Building integrated cities: mapping assets of the urban poor in Atteridgeville, Tshwane Metropolitan Council

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Dissertation submitted in fulfilment of the requirements for the degree *Magister Artium et Scientiae* in Urban and Regional Planning at the Potchefstroom Campus of the North-West University

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November 2015

ACKNOWLEDGEMENTS

My utmost thanks are to God for the strength and wisdom granted to me throughout my studies.

- Great appreciation to my mother and father for constantly supporting and encouraging me in achieving my aspirations.
- Thanks to Mr Mduduzi Nhlozi for availing himself for guidance and advice.
- My sincere gratitude to Professor C.B Schoeman for the support, clarity and guidance during my research.
- Thanks to Ms Willma Breytenbach for her creditable statistical expertise.
- Lastly, thanks to the people of the Atteridgeville community for their enthusiastic participation, honesty and commitment in engaging with me, and thanks to the officials of the City of Tshwane Municipality too for engaging with me.

ABSTRACT

The discourse on sustainable livelihoods began attracting global attention in the early 1960s. Substantial literature developed by various writers looked at the different ways in which people can guarantee access to sustainable livelihoods. Initially, the focus was given to economic ways of livelihood generation. Focus on the economic dimension of livelihoods was largely influenced by the discourse, which sought to address high poverty levels that dominated the world at the time. One of the responses by institutions such as the International Monetary Fund and the World Bank was to introduce programmes such as the Structural Adjustment Program, which was a poverty relief intervention in countries that were severely affected by poverty. During this period, most if not all poverty relief interventions were done at broader regional and provincial levels. The interventions aimed for bigger and widespread impacts.

In the years that followed, the discourse on livelihoods began to take a significant shift following the realisation that regional or country level interventions did not responsively address the issue of poverty. In terms of food security for example, many countries were reported to have enough quantities of food available at national level. However, this did not translate to access to food for all people at individual and household levels. While countries continued to indicate acceptable availability of food at national levels, the number of people without access to food continued to increase. Such trends began to shift to focus at micro levels.

Literature on livelihoods began to look at different ways in which people and particularly the poor make their living. Substantial literature was generated from countries of the developing world, which were at the time largely affected by high levels of poverty and unemployment. During that time, complexities and nuances of the concept of livelihood were widely studied, and new lessons were learned regarding the importance of the informal sector to the economy. The literature also began to look at dimensions of poverty other than the economic dimension. These were social and political dimensions of poverty that also play a crucial role in deepening and maintaining poverty levels. Considerable studies and reports indicated that most of the people in countries of the developing world are involved in the informal sector for purposes of earning a living. More importantly, people in the informal economy are involved in a number of activities for purposes of generating income to stabilise their livelihoods. This is what Francis Owusu calls ‘multiple livelihood strategies’ which people employ to sustain their lives.

The concept of multiple livelihood strategies is crucial in this study because it provides the premise through which to understand dynamics of informal waste recycling and ways in which the City of Tshwane can support and improve working conditions of the informal waste recyclers.

Key words:

Sustainable livelihoods

Assets

Vulnerability

Informal economy

Informal trading

Waste recycling.

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ABBREVIATIONS

AISA	African Institute of South Africa
AmFAR	American Foundation for AIDS Research
AmFAR	American Foundation for AIDS Research
BB-BEE	Broad Based- Black Economic Empowerment
BBSDP	Black Based Supplier Development Programme
BRICS	Brazil, Russia, India, China and South Africa
CARE	Cooperative for Assistance and Relief Everywhere
CoT	City of Tshwane
CSO	Civil Society Organisation
DCoGTA	Department of Cooperative Governance and Traditional Affairs
DfID	Department for International Development
DTI	Department of Trade and Industry
FAO	United Nations Food and Agriculture Organisation
GDP	Gross Domestic Product
HIV/AIDS	Human Immunodeficiency Virus/ Acquired Immune Deficiency Syndrome
IDP	Integrated Development Plan
IFRC	International Federation of Red Cross and Red Crescent
IMF	International Monetary Fund
ISP	Incubation Support Programme
MDGs	Millennium Development Goals
NDP	National Development Plan
RIDS	Rural Industrial Development Strategy
SACN	South African Cities Network

SADC	Southern African Development Community
SDF	Spatial Development Framework
SEDA	Small Enterprise Development Agency
SPLUMA	Spatial Planning and Land Use Management Act
StatsSA	Statistics South Africa
TBM	The British Museum
UK	United Kingdom
UN	United Nations
UNAIDS	United Nations Programme on HIV/AIDS
UNDP	United Nations Development Programme
UNFPA	United Nations Population Fund Agency
US	United States
USAID	United States Agency for International Development
VAT	Value Added Tax
WCED	World Commission on Environment and Development

GLOSSARY

Vulnerability is one dimension of deprivation along poverty, physical weakness, social inferiority, isolation, powerlessness and humiliation. It is seasonality, trends, and shocks that affect people's livelihoods.

Poverty is the lack of physical necessities, assets and income, and includes vulnerability, powerlessness, and lack of access to social amenities such as health and education facilities.

Assets comprise of human capital, natural capital, social capital, physical capital and financial capital that individuals / households use to develop earn a livelihood.

Livelihood comprises the capabilities, assets including both material and social resources, and activities required for a means of living.

Multiple Livelihood Strategies are various activities that individuals and households are involved in to earn a living.

Sustainable Livelihood is a way (livelihood) of living that can cope with and recover from stresses and shocks and maintain or enhance its capabilities and assets both now and in the future, while not undermining the natural resource base.

EXECUTIVE SUMMARY

The urban poor always look for innovative ways to ensure access to essential livelihood needs such as food, clothes and shelter. These innovative ways are evident on a day-to-day basis in towns and cities of South Africa. Whether it is erecting shacks, selling sweets or washing cars at the intersections, the urban poor are continually adapting and creating new ways by which they make a living. The idea is to ascertain whether the government acknowledges efforts by the urban poor and illustrates willingness to address these in a way that seeks to improve their livelihoods rather than destroy them. The role of the state is crucial given that Section 11 of the Constitution stipulates that 'everyone has the right to life" (Constitution, 1996: 1247) and the state must take reasonable steps to ensure realisation of this right. This study aims to unpack the dynamics of informal recycling, the challenges faced by the waste recyclers, the assets they have access to, and the opportunities for support and integration.

