal recycling sector is not organised, it causes problems as it gets harder for primary collectors to add value to the material they are collecting and they get more vulnerable to being exploited by the intermediate dealers. The material collected is usually traded locally. The chain of primary collectors exists between the intermediate dealers and

end users as shown in figure 3. The chain may include shops, wholesalers, intermediate dealers and brokers. The recycling chain happens in a form of hierarchy. If greater volumes of the secondary raw materials are traded, it adds more value. Primary collectors tend to be the most vulnerable as they do not have any organised support systems. Their work gets limited and they are easily exploited. Therefore, Wilson *et al* (2006:798) suggests that if there can be training for primary collectors in the informal recycling sector, empowering them into micro and small enterprises (MSE) can be an effective way of empowering them to add value to the material collected. This can help them to sidestep secondary buyers and dealers, hence increase their earnings.

### 2.12 Informal recycling economic driving force

The sector is good at finding recyclable material that may have a potential. They collect discarded materials and sort, clean, altering the shape of the material to help transport or by grouping the materials (Wilson *et al.*, 2006: 801). Informal recycling sector can be extremely effective. Wilson *et al.*, (2006:801) further states that, 80% of recovery rates achieved by the Zabbaleen in Cairo, because of the hard work they put when sorting the materials. Mostly materials that are collected for recycling are cardboards, papers, plastics, steel, glass, aluminium and other metals.

Primary collector's income is low, however, that does not mean they are the poorest in the society. Primary collectors are paid low wages. This mostly happens if there is one dealer they are selling to. Wilson *et al* (2006:801) agrees that such happens if the material is from dumps, where there is a long distance to travel to sell the materials and transportation is impossible for primary collectors. It was found that in some cases, primary collectors pay to have access to waste. In developing countries, informal recycling is mostly practised because of the low level of economic development (Wilson *et al.*, 2006:801). If there are other opportunities available and earnings are higher, informally collecting recyclable materials would be less financially attractive.

### 2.13 Social and economic issues

Informal recycling has major benefits in developing world. According to Haan et al (2002) cited in Wilson et al (2006:802), "primary collectors, from a macroeconomic perspective, they are well adapted to the prevailing conditions, namely abundant supply of working force, but scarce capital. They minimize capital expenditures and maximise hand power". Primary collectors can supply bulky, reliable materials to local dealers, this help in substituting



expensive imported materials. According to Wilson *et al* (2006:802), most western countries stopped the functioning of the informal recycling sector and they have been struggling to re-establish the system. Informal waste recycling systems in developing world help in minimising cost of the formal waste management systems. This minimizes the amount of waste to be collected and it results in less money the municipality spend in time collecting and transportation.

Informal collection of recyclable materials provides employment for socially disadvantaged population. Even though their working conditions are not pleasant, people survive despite the high unemployment rates. Wilson *et al* (2006:803) notes that primary collectors may fail to enter the formal sector for employment as some are not educated. This needs to be recognised for interventions trying to change working practices in the informal recycling sector. Some of the informal primary collectors find employment in the informal sector, but others join the sector because of poverty and the availability of waste.

According to Berthier (2003), in India, the Harijans deal with waste collection and recycling. In Cairo, the Christian minority deal with informal recycling. Isolation as a result of social exclusion has lead societies of waste collectors to develop their own habits, customs, beliefs and values. This proves that informal collection of recyclable materials is not new; it has been traditionally practical by disadvantaged groups. As a result, of being the marginalised and female, primary collectors are subjected to sexual harassment, poor living conditions, the lack of the provision of urban services, limited access to facilities and infrastructure and the absence of social safety measures are a norm for informal primary collector's communities.

#### 2.14 Health issue

Occupational health risks and community health risks remain major problems. Risks come with the kind of work, the processes of collecting. Informal primary collectors are exposed to high risks as occupational health and safety is ignored in this sector. According to Eerd (1996) cited in Wilson *et al* (2006:804), "scavenging in open dumps is considered as the most detrimental to health. Relevant literature is limited, with comparative data on health and accidents almost non-existent and studies often suffer from methodological flaws. It is widely recognised that further research is needed". In developing countries, informal primary collectors manually handle waste which is why they are at high risk. They get direct contact with toxic materials, remains of chemicals, and smoke.

Community health risks in informal recycling affects related communities and public. However, Wilson *et al* (2006:804) recognises that there is no clear evidence. In their study, they discovered that “Mexico city dumpsite collectors were reported to have a life expectancy of 39 years, while that of the general population was 67 years” (Wilson *et al.*, 2006:804). Manual sorting creates unsanitary conditions and causes illness and increase exposure of the vulnerable.

### 2.15 Municipal solid waste

According to Ointre cited in Medina (2010:1), municipal solid waste looks at the material waste. Municipal solid waste includes household waste, street sweeping, commercial waste and institutional waste. Municipal solid waste is one of important services any municipality can offer to it residents in developing countries as well as in developed countries. Cities which are failing to manage waste are unlikely to control other multipart important services like health and transportation.

Managing waste is important as it progressively contributes to the growth of economy of the country and minimizes waste going into the landfill and the sea. Solid waste management is one of the city’s largest sources of employment if handled in an effective manner. Uncollected waste usually leads to flooding, air, and water pollution. Hoornweg and Bhadattar (2012:1) suggest that “if the task of collecting waste is not large enough, local waste management officials need to deal with the integrated and international aspects of solid waste, and increasingly with the demographic change in the work force, employment generation, and management of staff both formal and informal”.

MSW requires strong cooperation between the municipality and it residents. Solid waste is linked to the local economic development of the municipal area and its urbanization. As urbanization occurs, economic wealth increases the consumption of goods and services and standard of living increase as well and this results to an increasing amount of waste. Solid waste is mostly a problem in the urban areas than in rural areas. As residents in the rural are poor and purchase fewer store-bought goods and they have higher level of reusing compared to the urban residents.



## 2.16 Incorporating the informal sector into formal municipal solid waste management

There are many stakeholders involved linked to wide market networks of the recycling sector (Ezeah *et al.*, 2013:2516). The stakeholders include the municipal officials, private sector and government. Convincing officials to move away from oppressing actions can be a challenge. Therefore, according to Wilson *et al* “there is a need to be recognition of the limited effectiveness of simply copying approaches to municipal solid waste management (MSWM) used in more economically developed countries as these are unlikely to be appropriate” (Wilson *et al.*, 2006:804). There is a need for policy makers to incorporate the informal sector with the formal sector and acknowledge that informal recycling contributes to economic and environmental benefits.

## 2.17 Municipal solid waste management in developing-country cities

Delivering effective and sustainable waste management and good sanitation are the challenges which today’s growing population in cities are coping with. Urbanization in developing countries is the cause or result of the expansion of informal settlements. According to Medina (2010:1), nearly one billion people live in slums. Population growth has put pressure on both municipal and urban infrastructure in many cities which have been forced to deal with the growing population (Madina: 2010:1). Municipal solid waste continues to receive less attention from the government, policy makers, and academics. Attention is focused on other environmental problems like water treatment. However, the way the solid waste is being managed continue to be a serious problem that needs serious attention as it contributes to high mortality rates in many cities.

## 2.18 Urbanization of poverty

Poverty has long been associated with rural areas, and has gradually become urbanized. According to the Habitat (2013:12) report, between 40 and 80 percent of urban residents are in poverty with no access to basic needs. Poverty in cities of the developing world is characterized by:

- Large and growing backlogs of delivery of basic services.
- Vulnerability to environmental health problems.
- Vulnerable sectors among women, children, and youth.
- Lack of decision making process and implementing activities by the communities.

## 2.19 Globalization, generation of waste

There is a positive association or link between what the society earns and how much waste is created. The richer wealthier income groups generate a lot of waste compared to the lower income groups. Globalization does promote economic growth. However, economic growth and the growth in population seriously put a strain to municipal resources that are meant to control the booming amount of waste. The table below presents the amount of waste that is generated by low-income countries, middle-income countries and high-income countries.

Table 1: Waste generated per capita and total waste generation

	Waste generation rate	Total waste generation (million tons/ year)
<b>Low-income countries</b>	1.5	669
<b>Middle-income countries</b>	1.9	696
<b>High-income countries</b>	4.1	996

Source: Cointreau (2008)

Wealthier individuals use more packaged products resulting in a greater percentage in waste such as cardboard, cans, glass and so on. Larger amounts of waste and varying conformation have a deep effect on waste management practices. This means that developing countries need to make some policy changes. The larger the amount of waste made, produced the more inorganic waste materials can result to a major effect on people's health. If this waste is not managed properly both, health, and the environment in developing countries will be worsening.

Conversional waste management system and their shortcomings according to Medina (2010:3), in order to spread refuse collection and reduce risks to environment related through insufficient waste management, require several initiatives to be implemented. According to Medina (2010:3), solutions that are related to waste management municipal problems include:

- *Formal* – they only consider solutions by the formal sector, and neglecting any possible initiatives by the informal sector which have developed in many developing countries around waste collection.

- *Capital-intensive approach* – this approach involved advanced technology and equipment imported from developed countries.
- *Bureaucratic* – this involves only top-down approach, without the community involvement.
- *Centralized and undiversified* – the solution they propose does not differentiate amongst the needs of neighborhoods between cities.

## 2.20 Differences between developed and developing country cities

There is a huge variance amongst the developed world and developing world when it comes to income, the standard living, and capital that are available for urban investments. Conservative solutions usually do not consider these differences and results when it comes to outcomes. People in developing countries produce a small amount of waste compared to those in wealthier places. Table 1 sums up the waste produced per capita and waste produced in countries with different income levels.

Medina (2010:4) states that developed countries have high labor costs, whereas the developing worlds have a lack of capital and cheap labor. This is true in terms of developing waste management systems which one concentrated in capital and that is saving in labor costs. Developing countries require low costs and labor intensive work which decreases poverty in most disadvantaged societies. The desirable MSWM solution needed for developing countries includes the generation of income for the unskilled people, especially for marginalized people. The informal sector in developing countries helps income generation for both women and the youth. Informal waste collection is more common in developing countries as opposed to developed countries.

## 2.21 Integrated waste management approach

Integrated waste management approaches involve hierarchical and coordinated initiatives to reduce pollution and maximize recovery of recyclable and reusable materials. This approach includes: waste prevention recycling, reuse, compost, sanitary landfill, and incineration.

### 2.21.1 Waste prevention

Waste prevention has the uppermost importance in integrated waste management. This initiative reduces the volume of waste that is generated by individuals, commercials etc. The lesser the waste created, means less collection transportation costs and less waste collectors be needed and a longer life span of landfills.

### 2.21.2 Reuse

After waste prevention initiatives are implemented, reuse of materials becomes a priority for an integrated waste management approach. Reuse involves the recovery of materials to be used again. Reusing is important as, it saves water, energy and reduces pollution and reduces the use of natural resources compared to single use.

### 2.21.3 Recycling

Once the material is reused, recycling follows. Recycling materials are recovered by melting, “re-pulping and reincorporating them as raw materials” (Medina, 2010:8). This is feasible for recovering the large volumes of materials such cardboard, paper, glass etc. Recycling has social, economic, and environmental benefits. Recycling is believed to save energy, a reduced amount of pollution compared to producing new raw material. This helps in lowering operational charges. Recycling also lessens the volume of waste, and thus extends landfills life spans, and saves money for municipality. This can result in a cleaner space and competitive economy and contribute more sustainable environment.