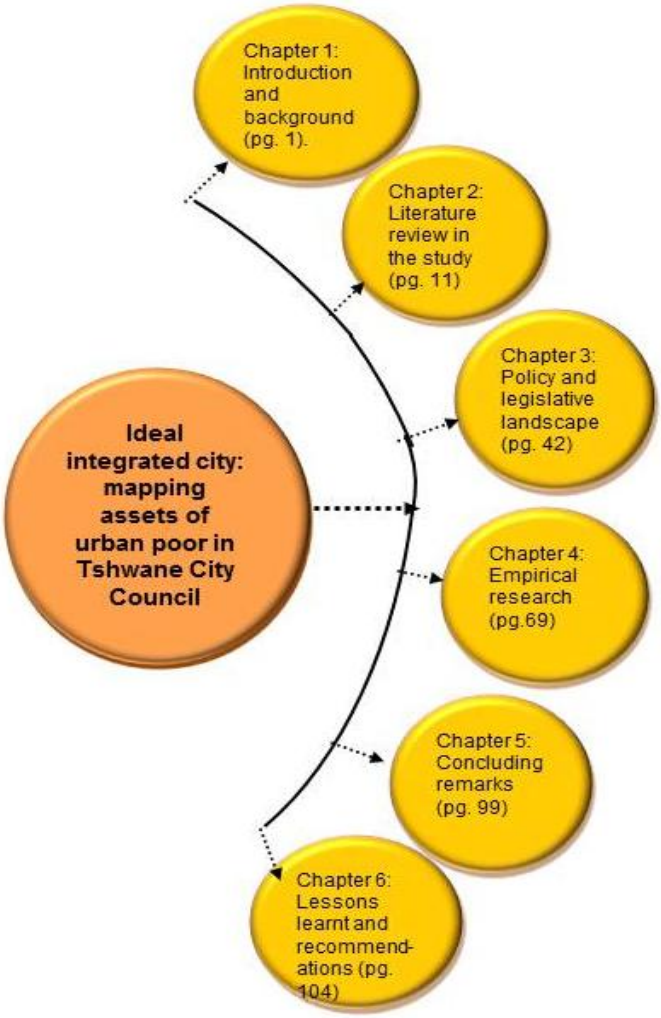

Figure 1: Graphical summary of the study
Source: Own construction, 2015

The study is organised into five (5) chapters, with each chapter analysing different dimensions of livelihoods. The introductory section of the study sets the scene for the study by introducing the problem statement and background to the study, the research aim and objectives, research question, basic hypothesis and methods used for collection of the information. The introductory section is important as it provides an entry point and sets the premise through which information is collected and analysed in the study.

Chapter 2 provides analyses into the different conceptual and theoretical frameworks that can be used as lenses to understand the concepts of livelihoods, poverty, assets, and other related concepts. The frameworks are carefully selected for purposes of underlining pertinent issues relating to the concept of livelihoods. These also provide a basis for critical analyses regarding what other studies have done towards understanding the concept of livelihoods. Central to the chapter is the concept of multiple livelihood strategies. This concept encapsulates all the dynamics of subjects of the study. It is a fundamental concept in that it provides the premise for understanding behaviours, attitudes and decision making processes of informal waste recyclers.

Government's responses and actions are guided by a myriad of policy and legislative frameworks. Chapter 3 analyses in detail various policy and legislative frameworks that administer and regulate economic development, informality, informal trading and spatial planning and development both at national and city or local level. The chapter explores attitudes of the government towards addressing informality, particularly informal waste recyclers. There are also analyses of the South African government's vision towards addressing poverty and unemployment as these have significant impact on informality.

Assumptions and analyses made in the previous chapters have to be qualified and tested by studying the context specific dynamics of how the urban poor strive to make a living. Chapter 4 situates the study in the regional and local context of Atteridgeville. The chapter also provides a profile of informal waste recyclers by looking at critical factors such as gender, nationality, level of education, income levels, and household dynamics. Analysis of the profile of informal waste recyclers is crucial for setting the scene upon which one can understand the decisions they make and the circumstances that forces them to make such decisions. Assets which informal recyclers have access to are mapped, and challenges and opportunities for integration of informal waste recycling into the city are analysed.

Based on analyses, arguments, perspectives and insights made in previous chapters, concluding remarks, lessons and recommendations are made at the end of the study. The

recommendations section puts forward suggestions through which the City of Tshwane can improve working conditions of informal waste recyclers and improve integration of informal waste recycling into the city's formal waste management processes.

OPSOMMING

Stedelike armoede en persone wat binne dit funksioneer sal altyd soek na innoverende maniere om toegang tot vir noodsaaklike lewensonderhoud behoeftes soos kos, klere en skuiling te verseker. Die innoverende maniere wat deur diesulke persone toegepas word, is duidelik op ’n dag-tot-dag-basis in dorpe en stede van Suid-Afrika waarneembaar. Of dit die oprigting van plakkershutte (informele strukture), verkoop lekkers of was van motors by die kruisings is, moet stedelike armes voortdurend aanpassings maak om te oorleef deur onder andere die skep van nuwe maniere om te bestaan en te oorleef. Die vraag is egter of die Regering (owerheid) hierdie pogings van die stedelike armes verstaan, begrip te illustreer en bereidwilligheid vertoon vir die wyse waarop armes poog om hul lewensbestaan te verbeter eerder as om dit te vernietig in die proses om hierdie dinamika aan te spreek. Die rol van die Staat (owerheid) is van kardinale belang deur uitvoering te gee aan Artikel 11 van die Grondwet wat onder andere bepaal dat "elke persoon (*landsburger*) die reg op lewe" het (Grondwet, 1996: 1247). Die Staat moet verseker dat redelike stappe geneem word om hierdie die reg te verseker. Hierdie studie het ten doel om die dinamika van informele herwinning, die uitdagings van die afval herwinning, die bates waartoe hulle toegang het en die geleentheid vir ondersteuning en integrasie uit te pak en na te vors.