In developing countries, the municipalities often do not have recycling programs; although some of them do practice recycling. Correspondingly, “informal recycling is mostly practiced throughout Africa and Asia” (Medina, 2010:8). Primary collectors collect waste materials on streets, at communal waste dumpsters and at the open dumpsites.

### 2.21.4 Composting

According to Eghball (2002:128), composting is a useful method that can be used to lessen the amount of waste materials to dump sites. Composting is a method of decomposing organic solid waste. When composting is done under monitored conditions, it does not have odors.

### 2.21.5 Incineration

With the integrated waste management approach, incineration is not that important as it comes after the waste approach, re-use, recycle and composting have been undertaken. Waste material is being burnt under controlled conditions. Incineration includes recovering energy. However, in developing countries, waste does not allow energy recovery as the materials happen to have a high level of moisture.

### 2.21.6 Sanitary Landfilling

Sanitary landfills are for the removal of waste to reduce dangers imposed to people. According to Medina (2010:9), sanitary landfills usually include one to three different liners

to stop leakages from polluting nearby surface waters. Table 2 shows high income countries collected and remove properly all the waste produced, whereas middle and low-income countries experience shortages of collecting and proper removal of waste in sanitary landfills.

*Table 2: Waste collection and disposal*

	<b>Waste collection</b>	<b>Proper Disposal</b>
<b>Low - income countries</b>	4090	590
<b>Middle - income countries</b>	6090	3090
<b>High income countries</b>	10090	10090

Source: Cointreau (2008)

## 2.22 Models of organizing primary collectors

According to Medina (2008:3), developing countries there are three models of organizing primary collectors which have been successful. Micro enterprises, cooperatives, and public-private partnership form part of these models. Microenterprises have been found to assist neighborhoods where the municipalities are not collecting waste. This also helps by providing income for entrepreneurial individuals. A study that was done in Mexico found that about 353,000 tons of wastes a year are collected for recycling purposes. Informal collectors make use of horse carts and pickup trucks to transport recyclable materials (Medina, 2007:147).

In Latin America, there are a number of cooperatives. Brazil also has about 500 primary collectors' cooperatives. According to Medina (2008:3), Belo Horizonte is the only country that has a program that incorporated street primary collectors. The program has 380 members, majority of which are women and they recycle up to 500 tons of material per month. Public-private partnerships in the recycling sector can benefit the society as whole and primary collectors. In Colombia, there is a healthy working partnership between the municipality and primary collectors. The municipality only provides the infrastructure and equipment where as the primary collectors provide labor. In Bogota, there is a partnership between the municipality and primary collectors. The municipality takes recyclable material that has been sorted and cleaned by primary collectors.

The formulation and organization of primary collectors is being supported by international development organizations. The International Finance Corporation (IFC) and the Austrian

Government are implementing a program with intentions of supporting recycling businesses in Albania, Bosnia and Herzegovina. Primary collectors supply at least 40% of recyclable material which the industry recycles. In regions that are faced by poverty and illiteracy, the IFC provides assistance through capacity development throughout the supply chain, from primary collectors to intermediate dealers, and the industry

### 2.23 The effectiveness of informal recycling activities

Support for primary collector's initiatives may be able to assist in lessening poverty and this may help in protecting the environment. Policy makers need to include primary collecting of waste and recycling. Refusing primary collectors from accessing waste has bad and negative effects on their earnings. For instance, "if there can be supportive policies range from legislation of primary collecting activities, encouraging the formation of primary collector's cooperatives, awarding of contracts for the collection of recyclables, to the formation of PPPs (Public Private Partnership) between local authorities and primary collectors, primary collectors can successfully work against the challenges they work against, rather than working independently as they are" (Tischler, 2013:46). In compliance with Medina (2008:1) by getting organized, informal primary collectors can strengthen the bargaining position; participate in the development process; be empowered through grassroots development; gain stability; get higher prices by avoiding middlemen and have contracts with the dealers and the municipality.

### 2.3 Conclusion

This chapter discussed the literature review on the experiences of primary collectors. The previous studies demonstrate how recycling and waste picking bring social, economic and environment benefits to society. It helps in poverty alleviation because jobs are created and as well as clean environment. The literature also confirms that primary collectors have been unrecognized stakeholders in the recycling industry. Collection of recyclable materials is often misunderstood and seen as insignificant.

## Chapter 3: Theoretical Framework

### 3.1 Introduction

The chapter discusses theories in relation to the study of the lived experiences of primary collectors in EThekweni Municipality. The main theory guiding this study is sustainable livelihood approaches. In achieving the objectives of the study, development theories such as basic needs approaches, participatory approaches, social exclusion approaches, capabilities approaches and the bottom up approaches are also discussed.

### 3.2 Sustainable livelihood

Sustainable livelihood realises that being marginalised is not the result of low income but also lack of social services make the poor more vulnerable and powerless (Krank, 2001:2). This approach aims to secure sustainability for the poor's livelihoods by encouraging a cohesive social environment and to ensure that natural resources are secured and managed better (DFID, 1999:3). The approach realises that people may not have jobs, cash and other savings in life, but have other more important assets in life such as the skills, natural, good health. In addition, sustainable livelihoods approach look at the opportunities and decisions that are meant to empower people and that are already available to the household of that particular local community. Gutierrez-Montes et al (2009:106) describe this approach to development as a "buzzword" which has an assets-based approach where government policies, public participation together with empowerment play a vital role in alleviating poverty and in promoting development. This approach is deemed as a way of giving the poor an access to economic activities and helps them reduce poverty.

#### 3.2.1 Sustainable livelihood in an urban context

Originally, a sustainable livelihood approach since 1990's has been used in development initiatives and applied in rural areas. Livelihood in urban areas is quite different compared to livelihoods from the rural areas. Livelihoods of the poor are determined mainly by the challenges and opportunities the location presents to the local community. Tischler (2013:7) state that, "there are various specifics of urban life, which have to be acknowledged and integrated into any livelihoods appraisal conducted in an urban context. The quality of life of poor urban people is influenced by what local government do or not do". The relationship that is shared between the poor in the political context and the local government has a critical impact to the wellbeing of the poor.

In urban areas, the lives of the poor revolve around money, and access to money is very important to them for survival. Unlike in the rural areas, as much as they need money for survival, they can always fall back on their production of food whenever life gets hard. This illustrates that people in the urban areas are more dependent on cash income and what natural resources can provide to them. In the case of primary collectors in the informal recycling sector, they are more dependent on solid waste and recyclable material to sell in order to get money (Rokodi, 2002:11).

### 3.2.2 Sustainable livelihoods framework

The sustainable livelihoods framework below (figure 5) is used to help people understand the livelihoods of the poor simple by identifying their main challenges affecting their livelihoods. According to Tischler (2013:8), the purpose of sustainable livelihoods framework is to “provide basis for identifying appropriate objectives and interventions to support the livelihoods”. The centre of the framework presents all the assets where people use to build their livelihoods. The model shows the link between policies, institutions and processes in relation to people’s vulnerabilities.



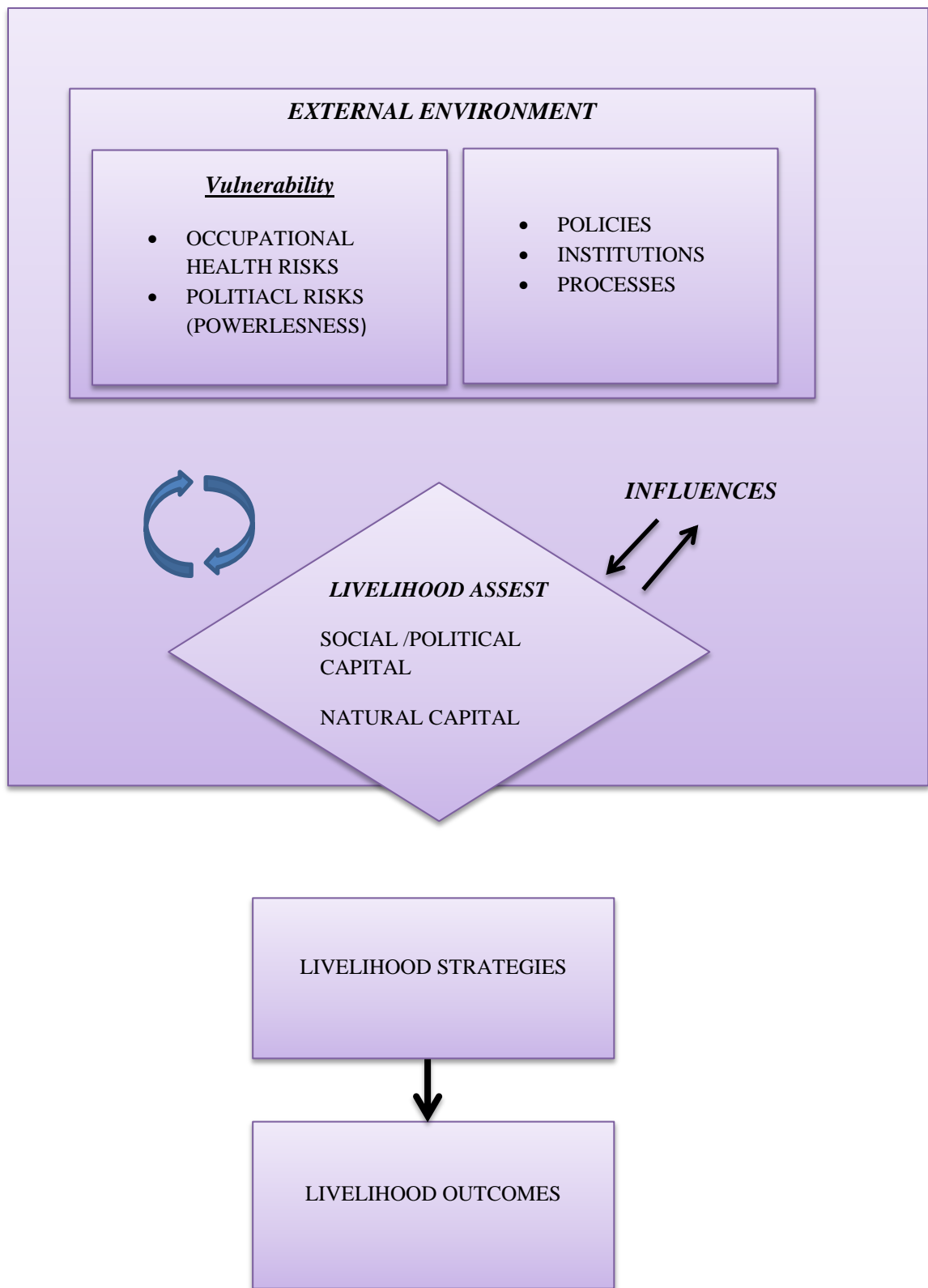


Fig.5: Sustainable livelihoods model

Source: Tischler (2013)

### 3.2.3 External environment

Livelihoods of people are made up by several factors linked to the external environment. These factors come with changes that may be permanent to people’s livelihoods, and people have only the option to adjust to these changes and processes. The changes may have either

positive or negative impact to people. They may be the tool to escape the trap of poverty, but they can also oppress the poor by exposing them more to vulnerability of the state of insecurity (Koberlein, 2003:45).