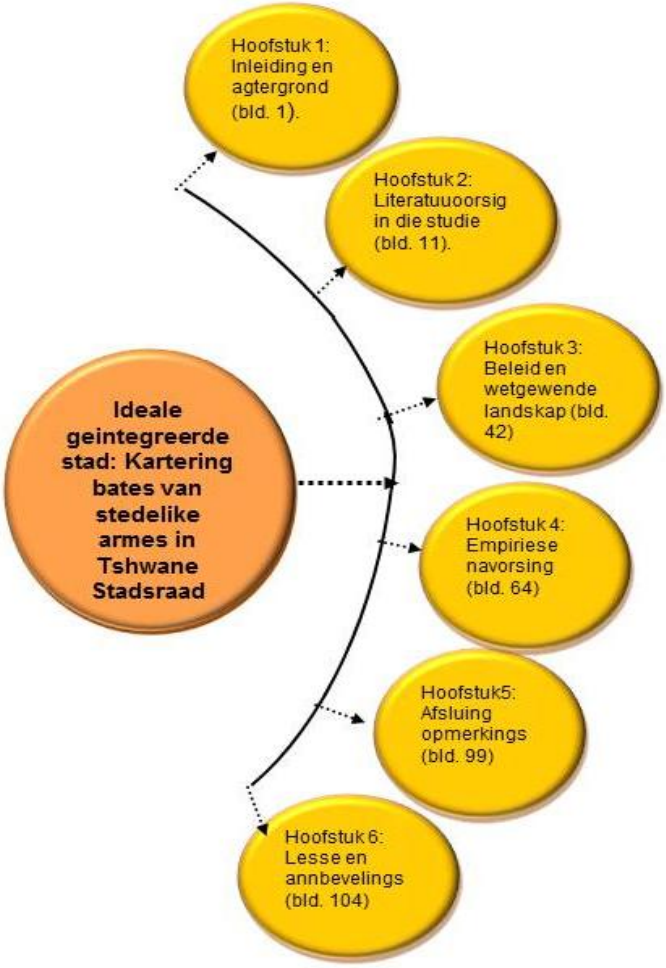

Figure 2: Graphical summary of the study
Source: Own construction, 2015

Die studie is in vyf (5) hoofstukke georganiseerd, met elke hoofstuk wat verskillende dimensies van bestaanbaarheid en lewensonderhoud analiseer. Die inleidende gedeelte van die studie begin deur die agtergrond tot die studie te beskryf insluitende die probleemstelling, navorsingfokus en doelwitte, navorsingsvraag, hipotese asook die basiese metodes wat gebruik word vir die versameling van die data en verwerking van inligting. Die inleidende gedeelte is belangrik aangesien dit die agtergrond bied vir die navorsing en dit stel die vertrekpunt waardeur inligting versamel, ontleed en vertolk sal word.

Hoofstuk 2 bevat ’n in diepte ontleding van die verskillende konseptuele en teoretiese raamwerke wat gebruik kan word as fokus om die konsep van lewensbestaan, armoede, bates en ander verwante begrippe te verstaan. Die raamwerke is noukeurig gekies vir die doel beklemtoon alle prominente kwessies rakende die konsep van lewensonderhoud en lewensbestaanbaarheid. Dit bied ’n ook basis vir die kritiese analise wat onderneem is. Ander studies binne die konsep van lewensonderhoud en lewensbestaanbaarheid is ook ingesluit. Sentraal tot die hoofstuk is die konsep van verskeie strategieë handellende oor lewensbestaan. Hierdie konsep omvat die dinamika van alle vakke van die fokus van die studie met die fokus op informele herwinning van afval materiaal. Dit is 'n fundamentele konsep in die sin dat dit die uitgangspunt insluit in die begrip vir die gedrag, houdings en besluitnemingsprosesse van die informele herwinnings afval aktiwiteite.

Die Regering se reaksies en aksies word gelei deur 'n komplekse stelsel van beleid en wetgewende raamwerke. Hoofstuk 3 ontleed in detail die verskillende beleid en wetgewende raamwerke en die wyses waarop dit administreer word. Dit Reguleer onder andere ekonomiese ontwikkeling, informaliteit, informele handel en ruimtelike beplanning en ontwikkeling op nasionale, stedelike en plaaslike vlak. Die hoofstuk poog om die visie en benadering van die Regering te verken insoverre dit die aanspreek van armoede en werkloosheid betref aangesien dit ’n belangrike invloed het op informaliteit.

Aannames en ontledings wat in die vorige hoofstukke gemaak is, word gekwalifiseer en getoets deur die bestudering van die konteks spesifieke dinamika van hoe die stedelike armes daarna streef om 'n bestaan te maak. Hoofstuk 4 plaas die studie in die munisipale en plaaslike konteks en word afgestem op die posisie in die Atteridgeville dorpsgebied. Die hoofstuk sluit ook ’n profiel in van die informele herwinnings aktiwiteite (persone of ‘handelaars’) deur ’n ontleding van die kritiese faktore soos geslag, nasionaliteit, vlak van opvoeding, inkomste vlakke en huishoudelike dinamiek. Ontleding van profiel van die informele afval herwinningsrolspelers is van

kardinale belang vir omgewing waarbinne diesulke persone funksioneer asook die besluite wat hulle maak in die lig van omstandighede wat hulle dwing om bepaalde besluite in die proses te rig. Bates waartoe informele herwinngsrolspelers toegang het, word gekarteer en die uitdagings, geleenthede vir integrasie in informele herwinngspraktyke binne stedelike verband word analiseer.

Gebaseer op die ontleding, lyn van argumente, perspektiewe en insigte in die voorafgaande hoofstukke, gevolgtrekkings, lesse geleer word aanbevelings gemaak in die studie om die informele herwinngspraktyke te bestuur en te rig. Die aanbevelings sluit in voorstelle vir die Stad van Tshwane om informele herwinngspraktyke en rolspelers te rig, integrasie te bevorder, en om die werksomstandighede van die informele herwinninspraktisyns (rolspelers) te verbeter.

CHAPTER ONE: INTRODUCTION AND BACKGROUND TO THE STUDY

1. Introduction

Developing countries' cities, together with smaller urban areas, continue to accommodate a substantial amount of urban population, with estimates showing that approximately "52 per cent of urban population" lives in these cities (UNFPA, 2007: 9). In terms of livelihood in cities, urbanisation in developing countries is a concern given the human, financial and technical resource challenges that often characterise these countries (UNFPA, 2007: 9). Important to note is that growth and development trends in cities of developing countries differ from those of countries in the developed north. UNFPA (2007: 7) notes that the enormous increase in the urban population of cities in the developing world is a result of the "second wave of demographic, economic and urban transitions".

The second urbanisation wave is much bigger and faster than the first urbanisation wave which took place between 1750s and 1950s (UNFPA, 2007: 9). Today, the growth of cities in the developing world is "dynamic, diverse, disordered and increasingly space-intensive (UNFPA, 2007: 48). In Africa for example, it is estimated that between 2000 and 2030, urban population will "increase from 294 million to 742 million" (UNFPA, 2007: 9). Growth of these cities suggests need for investment in new built infrastructure systems, growth of the economy, provision of employment opportunities, provision of social amenities and other related services that humans need for their livelihood. Also people moving to these cities are often poor (UNFPA, 2007: 9). In Mumbai for instance, it is said that 10 to 12 million people live in informal settlements or are squatters (Wyly, 2012: 11). Most cities of the developing world are faced with urbanisation issues related to shortage of proper housing and employment, which put much pressure on these cities to grow their economies and infrastructure in efforts to get people out of poverty (UNFPA, 2011: 7).

In the quest to make ends meet, people in cities and towns of the developing world have resorted to their own ways of doing things, often referred to as informal ways (as these fall outside of the commonly defined procedures of the formal sector). The informal settlements and/or informal trading activities that are evident in many cities today are responses to poor living state by people, especially those of the lower economic stratum (Owusu, 2006: 12 and Oberhauser & Yeboah, 2011: 23). Ojong (2011: 8) states that urban population in African cities often has to develop multiple livelihood strategies to enable them to deal with changing times and economic pressure. The notion of multiple livelihood strategies suggests that people need to "mix individual and household strategies developed over a given period of time that seeks to mobilize available resources and opportunities" for purposes of making a

living and support their households, which in some cases are left in the hinterlands (Ojong, 2011: 9).

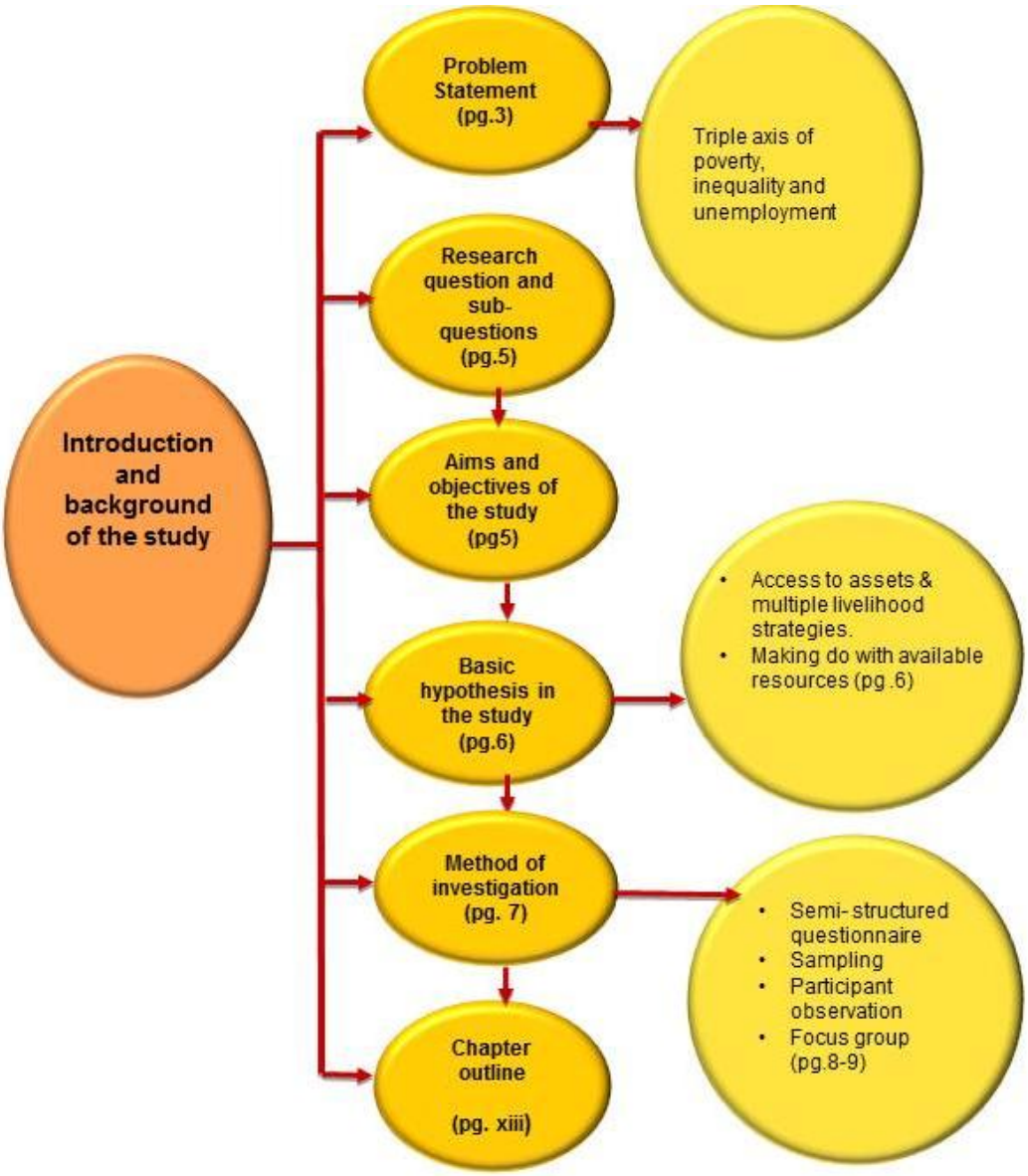

Figure 3: Line of argument in chapter 1

Source: Own construction, 2014

1.1. Problem statement: triple axis of urban poverty, unemployment and inequality

"In 2013, if you are born poor and black in a shack on the outskirts of a South African city, your life chances are dramatically lower than if you are born in a middle-class suburb of the same city" (DCoGTA, 2014: 19).

A number of research papers and reports dealing with the issue of urban poverty have been written. Research think-tanks such as South African Cities Network (SACN) and Isandla Institute have contributed significantly towards understanding and unravelling dynamics of urban poverty and how the urban poor are either accommodated or not accommondated in South Africa's cities. In the year 2000, South Africa became a signatory to the United Nation's Millennium Declaration, thereby undertaking to work with other countries to halve poverty between 1990 and 2015 (National Treasury, 2007: 1). Whereas a concerted effort has been directed towards the achievement of this goal, a lot still needs to done to halve poverty in South Africa, especially in the cities.

In the recent past, livelihood strategies in South Africa have increasingly received attention following exacerbated patterns of migration from rural to urban areas as most of the South African rural population seek better living conditions and opportunities in urban areas (Daniels et al, 2013: 12; Neves, D. & du Toit, 2013: 97). The intensified migration patterns present both opportunities and challenges as increasing numbers of people in urban areas as indicated in Figure 4 below suggest amplified competition for resources and employment opportunities (Daniels et al, 2013: 3).

As a result, a significant percentage of urban living South Africans have to employ a number of strategies to ensure they can earn a living. This relates more to that portion of urban migrants who possess low levels of education, and are located in the marginalised areas as indicated in figure 4 with low levels of amenities and economic opportunities.

The Department of Cooperative Governance and Traditional Affairs (2013: 16) noted in its discussion document on integrated development that "the reality is that the apartheid spatial patterns have remained largely unchanged. Since 1994, well-meaning redistribution policies have had unintended consequences on our cities. In the rush to address poverty through providing basic services and housing, most of the infrastructure investments over the last twenty years have, unintentionally, reinforced the spatial status quo". For example, "between

April 1994 and March 2011, the State provided over three million subsidised houses compared to fewer than a million delivered by the private sector. Almost all of this new-built stock reinforced the dominant urban patterns of sprawl and social segregation, and placed further strain on the existing public transport subsidy system".