#### 3.2.4 Vulnerability context

The livelihoods of people may be “affected by matters of insecurity, risks, emergencies or other possible damages, to which people and their assets are susceptible and over which they have limited or no control” (DFID, 1999:3). The types of risks people may face can be natural, economic, environmental, social and political. It is important to look at the risks faced by people, the mechanisms, and the policies that support these risks. In addition, “any analysis of vulnerability also must identify the capability of individuals to mobilise their assets to exploit opportunities to resist and recover from negative outcomes of the changing environment” (Tischler, 2013:8). Furthermore, Tischler (2013:8) argued that vulnerability is looked in terms of risk exposure in relation to political risks, such as being powerless and health risks discussed below.

#### 3.2.5 Political Risks-Powerlessness

This looks at the policies and processes that have been implemented by the government. These policies may have a bad effect to the livelihoods of people involved in the informal recycling economy, like primary collectors. The informal recycling sector recycles huge amounts of waste generated especially in cities. Powerlessness refers to the position informal recyclers in the recycling chain are usually in, and their position result in them being exploited and discriminated (Van De Klundet and Anschutz, 2001:12).

#### 3.2.6 Health Risks

Primary collectors are being exposed to all health risks while excising their work and may result in them being severely ill and injured. These may result them being permanently not being able to continue with their work which generate income for them.

#### 3.2.7 Policies, institutions and processes

According to Rakodi (2002:9), “access to assets and its application is considerably influenced by policies, institutions and relationships between individuals and organisations on the external side. Assets are important because they work from households, international, all spheres of government and the private sector” (DFID, 1999:17). Correspondingly, Rakod (2002:15) clarifies that these processes may include policies, laws, social norms and they

may be formal and informal, thereby are able to transform the way different organisations and people interact with each other.

### 3.2.8 Livelihood strategies and outcomes

The availability of assets forms livelihood strategies for people. They adopt these strategies to escape the trap of poverty. If the outcome of the strategies is positive, they can improve their lives for the better, generate income, and improve food security. In the case of this study, the strategies must be positive in a way which that maintain and improve primary collector’s access to recyclable waste materials for income generation and help in getting their voices heard by the government and relevant municipal authorities (Rakodi, 2002:16).

### 3.3 Development theories

Development can be defined in economic terms as the increase in economic output such as the Gross Domestic Product (GDP) (Willis, 2005). Depending on what development is emphasised as, it can range from basic needs, sustainability approaches, economic and human. Development is meant to lessen poverty and make people’s lives better. According to Stiglitz (1999:1), development is a “transformation of society, a movement from traditional relations, traditional ways of thinking, traditional methods of production, to more modern ways”. This means that development reduces deprivation. Development approaches have shifted the focus from the 1950’s to date. The table below shows how development approaches have been taking place in different scales.

Table 3: Development approaches

**DECADES    MAIN DEVELOPMENT APPROACHES**

1950s	<p>Modernization theories: all countries should follow the European model (Rostow, 1960).</p> <p>Structuralism theories: Southern countries must limit interaction with the global economy (Martinusen, 1975).</p>
1960s	<p>Modernization theories</p> <p>Dependency theories: exploitation by Northern countries is the cause for poverty in Southern countries (Frank, 1967).</p>
1970s	<p>Dependency theories</p> <p>Basic needs approaches: the government to improve the provision of basic needs for the</p>

poor (World Bank).

Women and development: effect of development on both men and women.

1980s

Neo-liberalism: a free market entrance for all.

Grassroots approaches: involvement of people in development processes.

Sustainable development: the current needs and future needs need to balance (Agenda 21).

Gender and development: gender impact development in several ways.

1990s

Neo liberalism

Post development: challenging the idea of development from the grassroots.

Sustainable development

Culture and development: a focus on how development affects social and cultural groups.

2000s

Neo liberalism

Source: Willis (2005)

### 3.4 The basic needs approach

Reader (2006:337) states that, “basic needs approach is an approach to social justice that gives priority to meeting people’s basic needs to ensure that there are sufficient and appropriately distributed basic needs, goods and services to sustain all human lives at a minimally decent level”. Basic needs approach was firstly introduced by the International Labour Organisation (ILO) in 1976 during the World Employment Conference. This approach is mostly utilised as a measuring tool to address poverty. This approach is mostly used in developing countries to address the basic needs of people who still lack access to basic needs such as water, shelter and food. Stavenhagen (2013) argues that the scholars in the 1970’s used the approach in challenging theories that has failed to promote development in developing countries. Basic needs approach promotes social justice and development for primary collectors. It proves that also primary collectors deserve a quality of life, access to health care, a decent place to live

This approach suggests that “economic growth and basic needs fulfilment may well be simultaneous, creating a virtuous circle between economic development, health and education” (Perlo-Freeman and Webber, 2009:965). Similarly, a study conducted by King

(1989) confirmed that “in developing world, rapid growth indeed worsens the extent of severity of poverty, increasing absolute inequalities of material resources and social opportunities” (King, 1998:387). This needs a more holistic approach to look at the extent of population growth in developing countries.

### 3.5 Bottom up approach

The bottom-up approach responds to the shortcomings of the top-down approach (Smith, 2008). The bottom up approach firstly focuses at identifying all relevant stakeholders that are reliable for economic development and delivering services to the local community. This stakeholder’s involvement is important as it allows the local government to identify services and needs for that certain community; this informs ‘their goals, strategies and activities’ to implement economic development agenda (Sabatier, 1986:32). Panda’s (2007) study revealed that as much as the bottom up approach involves local people, there is still a gap as some Non-Government Organisations (NGOs) still fails to consult and involve people when implementing projects that are meant for local people. Primary collectors needs to be involved in all stages of development, they also need to be consulted and should never be taken for granted, they know their local environment very well, and they need to be appreciated and valued. To select relevant indicators through community participation, bottom up approach will be a success story.

### 3.6 Capabilities approach (human development)

Capabilities are people’s ability to function and do things for themselves. Participating in communities, working, caring, healthy lifestyles and having shelter are good examples of capabilities. Sen (1999) argues that functioning’s involves beings and doings. Functioning does evaluate people’s wellbeing, for example, individual well-being, inequality and poverty. This approach looks at what primary collectors can do effectively to make a living.

With regards to poverty alleviation, the capability approach stress that people’s capabilities are enlarges. As stated by Musakwa, “it is noteworthy that the emphasis is not only on how human beings function but on them having the capability, which is a practical choice, to function in important ways, for example by ignorance, government oppression, lack of financial resources, or false consciousness” (Musakwa, 2008:60). People can develop themselves or to change their lives for the better regardless of what they are going through. Additionally, Sen 1999 argues that capability approach is in contrast with the notion that

development is seen in terms of Gross National Product (GNP) and that poverty is income deprivation. According to Townsend (2006), capabilities approach is facing challenges to measure education as some data is not available especially in developing world such as data on nutrition. Townsend (2006) further argues that the approach only looks at the western concept of good life, doubting it can be applied to developing countries.

### 3.7 Social exclusion approach

Vulnerability frameworks and sustainable livelihoods approach only looks at the household level whereas social exclusion focuses on external structures leading to poverty. In this regard, “social exclusion means individuals are cut-off from active engagement with dimensions considered normal in society” (Musakwa, 2008:60). Social exclusion looks at the mechanisms which exclude primary collectors from participating or have a normal social life. Poverty tends to restrict primary collectors to have things or do things that will allow them to have full participation in the society or community. Poverty and social exclusion are related, if solved, they can never be separated or solved in isolation. The lack of participation increases poverty as people may be excluded from networking socially to improve their lives and be excluded from paid work.

### 3.8 Participatory approach

A participatory approach allows people to participate at different levels, enabling them to realise what is poor and it affects. Ruggeri *et al* (2003) emphasises that the approach does not look at the external mechanisms, it solves problems from other approaches, what people can do to alleviate poverty. Furthermore, “participatory approach assists in correct targeting of poverty alleviation strategies” (Musakwa, 2008:62). Similarly, Chambers (2002) adds that in Western Kenya, the community came to realisation that losing their livestock was causing poverty for the community so they had to increase and improve their veterinary services to put the stop on this. The community had to participate and define their cause of poverty and how they can put the stop to it. This approach helps primary collectors in identifying what is the cause of poverty and its effects and processes and how to fight it.

### 3.9 Conclusion

This chapter looked at the theories in relation to the experiences of primary collectors within EThekwini municipality. The theories that were discussed included sustainable livelihood approach; basic needs approach, bottom up approach, capabilities approach, social exclusion

and participatory approach. Informal waste picking to recycling in the EThekwini has both social and economic contributions. Primary collectors are trying to sustain a living which ends up benefiting the EThekwini city as whole, not just primary informal collectors only. Recycling by primary informal collectors is very important in the broader economy and this need to be ensured, it is neither a peripheral, nor isolated activity.

## Chapter 4: Methodology

### 4.1 Introduction

Research methodology solves research problems. Different steps were followed in the research methodology in which the researcher adopted to study the research problem and its logic. These steps included choice of data, data collection and analysis and interpretation of data collected. According to Degu (2006:2), “methodology is a scientific inquiry aimed at learning new facts, testing ideas; it is the systematic collection, analysis and interpretation of data to generate new knowledge and answer a certain question or solve a problem”. The aim of this study is to understand the recycling value chain within EThekweni municipality area, and explore the lived experiences of primary collectors guided by a qualitative approach.

### 4.2 Qualitative methods

A qualitative method helped the researcher to understand people from their own reality experiences and how they frame their own experiences. According to Taylor *et al* (2015:8), “qualitative researchers empathize and identify with the people they study in order to understand how those people see things”. For qualitative research, it is very important that a researcher set aside his or her perspectives about the study being conducted and listen to how people studied see and frame their own experiences. Qualitative studies those people who are being ignored by the society like the poor and give out their voices. Furthermore, “qualitative studies are designed to ensure a close fit between the data and what people actually do and say. By observing people in their everyday lives, listening to them talk about what is on their minds, and looking at the documents they produce, the researcher obtains first-hand knowledge of social life unfiltered through operational definitions or rating scales” (Taylor *et al.*, 2015:8). This means that qualitative study allows the researcher to stay close to the real world.

### 4.3 Data collection

To address the objectives of this study, semi-structured interviews and observation were used to collect data. The data collection process and the methods used to collect data are discussed in detail in the following sections.

#### 4.3.1 Interviews

In this study, the researcher used semi-structured interviews which included open-ended questions. Interview involved reading questions to the respondent. In Burns (1997:329), “an interview is a verbal interchange, often face to face, though the telephone may be used, in which an interviewer tries to elicit information, beliefs or opinions from another person”. The



process of an interview can be flexible or inflexible. In flexible interviews, the interviewer is free to think and create other questions. With inflexible interview, the interviewer remains strictly to the questions they formulated beforehand; the use of probes is allowed (Burns 1997:330). In this study, the interviews were inflexible as the researcher formulated a schedule of interview questions before interviews were conducted. Only 20 participants were interviewed who are already primary collectors in EThekwini.

In a qualitative research when studying qualitative interviews in medical research, Britten found that “open ended questions help in defining the area being explored from which the interviewer or interviewee may diverge in order to pursue an idea in more detail” (Britten, 1995:251). Semi-structured interviews are used if the researcher will not have more chances doing an interview with the same person. Semi-structured interviews are preceded by observation. This helped in assisting the researcher to also study the surrounding environment while conducting an interview. This is evident in Cohen and Crabtree (2006:1) study where they found that “semi-structured interviews are often preceded by observation, informal and unstructured interviewing in order to allow the researchers to develop a keen understanding of the topic of interest necessary for developing relevant and meaningful semi structured questions”. The benefit of using interviews is that the interviewer comes prepared and they are able to prepare for the interview ahead of time and the semi-structured interviews provide reliable data (Cohen and Crabtree, 2006:1).

#### 4.3.2 Observation

Observation while conducting the study is very important as it is a purposeful way of watching and listening to interactions as they take place in the environment in which the study is taken (Ranjit, 2011). The researcher was also observing while conducting interviews. Observation is most appropriate when a researcher want to learn about the interactions between groups and study their patterns, behaviours of either workers or individuals. The researcher may use observation when they really cannot get full information by questioning as some respondents may not be co-operative and others find it difficult to interact (Ranjit, 2011). For observation, there is participant observation and non-participant observation. Non-participant observation was used for the purpose of this study. In non-participant observation, the researcher does not take part in activities but rather watches and listens while activities are taking place. The researcher remains a passive observer and draw conclusions from that (Ranjit, 2011).

Sapsford and Jupp (2006:59) outline the advantages of observation as “observation can provide information on the environment and behaviour of those who cannot speak for themselves and therefore cannot take part in the interviews or complete questionnaires: babies, very young children and animals are obvious examples. It can also give data on the environment and behaviour of those who will not take part in interviews or complete questionnaires because they have no time or because they object, or because they fear the consequences”. The recording of observations was under natural conditions using narrative recording, the researcher recorded interactions in her own words. Narrative recording has both advantages and disadvantages, but advantages outweigh disadvantages. A narrative recording assists in providing a deeper insight on the study (Ranjit, 2011).

#### 4.4 Data sources

##### 4.4.1 Primary data sources

Primary data collection involves experiment. In primary data collection researcher gets to choose who participate in the study. Primary data collection is data collected by the researcher for a research problem at hand, using tools that best fit the researcher (Hox and Boeijs, 2005:593). In addition, “primary data is collected specifically to address the problem in question and is conducted by the decision maker, a marketing firm and a university or extension researcher: unlike secondary data, primary data cannot be found elsewhere” Curtis (2008:2). The good thing about primary data is that it provides new information that has never been found before, new and original information (Curtis 2008:2). Through primary data sources, the researcher can observe the behaviours of the community at large.

##### 4.4.2 Secondary data sources

This is already available data that has been collected by other researchers and available for reuse by other researchers is called secondary data. Secondary data is based on what previous researchers concluded. It may be used for reanalysing, asking new questions that were not addressed. Using secondary data sources have both advantages and disadvantages. The first advantage is that the information is already available, together with the objectives and outcomes (Mncwabe, 2013:16). Boslaugh (2007:3) states that “the researcher does not have to devote many resources to this phase of research; cost is almost certainly lower than the expense of salaries, transportation, and so forth that would be required to collect and process a similar data from scratch”.

With the use of secondary data, the researcher can explore their questions before analysing primary data. Secondary data help the researcher to compare studies (Mncwabe, 2013:61).

The shortcoming of using secondary data is that it was for another study with a specific purpose which is different compared to the new data being collected. Boslaugh (2007:4) concludes that “one major disadvantage to using secondary data is that it is inherent in its nature because the data were not collected to answer your specific research questions, particular information that you would like to have may not have been collected”. In this study, the researcher used published books, government and municipality documents and journals articles to consolidate data on the policies and experiences of primary collectors in EThekwini.

## 4.5 Sampling

### 4.5.1 Purposive sampling

This study adopted a purposive sampling method to recruit participants. According to Mncwabe (2013:56), “a total population can be too large to collect information from all its members; thus a group of individuals are selected as representative of the population. Sampling should consider the size of targeted group and the accuracy of data collection”. A sample of 20 participants were interviewed and observed. In sampling, researchers have a choice to select or avoid data that make data that has been observed unrepresentative (Thompson, 2012:2). This study utilised purposive sampling. Data collection is important as it helps in understanding the study conducted and the way data is collected is also important in order to make a sound judgement and the end of the study. Purposive sampling technique is seen as a choice of a researcher simply by looking at the qualities participants have. Etikan et al (2016:2) agrees when he says that with purposive sampling, “the researcher decides what needs to be known and sets out to find people who can and are willing to provide the information by virtue of knowledge or experience”. Purposive sampling is for qualitative studies as it helps in selecting rich information cases with available resources. Homogenous sampling was utilised for this case of EThekwini municipality.

## 4.6 Location

The researcher used the case study of EThekwini municipality to examine and understand the recycling value chain in EThekwini municipality area, by exploring the lived experiences of primary collectors within the area. EThekwini was selected simply because recycling in the city is of significant value and the role of primary collectors needs to be acknowledged and included. “Given primary collectors valuable contribution to the city’s economy, an innovative way of incorporating this form of recycling into the city is required. What may

assist in addressing these challenges is the development of sorting spaces; to building, to address these issues” (EThekwini Municipality EDGE, 2016:17).

EThekwini municipality is in the province of KwaZulu-Natal (KZN). The municipality is believed to be the home to 3.6 million people in 2016. EThekwini faces various challenges which includes social, economic, and environmental and governance challenge. The population in 2017 is estimated to be at 3,723,435 and estimated to be at 3,853,278 by 2020. EThekwini municipality area like most of other developing world cities is experiencing high volumes of migration from rural areas and small town in KZN, other parts of South Africa and Southern Africa. This has resulted in a population increase and rapid rate of urbanisation. EThekwini has the strongest economy in KZN and has a huge contribution to the economy of the country. The economic key issues in EThekwini include high unemployment, inability to meet timeous demands for strategic infrastructure and other services, urbanisation as people are moving from rural areas and overcrowding in urban areas. This leads to food shortages and impact on the infrastructure’s carrying capacity



Fig.6: EThekwini Municipality map

Source: EThekwini Integrated Development Plan (2016)

#### 4.7 Data analysis

Qualitative research allows the researcher to draw conclusions and make sense of data that has been collected through interviews, observation and questionnaires. Newcomer (2001:423) describes qualitative data analysis as “a complex set of intertwined processes and practices. Data analysis has been described as the interplay between raw data the procedures used to interpret and organise the data and the emerging findings”.

This study applied the process of thematic analysis to draw conclusions and answer research questions. Thematic analysis is when the researcher encodes qualitative information from data collected. Codes and themes are terms that are mostly used in thematic analysis. The researcher identifies themes from the information provided from the interviews. “Thematic analysis is a method for identifying, analysing and reporting patterns (themes) within data. It minimally organises and describes data set in detail” (Boyatzis, 1998: 4). Thematic analysis is favourable used if the study needs more clarity to enhance the results (Boyatzis, 1998:4).

This type of analysis is used as a way of seeing, making sense and analysing qualitative information collected. In thematic analysis, the researcher uses a variety of information, this help in increasing accuracy in understanding people. The researcher may use more than a single method to analyse data. Thematic analysis allows flexibility (Mncwabe, 2013:75). Braun and Clark (2006:10) add that “given the disadvantages of the flexibility of thematic analysis, it is vital to understand that one is not trying to limit flexibility. However, the critiques of thematic analysis can be identified as too flexible methods”. Flexibility of thematic analysis was used to achieve the research objectives. Thematic analysis is made up of six phases, which the researcher is going to follow: familiarise with data; generate initial codes; search for themes; review potential themes; define and name themes and produce report.

##### 4.7.1 Familiarisation

The researcher learned the content of data collected from interviews with primary collectors by reading and re-reading thoroughly to know data inside and out. This was followed by identifying and recording parts which are seen to have potential in answering the research questions and achieving the objectives of the research.

#### 4.7.2 Generating codes

Codes label the area of interest. Clarke and Braun (2014:6626) define codes as “a pithy level that captures something interesting about the data, and the aim is to identify potentially meaningful bits of the data at the smallest level”. Codes are used to summarise and interpret the meaning of data. In this step, the researcher developed a list of codes to analyse data from the interview transcripts.

#### 4.7.3 Searching for themes

A theme identifies a meaning in the dataset which is assisting in answering the research questions. This is an important phase in thematic analysis, the researcher get to see the relevance of codes that have been identified. There are two steps when classifying themes; the researcher abstract and refine themes. By description, “abstract themes from codes text segments go through the text segments in each code and extract the salient, common or significant themes in the coded text segments; this can be done by re-reading the text segments within the context of the codes under which they have been classified, and abstracted from the full text” (Clarke and Braun, 2014:6626).

#### 4.7.4 Reviewing potential themes

This phase involved checking the network between themes and the codes where they work together in relation to the dataset. The researcher finally came up with the final set of themes. Similarly, Clarke and Braun (2014:6627) state that reviewing potential themes is useful for immature qualitative researchers.

#### 4.7.5 Defining and naming

A detailed definition of each theme and how they relate to other themes was produced. Data that was going to be used for final report was selected to develop and build the analysis. According to Clarke and Braun (2014:6627), each theme should address research questions.

#### 4.7.6 Producing the report

This is the final phase, where the researcher had a chance to refine the analysis, determine the way the themes will be presented. The interpretation of the information gathered needs to be interesting to the reader’s eye.

### 4.8 Ethical consideration and confidentiality

The study involves vulnerable people of the city, so ethical consideration is important. The researcher followed various steps before conducting the study.

#### 4.8.1 Informed Consent

The informed consent is very important when collecting data; it ensures that participants have the freedom to participate and not to participate in the study. Participants get an opportunity to understand what the study is about. The researcher informs the participants on the purpose of the study, what is required and expected of them, the dangers and benefits of the study (Mark et al., 2005). The researcher followed ethical consideration steps. In this regard, the study participants were informed about their rights during the study and their right to stop participating in the study.

#### 4.8.2 Management of information

The researcher has to protect the confidentiality of participants (Bhattacharjee, 2012). Data that was collected was presented anonymously and participants were informed before the study that their personal details would be confidential.

#### 4.8.3 Ethical consideration

Ethical clearance certificate was obtained from the University of KwaZulu-Natal's ethics committee before conducting the study (ref: HSS/2133/017M). The researcher and the study supervisor had access to the study information. Notes that were made by the researcher will be destroyed after the study is complete and final report will be under the University of KwaZulu-Natal.

#### 4.9 Limitations

Collecting data was challenging. Some of primary collectors did not want to participate; they felt it was a waste of time as they should be working. Some of the participants did not want to participate simply because the previous studies that were conducted did not help them. They felt like researchers use their bad situations to get what they want and never come back. Those collectors, who finally participated, had limited time because they wanted to go back to work. They were hesitant to be part of the study as they feared that their names were going to be disclosed.