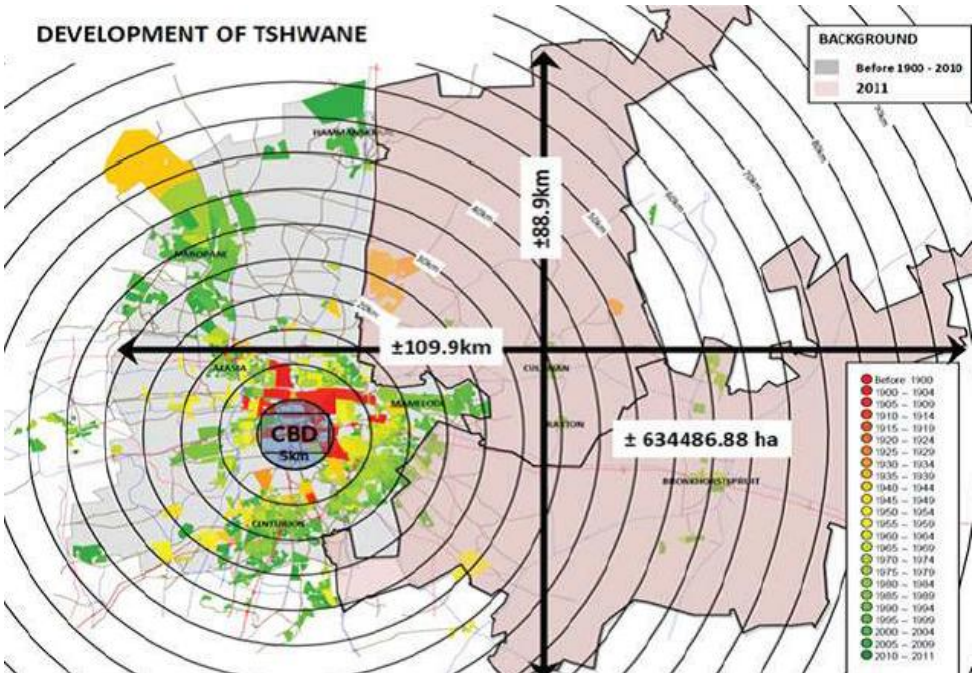

Figure 4: Spatial fragmentation in City of Tshwane
Source: Urban Morphology Institute- University of Pretoria, 2014: 44

As a result, South Africa continues to endure racialized and institutionalised poverty where areas that were previously neglected and did not received investment continue to accommodate a number of non-white populations with often low levels of education (Neves & du Toit, 2013: 95). The non-white population, particularly the black population remains the poorest population segment in South Africa. In the year 2000, it was reported that 25 million South Africans were poor, and 95 per cent of these fell within the category of African / Black population (Neves & du Toit, 2013: 96). Given the economic meltdown of 2008, it is an imaginable possibility that these percentages have increased.

The nature of poverty and vulnerability is also fickle and thus needs to be consistently understood to ensure that policies that have been developed to responsively address issues related to poverty (Chambers, 1995: 179; Moser, 1997: 3). It is this fluidity of poverty that has made it challenging for South Africa to appropriately lift people out of poverty. There has also been splitting of households as people leave their rural hinterlands to the urban settings in search of social and economic opportunities. This continues to make it difficult to address

poverty in terms of numbers, given the country's commitment to improve the living conditions of the people and also provide a conducive environment for people to prosper, in turn creating opportunities for others.

1.2. Research question

What are the multiple livelihood strategies of people to earn a living amidst increasing urban poverty in Atteridgeville, Tshwane Metropolitan Council?

1.2.1. Sub-questions

The interrogation of various issues that relate to urban poverty and how people make a living in cities will go a long way in implicitly addressing the following questions within the study:

- What constitutes multiple livelihood strategies in urban environments?
- What constitutes an ideal integrated city?
- What is urban poverty?
- What is livelihood?
- What constitutes livelihood assets?
- What are integrated cities?
- What is the asset vulnerability framework?
- Why is identifying assets important?

1.3. Aims and objectives of the study

This study aims to do the following:

- Explore day-to-day activities (particularly recycling activities) which the people of Atteridgeville are involved in to earn a living;
- Analyse and understand the policy and legislative landscape regarding informal trading activities in City of Tshwane; and,
- Spatially map assets that those involved in informal recycling use to access the recyclable material and in so doing secure their livelihood.

The mapping of assets is important for a number of reasons and these relate to *inter alia*:

- Identification and mobilisation of individual and community assets to increase opportunities for development and growth;
- Growing the ability to leverage external resources through further investment into the community assets;

- Building on already existing partnerships, and as a result create new partnerships and/or relationships to leverage resources by linking individuals, institutions, and organizations through identifying common goals and interests; and,
- Better equipping individuals to focus on assets with high spill-over effects and increases their opportunities and potential for development.

1.4. Basic hypothesis in the study

Two key assumptions / hypotheses are made in the study, and these are based on the premise that a substantial number of people migrating to urban areas possessing low levels of education are not absorbed by the formal economy as a result of many factors including spatial disintegration, and as a result is left to try and find other ways to secure their livelihood. The hypothesis of the study is discussed below:

1.4.1. Access to assets and multiple livelihood strategies

The inherent assumption is that people's access to assets is crucial for how they secure their livelihood and to a certain extent move away from poverty. As argued elsewhere in the study, a considerable number of people in urban areas have resorted to 'other' ways of doing things for purposes of earning a living. This is evidently as a result of fewer opportunities for many of the people, especially those with low levels of education. However, this study also puts forward that there are a number of instances where people have not only made ends meet through their involvement in the informal economy, but have also made major strides towards moving out of poverty, and have in certain instances offered opportunities for others to earn a livelihood.

The study also assumes that a considerable number of urban residents, in particular those of Atteridgeville, are involved in different livelihood activities, that is, multiple livelihood strategies. A number of reasons can be attributed for this, one being that because of the volatility of the informal sector in which people are involved, they are then forced to invest their resources in a diverse environment to ensure that if one investment does not yield benefits, they can then look into the other to continue with their livelihood. The second reason relates to the income made through the activities which people get involved in. As a result, people get involved in different activities for purposes of increasing their profit margins, and therefore, stabilise their livelihoods. This however has impact on their quality of life as it suggests that they devote most of their time in their various livelihood activities.

1.4.2. Making a living with available resources

Another assumption made in pursuing this study is that people exploring different livelihood strategies do not suggest their inspiration and stimulation come out of poverty, but rather the dire need to make ends meet. High levels of poverty, unemployment, and high levels of inequalities suggest increased competition for resources and opportunities, and as a result people are forced to make do with the little they have. More importantly, they have to diversify their livelihood sources as there are no guarantees and/or stability in the environment within which they work. Thus, employing various livelihood strategies suggests people's vulnerabilities within the informal economy. If any interventions had to be put forward, they would have to address the issue of instability of the sector as well as how people view the sector and the opportunities it brings.

1.5. Method of investigation

1.5.1. Literature study

This part of the study unpacks and analyses literature on theoretical and conceptual frameworks which underlie the concept of livelihoods. The crux of the literature engaged in the study revolves around issues of livelihoods, urban poverty, sustainable livelihood approach, vulnerability framework and assets. Smyth and Whitehead (2012: 14) allude to the notion of livelihoods evolving overtime. During the initial years in the discourse on livelihoods, understanding of the concept was limited to capabilities, assets and activities required for a means of living (Chambers, 1995: 173; Smyth & Whitehead, 2012: 13). This definition then gave a much narrower understanding of the strategies of people in efforts to make ends meet. The definition implicitly separates the concept of livelihoods from the mainstream economy. It tacitly disregards that livelihoods flow from financial reward for work done, and are therefore connected to formal labour and other markets (Smyth & Whitehead, 2012: 13).