## Chapter 5: Findings, Analysis and Results

### 5.1 Introduction

This chapter analysed data gathered from primary sources (interviews and observation) and secondary data. It analyses the ways in which primary collectors operate as one of the key role players in the recycling value chain within EThekwini, South Africa. The chapter will also present the recycling background and its role players in EThekwini. Key informants included 20 primary collectors collecting cardboard in EThekwini CBD (Central Business District). The study explored their lived experiences as primary collectors within the city.

### 5.2 Recycling in EThekwini

The recycling value chain is complex due to interaction between the formal and informal role players. In EThekwini, waste is collected collectively by both formal and informal collectors. Formal collectors include EThekwini Municipality DSW (Durban Solid and Waste) department; the informal sector is made up of primary collectors. Waste is said to gain back its value the minute it is collected from the bin. Recycling is a priority to minimise waste in EThekwini Municipality. It is practised by DSW, individuals and businesses.

The municipality have a recycling flagship project that is implemented to minimize waste going to the landfill; the project is the orange bag scheme. The orange bag scheme caters for households and commercial waste which includes papers, cardboards and plastics only. There are several buy-back centres in EThekwini including Isipingo, KwaMashu, Umlazi, and Old North Coast Road. Some buy-back centres do not have a contract with the municipality for providing collection services. Primary collectors provide their services by collecting and sell the material for recycling to buy-back centres and secondary collectors. At a later stage, the materials are sold to dealers such as Mondi, Sappi and Mpact.

According to Urban-Econ (2015:41), “the orange bag has approximately 90% coverage of EThekwini households, however, collection volumes are relatively low. From July 2013 to June 2014, only 10426 tonnes of recyclables was collected, representing less than 1% of DSW general solid waste, and mixed load waste during this period”. This proves how ineffective the project is in minimising waste going to the landfill. This project has a number of challenges hindering its success. Challenges as per a research conducted by Urban-Econ (2015) includes low participation by households, the project is too complex to monitor and that it does not cover all recyclable streams such as glass. In 2017, the municipality had



challenges with the supply of orange bags for recycling. Regardless to this, the municipality is continuing to urge residents to continue with recycling.



Fig.7: Orange bag for paper, cardboards and plastics

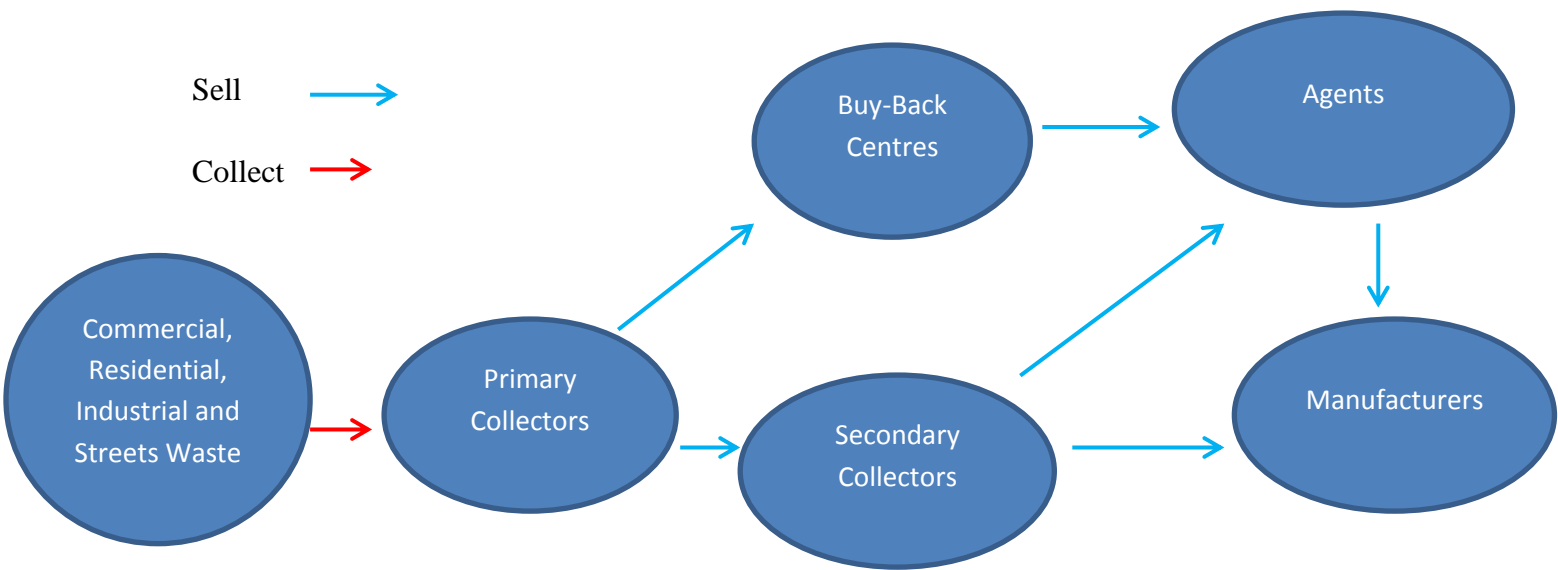
Source: Researcher (2017)

### 5.3 EThekwini Recycling Value Chain Role Players

Role players of the recycling value chain in EThekwini include primary collectors, buy-back centres, drop off centres, secondary collectors and the orange bag scheme that is discussed above. All these role players have a significant role in minimising waste within the municipal area.

#### 5.3.1 Primary collectors

Primary collectors being the study sample of this research, they sell the recyclable materials; they are paid by the buy-back centres and secondary collectors for their services. Some of them have been informally operating within the industry for more than 5 years. As stated on the Urban-Econ report, “primary collectors in EThekwini are active in both pre-and post-consumer waste areas, industrial, light industrial, residential and commercial areas across the whole of EThekwini although are most active in light industrial and mixed-use land uses” (Urban-Econ, 2015:41). Primary collectors are not incorporated in any of city’s plans and by laws.



*Fig.8: Primary collector's operation chain*

Source: Urban-Econ (2015)

Primary collectors pick up the materials from shops, households and streets. After collecting, the material is sold to dealers. Dealers then sell the materials to manufactures.

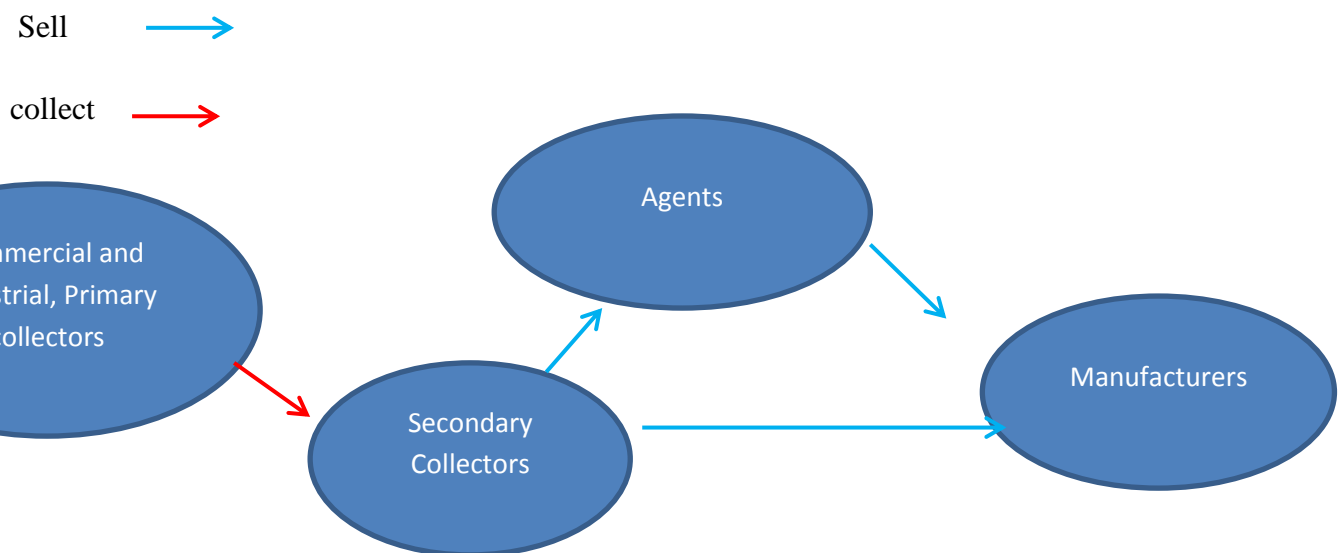


*Fig.9: Primary collectors sorting the material*

Source: Researcher (2017)

### 5.3.2 Secondary collectors

Secondary collectors link the informal and formal sectors. They are made up of agents, individual recyclable material buyers. They buy from primary collectors. Most of agents relate to manufacturers in a way that they collect the materials on their behalf. Most of the agents collect for Mondi and Sappi papers. The agents include Mpact and Nampak. Buy-back centres sell the materials bought from primary collectors to the agents. Secondary collectors include independent individuals. Urban-Econ (2015:40) clarifies that “independent recyclable buyers and sellers are comprehensive entrepreneurs in that they have identified an opportunity for waste collection, have negotiated informal collection contracts with suppliers such as restaurants, have invested in a truck and sell directly to recyclers or manufacturers or buy-back centres. They are also not attached to a site or to a manufacturer or recycler”.



*Fig.10: Secondary collector's operating chain*

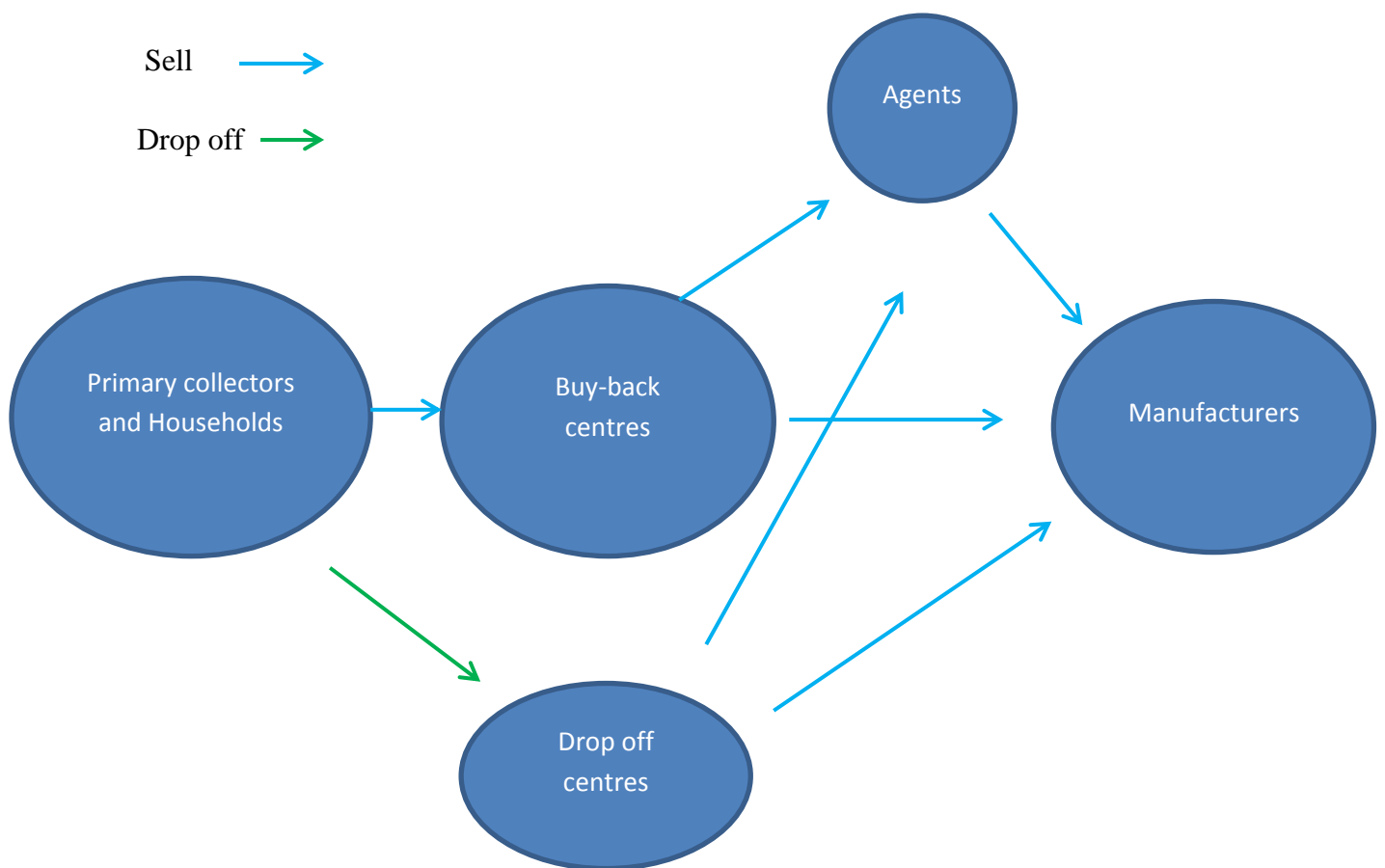
Source: Urban-Econ (2015)

Secondary collectors collect the materials from commercial and industrial and buy from primary collectors. The material collected is then sold to agents and manufactures.

### 5.3.3 Buy-back and drop-off centres

There are 5 buy-back centres that are operating to date in EThekwini. There is one in Lorne Street and Brook Street within the CBD (Central Business District), the one in Umlazi and KwaMashu. The Old North Coast Road one is not operating currently due to renovations in which EThekwini Municipality Economic and Investment Promotion Unit is currently working on. Buy-back and drop off centres add the same value to the recycling value chain in EThekwini. The city has 11 drop off centres which are not owned by the municipality. These

drop-off centres take cardboards, paper, plastic, glass and cans. The drops off centres are under the ownership of Igagasi Waste Management; Zizamlele Waste Management and Power Rush Trading. The centres cover different areas within EThekweni. Igagasi Waste Management, according to Urban-Econ (2015:62) covers Amanzimtoti, Durban North and Merewent; Zizamlele Waste Management covers Bellair, Bluff, Chatsworth and Woodlands and Montclair; and Power Rush Trading serve Mount Edgecombe, Redhill, Newlands and Phoenix.



*Fig.11: The chain between primary collectors, buy-back and drop off centres*  
 Source: Urban-Econ (2015)

Households drop the material off to drop off centres, buy-back centres and buy from primary collectors. Agents and manufacturers then buy the materials from buy-back and drop off centres.





*Fig.12: Umlazi drop off centre*

Source: Researcher (2017)

## 5.4 Research findings

This section of the chapter provides findings from data collection. Findings are based on the main research question: What are lived experiences of primary collectors in the EThekwini municipality. Three themes were developed for data analysis which includes: Exposure to health and safety; Social issues and Lack of recognition and support for primary collectors. Interviews were conducted with 20 primary collectors from EThekwini CBD as the primary source of data. A previous research that was conducted on Value Chain Analysis of Recycling Streams in EThekwini in 2016 was also used as the secondary source of data and the EThekwini municipality website was used.

### 5.4.1 Health status

Primary collectors regard their health as excellent. They are not open with their health status because they fear being judged by the society. From the interviews conducted, it became clear that those primary collectors who claimed their lives as excellent were not telling the truth, but they were protecting their image. Primary collectors are exposed to dangers as they manually sort the material. They do not have protection measures such as gloves and boots as primary collector 1 states:

*“We use our hands to sort the cardboards because we do not have gloves and we do sustain injuries from that as we sometimes come across broken glasses and cans.”* (Primary Collector 1: November 2017)

The lack of protection measures for primary collectors poses danger to their health because they come in direct contact with chemicals and sharp objects.

It was also recognised that primary collectors sustain injuries while at work. The waste is not separated and sorted from non-hazardous waste in open dumps. They are more exposed to contacting diseases such as HIV (Human Immunodeficiency Virus) and it was observed that they are more prone to inhaling gas, dust and chemicals; this results in them having TB (Tuberculosis). The other health issues that were found as affecting primary collectors were fires from burning waste. The nature of their work is dangerous, they go to extremely dangerous spaces in search of the material and some die. Once they sustain injuries, they stop working and lose their earning as expressed by primary collector 3:

*“Sometimes we pass through fires while searching for the materials, and we are used to these conditions because it is something we experience on daily bases. You just learn to be strong and make a living because no one is going to give you money if you did not work for it”*  
(Primary Collector 3: November 2017)

Another relevant expression which indicates the level of risk the primary collector’s work is was presented by primary collector 1 when he stated that:

*“I have seen people dying in front of me. Some of us jump into the rails just to get the materials. If you die there, nobody cares; people just carry on with hustling as if nothing happened.”* (Primary Collector 1: November 2017)

Primary collectors work long hours, they do not have normal working hours. The participants revealed that they work all day long up until the buy-back centres are closed. They work in extreme weathers as they were found not to be saving the money they make on daily bases.



*Fig.13: Primary collectors sorting the material*

Source: Urban-Econ (2015)

#### *5.4.1.1 Medical consultation in the last 3 months*

Primary collectors do not often visit health care services such as clinic or hospital. They do not get time to attend to their health issues. From the interviews conducted, five in twenty respondents reported to have been to a clinic, and it was worth noting that their visits were due to bottle cuts and skin problems. The skin problem is the result of the dirty water which they come in contact with and it was reported that some of these primary collectors do not easily get access to water for bathing. Most primary collectors are not taking medication to ease their health problems as asserted in the following responses:

*“I do not remember the last time I have consulted with the doctor or a clinic. But I do get sick and I have rashes that I hope they go away soon because it has been months.”* (Primary collector 3: November 2017)

*“I am asthmatic and it has been months since I have used my medication because I do not find time to go to the hospital; I am always working. My fear is, what if it attacks me and I do not have the strength to fight it as I am always tired due to hard working.”* (Primary collector 5: November 2017)

*“Last week I was at the clinic as I had a bottle cut and it is healing now, but I do not often go to the clinic. I am a busy person.”* (Primary collector 6: November 2017)

*“I cannot remember when I went to the clinic or hospital. But few months back I had a cut and rash all over my face, I was forced to consult the clinic. People were getting disgusted with my face. I had to do something.”* (Primary collector 8: November 2017)

#### *5.4.1.2 Physical demands of working*

Working as a primary collector is physically exhausting. Primary collectors do not have supporting infrastructure to make their work easy and manageable. They travel long distances collecting the materials on foot. Primary collectors carry the materials by head from Point, West Street, Smith Street and Beria and go sell in Lorne Street and Brook Street as evidenced in the following responses:

*“If we can get trucks at least to transport the material that can make our lives easier.”*  
(Primary collector 10: November 2017)

*“I collect from different places on foot. There is no transportation. I go from West Street to Beria and also Point. It is exhausting a lot, but we do not have a choice. I start working at 5AM till 10PM”* (Primary collector 8: November 2017)

#### *5.4.1.3 Weather conditions*

Primary collectors work in all weathers, despite their health conditions. They work on rainy days so they can buy food at the end of the day. On rainy days, it was reported that they make use of plastics to avoid getting wet. This is the shortcoming as the researcher was never able to observe that happening.

#### *5.4.1.4 Working days*

Primary collectors are independent, they are self-employed. There are no specific working days, they work 7 days a week with no resting in between. For instance, one primary collector expressed the following:

*“With this kind of work, it is the survival of the fittest. If you weak, you will not survive the pressure. I work all day for 7 days, from Monday to Sunday because I was not born with a silver spoon in my mouth to be choosy. From 5AM to 10PM you will find me hustling on the streets and now I am used to it.”* (Primary collector 11: November 2017)

### 5.4.2 Social issues

#### *5.4.2.1 What they like and do not like about their work*

For primary collectors, the positive of their work outweighs the negatives. They are able to make money and provide for themselves and buy food. Some of primary collectors are



supporting families and younger siblings with the money they are getting. They do not have to beg on the streets to get easy money. They work hard for their earnings. Their work helps them in staying away from crime and it was worth noting that the majority that talked about crime and robbery were male collectors. When asked as to what they like and dislike in relation to their work, two respondents expressed the following sentiments:

*“I have a family to feed at the end of the day; the money that I am making is making a significant difference. I am able to send my two boys to school and feed them. We never go to bed on empty stomach”* (Primary collector 11: November 2017).

*“I have been to jail before, since I started working as a collector I have never been to jail. It helps in staying away from trouble and committing crime. I use my hard earned money to buy food, even though it is not enough sometimes. But at least I am getting something”* (Primary collector 15: November 2017)

#### *5.4.2.2 Educational level*

People in the informal sector have no formal education and some are school drop outs. Primary collectors are known to be illiterate, and incompetent (Schenck and Blacuiw, 2011). This is making it hard for them to be employable. They go to the informal sector because they do not have other options to go for as indicated on the responses below:

*“The highest grade I have is grade 6. When my parents died, I had no one to support me. I had sibling to provide food for. I had to drop out of school so that we can have food at the end of the day. If I can get a chance to go back to school, I would be happy.”* (Primary collector 16: November 2017)

*“In our times only males were allowed to go to school. Only if I had a choice. That is why I am making it sure that my kids have education.”* (Primary collector 11: November 2017)

#### *5.4.2.3 Age of starting to collect*

The majority of respondents opted for collecting because they dropped out of school and they could not find jobs. The low levels of education made them unemployable. Out of 20 respondents, eleven of them started collecting between the age of 15 years and 20 years. The others started when they moved to EThekweni between the age of 22 and 25.