Therefore, this study goes the extra mile in examining, firstly, the assets that people have access to, and also more importantly its relation to the formal labour market. Understanding the relationship between assets and formal labour market is important for the study since the key assertion in the study is that it is people's access to assets that enables them to secure a livelihood. The formal labour market on the other hand provides some of these assets, such as financial assets. The inability of people to enter the formal labour market therefore leaves them with little or no options except to seek opportunities in the informal sector or the informal economy. The study sought to understand the dynamics of people involved in the

informal economy, activities they undertake, the assets they possess, how they manage these assets and ultimately transform them into income, food or other basic necessities.

The study draws from work done by various researchers who have written extensively on the subject of urban poverty and livelihood strategies. As such, the study will also borrow from literature on development and various theoretical lenses.

The concepts of sustainable livelihoods and vulnerability feature a lot in the study as people's strategies for livelihood revolve around these. Also worth mentioning is that a systematic approach will be undertaken in the gathering of information and reporting of knowledge of livelihood strategies in Atteridgeville. The methodology for the data collection is explained further below.

1.5.2. Proposed design

The study employs both qualitative and quantitative research approaches. A series of interviews, through semi-structured questionnaires, were conducted to determine the various assets that the people of Atteridgeville had access to. A total of 50 people engaged in different activities were observed in an attempt to understand their day-to-day living routine. The study then makes efforts to spatially map people's movement patterns but also more particularly the location of what they refer to as their assets. What is also important in the assessment of livelihood assets is the understanding of the policy environment which governs and regulates the informal sector. As a result, the study also assesses both the legislative and policy framework that deal with issues of informality, urban poverty and local economic development in the City of Tshwane. A number of officials who deal directly with policies that have direct impact on informal trading and small business were interviewed.

1.5.3. Data acquisition methods

a) Semi-structured questionnaires

The study involves interactions with study participants which were done through semi-structured interviews. The questions sought to understand how people make their living, what they consider to be their assets, what they would like changed/improved, and more importantly, factors they consider to be threats to their livelihoods. Support on how to best collect and analyse data was used from the Statistical Support Services of the NWU (Potchefstroom Campus). The support was crucial for the study as it ensured that the

method used for the collection of data was sound and the analysing of data was responsive to help and thoroughly unpack all the collected information.

b) Purposive sampling

It is apparent that the study did not seek to understand livelihood strategies of all the people living in Atteridgeville, but rather considered certain factors which assisted in selecting participants for the study. The 50 informal traders interviewed are interviewed on convenience and willingness to participate in the study.

c) Participant observation

The study involves participant observation which was carried out particularly for purposes of tracking the different assets of people within the Atteridgeville area. This exercise was done with the underlying understanding that the interviewees are involved in multiple livelihood earning strategies. This then gave way to the mapping of a specific location of those involved in the different informal activities and what they considered as assets, for example, schools, local shops, clinics, parks and other related assets.

d) Focus groups

In understanding assets, the study made a distinction between individual and community assets. The focus groups, where the different study participants are brought together to discuss what they consider assets enabled the separation of what the people of Atteridgeville consider as individual/private assets and community assets.

1.5.4. Data processing

The collected data was taken through an in-depth, thorough analysis which sought to map the assets that people have access to for their purpose of their livelihoods. There will be some instances where percentages will be provided to quantify findings as the study deals with people.

1.5.5. Coding of data

The data collected through the interviewing process was analysed through setting up a number of thematic areas relating to the concepts in the study, and more importantly, to the questions which the study sought to give answers.

Given that household characteristics vary in terms of income, employment status, head of the household, social status and composition, different codes were also used to categorise certain items in the study.

1.5.6. Research methodology: Advantages and disadvantages

Various research methods outlined above are crucial for collection of information which will assist substantially in understanding dynamics of informal waste recycling in the City of Tshwane, and more particularly in Atteridgeville. It should however be noted that use of these different research methods also point out to the different advantages and disadvantages of each method. It is in fact for this reason that not one method is used for collection of data, but various methods as discussed above. This section outlines both advantages and disadvantages of all research methods used in the study for purposes of justifying appropriateness of these methods and how they complement each other to ensure that appropriate information is gathered to understand dynamics of informal waste recycling in the City of Tshwane. These are outlined in the table below.

Table 1: Strengths and weaknesses of the research methods applied in the study.

Research method	Advantages	Disadvantages
Interviews (Semi-structured questionnaire)	▪ Allows the interviewer to follow a clear guide, which is crucial for setting up a trajectory in the conversation that may stray from the guide when the interviewer feels this is appropriate. ▪ Provides a clear set of instructions for the interviewer. ▪ Provides a reliable, comparable qualitative data ▪ Allows for researcher observation, informal and unstructured interviewing which is crucial for further understanding of the research topic, and in turn, this allows for new way of understanding of research problem. ▪ The semi-structured nature of interviews allows informants the freedom to express their views in their own terms, which in turn enriches the study as lots of information is given by study participants. ▪ This also allows for face-to-face interaction between the interviewer and	▪ Lack of flexibility of questions may prevent an opportunity for study participants to expand further in their answers and thereby giving more information which may be crucial for understanding of the research problem. ▪ The information gathered is often largely influenced by factors such as sex, age and ethnic origins, and the structured questions may fail to capture these dynamics. ▪ The stance of the research may in some cases influence questions that are asked to study participants, which in turn pre-determines the information that is gathered. ▪ The researcher must always explain clearly the intention and objective of the project to prevent misunderstandings with study participants. This is crucial for ensuring that trust is gained between the researcher and participants so that both parties can engage each other in good faith.

	study participants which leads to robust expression of participants' viewpoints. ▪ Leads to collection of real life, every day experiences of study participants which is crucial for ensuring that decisions made are based on context specific realities of people.	
Purposive sampling	▪ Purposive sampling is crucial for selection of rich cases for in-depth study. ▪ It allows researcher to collect information from a very specific group of people. ▪ By focusing on a specific type of study participants, the method is crucial for the saving time and money. ▪ The data gathered allows for representativity of the larger population	▪ The selection criteria used by the researcher can be very arbitrary and are almost always subjective. ▪ The nature of purposive sampling, the narrowness of the questions used often reflect the stance of the researcher on a subject far, and as this can to an extent gives way to pre-empting of the research. ▪ The sample population often used by purposive sampling can not necessarily be entirely the population that the researcher is seeking to reach and understand their experiences. ▪ The small size of the population which is often used may lead to a small variation in the sample which in turn causes deviance in the results. ▪ As a result of this, this sampling method is often criticised as being open to selection bias and error.
Participant observation	▪ It allows for richly detailed description, which is important for behaviours, intentions, situations, and events as understood by the study participants. ▪ It provides opportunities for viewing or participating in unscheduled or unorganised situations which is crucial for revealing true experiences of study participants. ▪ It gives the researcher an opportunity to be part of the study participants and fully understand their culture practices, daily activities and reasoning behind their decision making processes.	▪ It may be time consuming as some of the activities or actions of study participants may add no value to the study. ▪ Participant observation maybe largely influenced by factors such as gender, language, race and religion of the researcher or study participants. As a result, the researcher must understand how his/her gender, sexuality, ethnicity, class, and theoretical approach may affect observation, analysis, and interpretation. ▪ Researchers can be also feeling left out in the process as they might not fully understand activities done by study participants. ▪ May lead to bias in reporting more particularly in areas where researcher does not relate fully and understand cultural practices of study participants. This may lead to the researcher reporting negatively about practices of the participants.

Focus groups	▪ Focus group research method is cost and time effective as respondents and researchers can be in the same place at the same time. ▪ It allows respondents to interact with the researcher in terms of the information and the subject under investigation. ▪ It reveals the respondents' worldviews and social processes that we know little	▪ To ensure that relevant information is collected, the recruitment of the right kind of respondents is crucial. This however often proves to be difficult in and in many instances could be met with suspicion especially in areas that are volatile (such as areas where there is high level of poverty, political instabilities, migrant communities and high levels crime). ▪ Getting people together on time often proves challenging more especially in areas where transport is not easily accessible, and/or people do not have means to access transport. ▪ There is always likelihood of respondents giving responses that are irrelevant and would, therefore, need redirection. ▪ Focus groups could also lead to contrasting viewpoints being given which could lead to delays in the data collection process. ▪ Conflicts between study participants may arise, and the interviewer would be required to play a mediator role, which is challenging and can lead to waste of time and resources.

Source: Cohen and Crabtree, 2006.

1.6. Conclusion

The issue of informality and livelihood strategies in towns and cities of the developing world presents nuanced dynamics of how people live in these environments today. This calls for a differentiated approach in terms of creating conducive, integrated environments where people can prosper and maintain sustainable livelihoods. The exacerbation of poverty and unemployment levels coupled with spatial disintegration of the different income and race groups continue to force a large portion of the population to be involved in the informal sector of the economy. As a result, the informal economy plays a critical role not only towards contribution towards national economic output, but also more importantly to the livelihoods of the people. The question however relates to how cities can ensure integration of these activities into the mainstream processes of cities.

CHAPTER TWO: LITERATURE REVIEW – EMBEDDING MULTIPLE LIVELIHOOD STRATEGIES IN THEORY

2. Introduction

A multitude of reports by the United Nations Population Fund (UNFPA), UN-Habitat, have in recent years indicated that the majority of people who live in urban areas "are engaged in an unremitting struggle to secure a livelihood in the face of adverse social, economic and often political circumstances" (Murray, 2001: 2). As the realties and scourge of unemployment, poverty and inequality continue to exacerbate, people living in urban areas are left with a few options to look for varied ways of ensuring that they have food on the table for their families. This widespread poverty in urban areas has undulating effects, and leading to other social challenges that affect both households and nations at large (Green, 2012:3; Mwaniki, 2007: 1; Woolard, 2002: 2).

Poverty places a burden on families to focus on developmental issues such as improving the educational needs of children, improving health and living healthy lives, buying food to maintain healthy diets and more importantly responsively contributing to the development of their communities and nations at large (Green, 2012: 4; Woolard, 2002: 2). In Ghana and Senegal for an example, it is reported that children born into the "poorest 20 per cent of households are two to three times more likely to die before the age of five (5) than children born into the richest 20 per cent of households" (Green, 2012: 5). This trajectory is commonplace across the globe, especially in counties of the developing world with countries such as Brazil and India experiencing similar development challenges. South Africa is not an exception. In the report titled "Towards an Integrated Urban Development Framework – A discussion document", the South African government stated that "in 2013 if you are born poor and black in a shack on the outskirts of a South African city, your life chances are dramatically lower than if you are born in a middle-class suburb of the same city" (DCoGTA, 2013: 19). The dire state of poverty in South Africa when compared to other countries with similar development trajectory is illustrated in Table 2 overleaf by the World Bank. South Africa has the lowest number of population, lowest gross domestic product and lower life expectancy. However, whilst the country has the lowest number of people, it has the highest percentage of poverty. This signals high rates of unemployment and social ills in the country. The swelling of the informal sector is one of the many results of high unemployment and poverty levels in South Africa.

Table 2: Development statistics of BRICS countries

s/n	Variable	South Africa	Brazil	China	India
1.	Population	53.16m	200.4m	1.357bn	1.252bn
2.	GDP (US$)	$366.1bn	$2.246tn	$9.240tn	$1.875tn
3.	Life expectancy at birth (total years)	57	74	75	66
4.	Poverty headcount ratio at national poverty lines (% of population)	53.8%	8.9%	4.6%	21.9%

Source: World Bank, 2015.

This chapter aimed to do two fundamental things:

- Firstly, to look into the different concepts, arguments or perspectives that underlie livelihood; and,
- Secondly, to look at the theories and theoretical perspectives that are analytical frameworks for understanding livelihood strategies. There are six (6) key concepts that are explored and discussed in the study, and these are urban poverty, vulnerability, assets, livelihood, multiple livelihood strategies and sustainable livelihoods. These concepts are internationally recognised concepts and form an integral part of discourse on livelihoods. In seeking to profoundly understand these concepts, the study borrows from various bodies of knowledge across economic studies, planning, political, geography and urban studies. These are chosen as a result of the multidisciplinary nature of the concept of livelihoods. It is done to ensure that all fields that concern the notions of planning and livelihood strategies are systematically reviewed by looking at different definitions – how these are defined and understood.

The concepts discussed in the study are embedded in various theories and theoretical perspectives or arguments. The study uses these theories for the three fundamental reasons:

- Firstly, as the premise for understanding and analysing concepts;
- Secondly, provide a framework for understanding perspectives for and against the usefulness of concept of multiple livelihood strategies; and,

- Thirdly, provide the premise for understanding dynamics and day-to-day activities of informal waste recyclers in the City of Tshwane.

The theories used are systems theory, complex theory and planning and development theories, including participation theory, collaborative theory and communicative rationality theory. These theories are embedded within the post-modern thinking which understood development issues from a local scale and advocated for diversity and acknowledgement of local people as agents of community development (Nicol, 2009: 6). The figure below graphically illustrates the line of argument and structure of the chapter.