#### *5.4.2.4 Homelessness and drug use*

Some of the primary collectors do not have homes and are staying in shelters. There is an issue of homelessness and drug taking especially for the younger ones (youth). They pay rent

at the shelters on daily basis to have a place to sleep. They find themselves sleeping on the streets, under the bridges and railways if they did not save the money for the shelter. In most cases they do not save the money for the place to sleep as they happen to spend more of their earnings on drugs as expressed in the following five responses:

*“My story is different. I am a University of Pretoria drop out. I dropped out in my second year if I am not mistaken. I was doing Chemical Engineering there when I started taking drugs and I could not attend and I ended up dropping out. I am not proud of my choices because it is not that I am not capable of changing my life for the better, but bad choices. That is why I ended up here.”* (Primary collector 1: November 2017)

*“Not that I do not have a family, I do. I am taking the drug nyaope that is why I ended up on the street as if I do not have home. We do need help because it is not like we like this situation. It is just that, it is really hard to stop. I spend more of my money on buying food and the drug, that is why I do not save the money and I am not sure of how much I make a day. As soon as I get money, I run to buy the drug and fail to save for the shelter.”* (Primary collector 12: November 2017)

*“If you do not save for the shelter, you find yourself sleeping on the street or under bridges. At least with the R20.00 you pay, you get to sleep, bath and wash your clothes.”* (Primary collector 5: November 2017)

*“I always sleep at Albert Park and light fires to keep myself warm throughout the night. I always fail to save money.”* (Primary collector 16: November 2017)

#### *5.4.2.5 Daily earnings*

Income is based on the kind of recycling stream the collector is engaged on. Collecting cardboards is what primary collectors go for the most and not the other streams and the material is more easily accessible. For cardboards, the money is better than on other streams. For cardboards, the kilogram is R0.60, for a paper per kilogram is R0.10 and cans are R2.00 of which is better than the cardboards but it is not easily accessible as presented by primary collector 16:

*“I collect for all streams, but with cardboards I easily get the material. With paper and cans we struggle.”* (Primary collector 16: November 2017)

The amount of money is not always the same; it depends on how the day is. There are good and bad days, the money which they make depends on the day. Respondents estimated to be making R80.00 to R100.00 on good days and R40.00 to R50.00 on bad days. However, some primary collectors fail to manage their earnings as indicated in the following response:

*“I am not sure how much I make a day. I spend it as soon as I get.” (Primary collector 17: November 2017)*

None of the respondents are spending money on health care services. Primary collectors are price takers; the buyer determines the prices according to the weight of the material. The prices across the buyers are not the same and this gives primary collectors a chance to choose the buyer they want to sell their materials to. There are also no formal relationships between the buyer and the seller. It was worth noting that primary collectors feel safe in the hands of their buyers as expressed by the following respondents:

*“When you are approaching the buyer, like where I sell my cardboards, you do not negotiate the price of the material. The seller gives you the price list according to the weight of the materials. They also weigh your material so you can see that they not robbing you. But at least if you not happy with the prices of that buyer, you can move to another one since there are no contracts between the two parties. Despite all that, I really appreciate what I am getting; at least these people are giving us something. We do not go to bed hungry.” (Primary collector 11: November 2017)*

*“As much as we sometimes I am not happy with the amount that we are getting, but you cannot bite the hand that feeds you. We only feel the sense of protection from our buyers; they appreciate our kind of work.” (Primary collector 16: November 2017)*

There are no corporations and unions representing primary collectors. Having corporations can help in getting primary collectors voices heard. They can fight their struggle collectively unlike when they are working independently.

The competition between them as primary collectors is tight. Primary collectors have spots where they go and collect. They form relationships with stores like Pep, Ackerman’s, Boxer stores, so they can keep materials for them. For a primary collector, it is important to have a spot because they get the assurance that they going to get the materials ready for them. Primary collectors in some cases fight over the spots for collecting, and they end up sustaining injuries.



Fig.14: Primary collector showing his earnings from recyclables  
 Source: Urban-Econ (2015)



Fig.15: The buy-back centre with the list of prices for the recyclables  
 Source: Researcher (2017)

### 5.4.3 Lack of recognition and support

#### 5.4.3.1 Social exclusion

Stigmatisation is the issue for primary collectors. This tends to affect their work and earnings. Primary collectors are often called by names like ‘amaphara’, meaning they are thieves and street dwellers. This treatment affects every primary collector who is informally collecting for recycling, even those who are not taking drugs. It is a problem for primary collectors to work in public spaces like at the taxi ranks. They are often excluded in the society.

Primary collectors are often mistaken with muggers. Muggers pretend to be primary collectors when committing crime. Drug taking and homelessness is the reason for all primary collectors to get bad treatment from the society. The following responses suggest how primary collectors are mistreated:

*“People if they see you with cardboards, they are quick to judge you. They are forgetting that we are in this industry for different purposes. I am not a thief and I have never been one. But I always get treated as one.”* (Primary collector 19: November 2017)

*“It is challenging working in this industry because especially the young ones, they have different reasons why they are doing this kind of work. Some are using the money to buy drugs, whereas some like me are feeding their families. But we all get the same treatments and we are seen as one.”* (Primary collector 8: November 2017)

*“We get bad treatment especially if we are collecting from taxi ranks, we are called names. People treat us as animals and they have no respect for us. There was an incident where I got beaten by taxi drivers who were pretending to be police officers. I was told to stand against the wall and I sustained injuries. I will never forget that day. I felt like a dog and worthless.”* (Primary collector 16: November 2017)

*“If the government can rule out that that all primary collectors collecting cardboards; paper; cans and metal must be killed, the South African society will rejoice. They forget that what we are doing is good for them. We are helping in cleaning the city. We deserve better that what we get from people. No one wants to be associated with us as if we eat people. Fine, our kind of work we get dirty, but that is not who we are. After work, we are like normal people as they perceive we are not.”* (Primary collector 11: November 2017)

#### 5.4.3.2 Law enforcement harassment

The greatest challenge faced by primary collectors is police harassment. On daily basis, primary collectors are on the lookout for metro police and the municipal security. Primary collectors in EThekweni are working in fear of the municipal officials. They are believed to be causing trouble and messing the city when sorting the materials. On daily basis, primary collectors are running from the police as respondents expressed:

*“We do not get along with police officials. We are always on the lookout for them. When they catch us with the material, they take it back to the bins. This affects our earnings so badly. It is not like we are committing crime. We are at work just like them.”* (Primary collector 16: November 2017)

*“Metro police treat us like some sort of animals. They are always chasing us. They say we are messing the city. Yes, some of us do, especially those who are using water when sorting the materials, it really gets messy. But not all of us.”* (Primary collector 19: November 2017)

*“I have never seen it happen but I heard that these officials take our materials and sell them. They are stealing our hard-earned work. After they take our cardboards, we start afresh and collect again and that hurts. It is frustrating because we are trying to make a living too.”* (Primary collector 16: November 2017)

It was also noted that primary collectors lack recognition and support from municipal officials as highlighted by some respondents:

*“If they see us, it is like they are seeing dogs that need to be chased out of the public space. They take us to police station to check if we do not have cases against us because we are perceived as criminals.”* (Primary collector 14: November 2017)

*“There is this one time after they took us to the police station to check our fingerprints; they took us outside of EThekweni. I think that was close to Adams. They threw us there and told us not to come back to the city. We are not wanted there. It was so hard walking back; we had to walk back on foot because we did not have a choice. They told us to go back where we come from because they are cleaning the city.”* (Primary collector 2: November 2017)

Primary collectors used to get support from civil society organisations. They used to get trollies, gloves and food and it stopped. These organisations got tired as the police always come take the trollies and run over them. Primary collectors in EThekweni are no longer



getting support from either from government, the municipality and private organisations. Buy-back centres complained to the municipality because of the profit shortfalls they were experiencing where as they are renting their spaces to the municipality, but it has never stopped. The municipality authorities lack the idea on how primary collectors are making an impact in the reduction of waste in the city. Primary collectors at times get restricted to come to the city; they are told to go to the bridges and railways.

Primary collectors were seen as capable of developing themselves and changing their lives for the better regardless of being socially excluded. Social exclusion hinders them from having a fruitful engagement in the society. This steals their sense of belonging and to having a normal lifestyle. This is seen in Musakwa (2008:60) as he defines social exclusion as being cut off from active engagement with dimensions considered as normal in the society.

Primary collector's engagement and participation in the informal economy allows them to lessen poverty in the society without having to wait for the government to change their situations. It was seen that primary collectors are able to define their cause of poverty and how they can fight it. This is allowed in the participatory approach to development. People need to participate and be able to define their situations and work towards changing it.

The lack of resources such as social services makes primary collectors more vulnerable and powerless. The number of people coming to the city from neighbouring small towns makes it hard for the municipality to provide services that can cover all, such as jobs. It is important for one to be able to turn around their circumstances and sustain a living such having the skills and good health. Primary collectors are seen to be able to look at opportunities and making decisions to empower themselves.

## 5.5 Conclusion

This chapter explored the lived experiences of primary collectors in EThekweni Municipality. It provided the background of recycling in EThekweni and the role players within the recycling value chain. The chapter presented the findings and synthesis of the study findings. Primary collectors experience abuse in so many levels. They are being stigmatised. This takes away all the positivity they bring to waste management of the city.

## Chapter 6: Conclusion and Recommendations

### 6.1 Introduction

This chapter provides the summary of findings in relation to the objectives that were outlined in Chapter 1. This will be followed by the recommendations and conclusions.

### 6.2 Summary of the objectives

The study looked at the recycling value chain in EThekwini Municipality by exploring the lived experiences of primary collectors. The findings on the objectives of the study are summarized below.

#### 6.2.1 Exploring the reasons behind being a collector

The respondents for this study revealed that the reason they became primary collectors was to support for themselves (food and clothes). The majority of them have troubled backgrounds. They are unemployable; being a collector was the easiest way to make money. Primary collectors are collecting cardboards to stay away from trouble and committing crime.

#### 6.2.2 Exploring problems encountered by primary collectors within EThekwini

Primary collectors in EThekwini are experiencing challenges that are socially and health related and there is lack of recognition and support. The nature of their work is physically exhausting; they do not have resting days. Some of the primary collectors are taking treatments; it gets hard to recover with the schedule of their working hours. The working conditions are terrible; they are prone to contract diseases like TB, asthma and lung infections. Most primary collectors have skin problems as they always come in contact with dirty materials when sorting and collecting the cardboards. It was found that primary collectors are lacking support and recognition from the society and the municipal officials. Primary collectors experience abuse, this is affecting their earnings. Primary collectors feel unaccepted by the society because of the stigmatization. Primary collectors are regarded as criminals. Most of them are homeless and taking drugs which are the reasons they are being judged and excluded in the society.



### 6.2.3 Exploring methods of pricing the material collected

Primary collectors do not have a say with price setting of materials. Buyers determine prices; the material is firstly weighed. Primary collectors do not have the platform to suggest and negotiate the prices. Prices throughout the buyers are not the same, this leaves the space for primary collectors to choose where they want to sell their materials based on prices they are getting. It was found that prices go up once a year. It also depends on the word of mouth. If the buyer knows that another buyer has increased the price, they also increase.

### 6.2.4 Exploring impact of recycling on the well-being of primary collectors

The money they are earning help in supporting with basic needs such as food and clothes. It may not be enough to help them out of poverty, but they never go to sleep in empty stomach and they can support families. Most respondents revealed that they are staying in shelters and pay R20.00 on daily basis. The fee covers bathing, sleeping and washing. It was found that primary collectors sometimes fail to save for the shelter, and end up sleeping under the bridges and parks.

### 6.2.5 Exploring the support which primary collectors receive from government, private sector and civil society

There is no support they receive from the government and the municipality. It was found that Civil Society Organizations once supported primary collectors and eventually stopped. Primary collectors were getting trolleys to carry the materials because they travel long distances collecting cardboards. They were also getting gloves for protection when sorting the material. Respondents revealed that these organizations got tired and stopped when the metro police came and took the equipment.

### 6.2.6 Exploring major risk factors associated with waste recycling

Primary collectors are vulnerable in their work; they work under dangerous and unhealthy conditions. They experience injuries and illness because of their work. Primary collectors are exposed to dust and germs which is a concern for their health. They experience rashes, asthma and TB as a result. The study findings suggest that prevention measures for primary collectors are needed.

## 6.3 Recommendations

Primary collectors have a significance role in the growth of the city's economy, which should never go unnoticed. They deserve to be treated equally like other workers. Primary collectors are not committing crime; they are making a living and supporting families. They are contributing to the expansion of the life cycle of landfills; they are minimising the volumes of

waste that is going to landfill. The city's officials edge the residents to participate in recycling; they need to start recognizing the work of primary collectors and its impact. It is the municipality's duty to keep the city clean and primary collectors are helping and they are increasing the rates of recycling and green jobs within the city.

### 6.3.1 Policy recommendations

It is imperative for the municipality to include the work of primary collectors in the waste management policies. Police harassment needs to stop. It is directly affecting the earnings of primary collectors. Primary collectors work in fear of the municipal securities and metro police. The municipal officials take the material leaving primary collectors vulnerable and helpless. Primary collectors should be making more money than they are making, abuse is the problem. The municipality need to consider giving primary collectors permission to work; getting the permission will help in the reduction of the ever-increasing poverty rates and crime rates. The residents need to be educated on the benefits of recycling. Awareness is needed so they can understand the work and the importance of having primary collectors in the city. This will help in stopping the abuse and harassment and people can start appreciating.

The municipality need to consult with primary collectors, hear their concerns and their goals in relation to their work, and where the municipality can intervene. Neglecting and ill-treating these people is not helping; rather it is preventing the city from progressing with recycling. Primary collectors like street vendors need to be accepted. The city's permitting system needs to be revisited. Through consultations, primary collectors can work in peace and the city can promote green jobs and recycling.

There is a need for the municipality to provide support and equipment to primary collectors. The concern for the municipality is that primary collector's sorting spaces are messy. The municipality need to raise funds and build sorting centres where primary collectors can sort and store the materials collected, this will encourage pleasing urban environment. Transport is needed; primary collectors travel long distances on foot collecting the materials. The municipality needs to provide with trucks to transport the material. The provision of this equipment should be the city's priority as it is important for the well-being of the collectors.

Primary collectors must form committees or corporations. This will attract civil society organizations and gain interest in helping and supporting their work. Through this act, they may get training on occupational health and emergency first aid training as their work is

dangerous. This may also help primary collectors to gain confidence in addressing their grievances and they may be able to negotiate the prices with the buyers. There is also a need for a union representing and fighting for the rights of primary collectors.

The municipality and the government need to come to realization that primary collectors will always be the part of the informal economy, and they should not be considered as a problem but as a solution to grow the economy. Primary collectors are the gears to the positive turn of the informal economy. Other government departments such as the Department of Social Development can also play the part. The department needs to advocate for primary collectors by providing interventions of drug use.

#### 6.4 Conclusion

This study explored the lived experiences of primary collectors in EThekweni. Social exclusion, harassment and lack of recognition are the major problems identified in this study. Primary collectors like any other workers, deserve fair treatment and respect. They need to be treated with dignity. Primary collectors are a permanent part of the waste management; they must be recognised.

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## Appendix 1: Interview guide



### **INTERVIEW SCHEDULE**

**Recycling Value Chain Reality: Exploring the lived experiences of primary collectors in EThekweni Municipality.**

#### **Biographical Information**

1. Name?
2. Recommended pseudo name?
3. Age?
4. Gender?
5. Income
6. How many hours do you work a day?

#### **Primary Collectors**

##### **GENERAL**

1. Why did you decide to become a collector?
2. How long have you been a collector?
3. Tell me what collecting involves?
4. Describe your day?
5. Tell me about the nature of your work
6. What led you to collecting recyclable material?

##### **INCOME**

7. How much are you earning?
8. Do you think it is enough?

9. What do you do with the money you get?
10. What is the biggest amount of material do you normally collect per day?

### **EXPERIENCE**

11. How is the competition amongst other collectors?
12. Who do you target the most to get the material?
13. How do you choose the buyer?
14. Is there a special time you have to go and collect the material?
15. How many places do you collect material per day?
16. Who buys the material the most?
17. What do you do with the material if the buyer doesn't come?
18. Do you get threats from law enforcement officials? How and how do you deal with the threats?
19. Is there any contract you have with the buyer?
20. How vulnerable are you in this kind of work?
21. What can you do to change the way you're treated in your work?
22. What do you think could be done to make your job easier?
23. What are the key challenges that you face?
24. Are any positive traits or impacts in your life that is attributed to recycling?
25. What are the main reasons associated to poor or negative traits, if any?
26. Is there any support you get from the municipal authorities, private and society sector
27. How does the society perceive you?
28. Why do you think the society perceived you the way you think they do?
29. How will you like to be treated by the society?

### **PRICE SETTING**

26. How do you set the prices?
27. What is the biggest price do you get?
28. Are you able to negotiate the prices?
29. Do you have any suggestions to make regarding pricing?

## Appendix 2: Informed consent form



**UNIVERSITY OF  
KWAZULU-NATAL**  
Informed Consent Form

**Consent Form for Participation of Human Subjects in Research**  
University of Kwa-Zulu Natal

**PROJECT TITLE:** Recycling Value Chain Reality: Exploring the lived experiences of primary collectors in the EThekweni Municipality.

**RESEARCHER:** Sanelile Bongeka Khumalo **Protocol Reference Number:** HSS/2133/017M

**STUDENT NUMBER:** 210511236  
The Department of Built Environment and Development Studies  
University of KwaZulu Natal, Durban, South Africa.

**DURATION:** The interview will take **sixty minutes** of your time.

### Dear Participant

My name is Sanelile Bongeka Khumalo (210511236). I am a Masters candidate studying at the University of KwaZulu-Natal, Howard College. The title of my research is: *Recycling Value Chain Reality: Exploring the lived experiences of primary collectors in the EThekweni Municipality*. The aim of the study is to explore the challenges faced by the primary collectors within eThekweni Municipality Area.

Please note that the information that you provide will be used for scholarly research only. Your participation is entirely voluntary. You have a choice to participate, not to participate or stop participating in the research. The views in this interview will be presented anonymously. Neither your name nor identity will be disclosed in any form in the study. The interviews will be recorded and the data may be used at a later stage in the research report. If you agree to participate please sign the declaration attached to this statement.

<b>Name of Researcher</b>	Sanelile Bongeka Khumalo
<b>Signature of researcher</b>	
<b>Date</b>	17 November 2017

### PERMISSION FROM PARTICIPANT TO BE INTERVIEWED

I N Shazi.....(full name) on this day of 17 November 2017.....(date)

Agree to be interviewed for the above research project. I understand that I will be asked

Name of Participant	N Shazi
Signature of researcher	<i>N. B. Shazi</i>
Date	17 November 2017

questions that the researcher finds relevant for the purpose of this study. I also understand that the interview will be recorded and the data may be used at a later stage in the research report. I understand that I can withdraw anytime.

#### **PERMISSION FOR AUDIO-RECORDED INTERVIEWS**

I, N. Shazi (full name) on this day of 17 November 2017 (date)  
Agree that the interview for the above research project can be audio-recorded for research purposes at a later stage in the research report.

Name of Participant	N Shazi
Signature of researcher	<i>N. B. Shazi</i>
Date	17 November 2017

#### **I CAN BE CONTACTED AT:**

School of Built Environment and Development Studies,  
University of KwaZulu-Natal,  
Howard College Campus,  
Durban.  
Email: [210511236@stu.ukzn.ac.za](mailto:210511236@stu.ukzn.ac.za);  
Cell: 064 656 975

#### **MY SUPERVISOR**

Dr Mariam Seedat Khan  
University of KwaZulu-Natal  
School of Social Sciences,  
Howard College Campus,  
Durban

#### **Contact details**

Email: [Seedatm@ukzn.ac.za](mailto:Seedatm@ukzn.ac.za)  
Phone number: 031 260 1056.

#### **Contact details**

The Humanities and Social Sciences Research Ethics Committee  
Ms Phumelele Ximba,  
University of KwaZulu-Natal,  
Research Office, Email: [ximbap@ukzn.ac.za](mailto:ximbap@ukzn.ac.za),  
Phone number +27312603587.

Please tick the appropriate box	YES	NO
I consent to participating in the semi-structured interview in a place that is convenient to me	✓	

I N Shazi (full names of participant) hereby confirm that I understand the contents of this document and the nature of the research project, and I consent to participating in the research project. I understand that I am at liberty to withdraw from the project at any time, should I so desire. I understand the intention of the research. I hereby agree to participate.

I consent / do not consent to have this interview recorded (if applicable)

SIGNATURE OF PARTICIPANT

DATE 17 November 2017



NAME OF PARTICIPANT

N Shazi

Thank you for your contribution to this research.



## Appendix 3: Ethical clearance



14 November 2017

Ms Sanelle Bongeka Khumalo (210511236)  
School of Built Environment & Development Studies  
Howard College Campus

Dear Ms Khumalo,

Protocol reference number: HSS/2133/017M

Project title: Recycling Value Chain Reality: Exploring the lived experiences of primary collectors in the eThekweni Municipality

### Approval Notification – Expedited Application

In response to your application received on 01 November 2017, the Humanities & Social Sciences Research Ethics Committee has considered the abovementioned application and the protocol has been granted **FULL APPROVAL**.

Any alteration/s to the approved research protocol i.e. Questionnaire/Interview Schedule, Informed Consent Form, Title of the Project, Location of the Study, Research Approach and Methods must be reviewed and approved through the amendment/modification prior to its implementation. In case you have further queries, please quote the above reference number.

**PLEASE NOTE:** Research data should be securely stored in the discipline/department for a period of 5 years.

The ethical clearance certificate is only valid for a period of 3 years from the date of issue. Thereafter Recertification must be applied for on an annual basis.

I take this opportunity of wishing you everything of the best with your study.

Yours faithfully

Dr Shamila Naidoo (Deputy Chair)

/ms

Cc Supervisor: Dr Marlam Seedat-Khan and Dr Gerard Boyce  
Cc Academic Leader Research: Professor Oliver Mtapuri  
Cc School Administrator: Ms Nolundi Mzolo

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Humanities & Social Sciences Research Ethics Committee

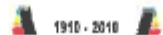
Dr Shenuka Singh (Chair)

Westville Campus, Govan Mbeki Building

Postal Address: Private Bag X64001, Durban 4000

Telephone: +27 (0) 31 260 3587/8350/4557 Facsimile: +27 (0) 31 260 4809 Email: [simbao@ukzn.ac.za](mailto:simbao@ukzn.ac.za) / [amy@ukzn.ac.za](mailto:amy@ukzn.ac.za) / [mphung@ukzn.ac.za](mailto:mphung@ukzn.ac.za)

Website: [www.ukzn.ac.za](http://www.ukzn.ac.za)



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## Appendix 4: Turn in Report

### Value Chain

#### ORIGINALITY REPORT

8%

SIMILARITY INDEX

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INTERNET SOURCES

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#### PRIMARY SOURCES

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Submitted to University of KwaZulu-Natal

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7

Redmond, Gerry. "Child poverty and child rights: Edging towards a definition", Journal of Children and Poverty, 2008.

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