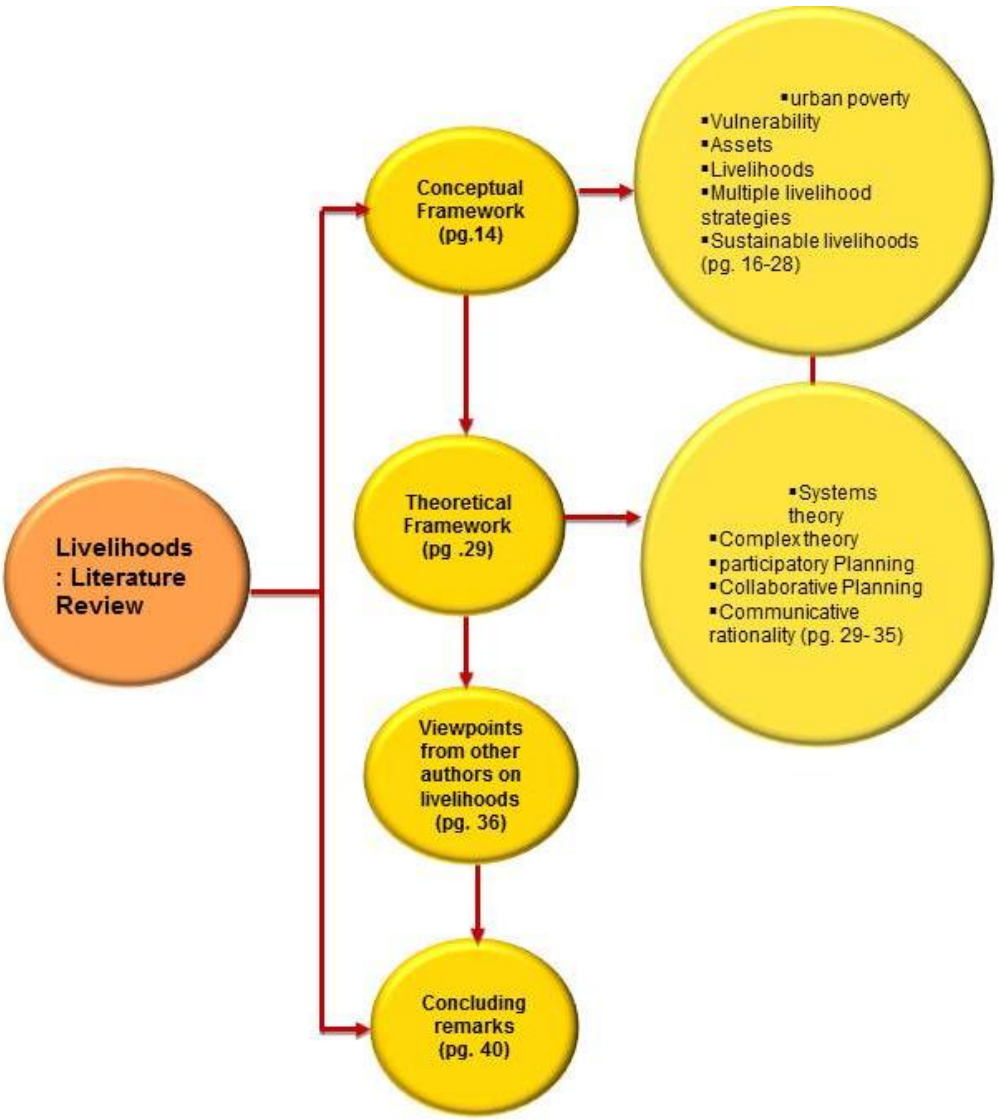

Figure 5: Line of argument in the study
Source: Own construction 2014.

2.1. Fundamental concepts in the study

2.1.1. Urban poverty

A considerable amount of literature on poverty or the state of being poor has been generated over many decades. Poverty has existed for centuries, and is said to have increased rapidly in the centuries following the industrial revolution mid-17th and late 18th century (Grell & Cunningham, 2002). It was during these centuries that development patterns and the way of life generally began to take a turning point. The population and average incomes began to exhibit exponential, sustained growth (Morris, et al, 2012: 13). Areas of economy also grew exponentially, and as the result attracted a large number of people to these areas. Cities such London, Portsmouth, Manchester, Birmingham, Frankfurt, Detroit, and Texas grew rapidly during this period as a result of growth in production levels and people migrating into these areas. The decades that followed saw large numbers of people emigrating to these centres of economic productivity (Moch, 2011: 2).

Interestingly, not all those who moved into these areas managed to attain employment opportunities. Reports have in fact indicated that in the 19th century, many British cities had been plagued by social issues such as crime and informal settlements (TBM, 2014). The cities of the developed world however have managed to keep poverty at reasonably low levels. On the contrary, this cannot be said of cities in the third world. Poverty in cities of the developing world has been commonplace.

A number of reasons can be attributed to this including colonialism, apartheid, globalisation, political instabilities, structural adjustment programmes as well asnon-industrialisation (Morris, et al, 2012: 31; Davies et al, 2001: 714 & 715; Owusu, 2007: 2). Initially, literature on poverty in these cities adopted traditional methods of understanding poverty limiting it to factors of income and unemployment, and used measures developed by institutions such as the International Monetary Fund. In the 1980s, however, many scholars, mostly coming from the global south, argued against the use of traditional measures and indicators of poverty calling them reductionist, standardised, stable and not reflecting the realities of poverty in cities of the developing world (Chambers, 1995: 173; Ojong, 2011: 10; AISA, 2011.,Chambers (1995: 173) fittingly asserts that “the realities of poor people are local, complex, diverse and dynamic,” and thus measuring incomes as indicators of poverty, though important, does not reflect all the dynamics and complexities of poverty in these cities.

Being poor in general involves a number of factors which must not only be confined to income and unemployment. It also suggests “lack of, or inability to achieve, a socially acceptable standard of living”, or the possession of insufficient resources to meet basic needs (Suich, 2012: 2). This then suggests that poverty should be understood within the context of resources that people can access and claim, the conditions in which they have access to these resources, and the level of choice that they have on what kind of resources to claim (Chambers, 1995: 185; Krantz, 2001: 1 & 4). This understanding of poverty begins to border around the subjects of access to resources, and power which play a crucial role in analysing poverty dynamics (Suich, 2012: 2).

Arguments against confining the meaning of poverty to traditional structural approaches gave way to a new way thesis of understanding poverty, that is, cultural dimension of poverty. The thesis on a culture of poverty introduced a different dimension to that of the structural thesis of poverty. Jordan underlines that the culture of poverty as a notion does not stem from the lack of income, but rather is a result of “deficient character of the poor along with their deviant behaviour and the resultant self-reinforcing environment that restrict their access to economic viability and success” (Jordan, 2004: 19). The dysfunctional attitudes and values that characterise poor communities and families such as female-headed single parent families, teen pregnancy, drug and alcohol abuse and criminal activities are passed down from one generation to another, and this leads to a “vicious cycle” from which for the most part, very few escape (Jordan, 2004: 19). This understanding of poverty is also fittingly described in anthropological studies where the poor are seen as "an economically and politically deprived population whose behaviour, values - and pathologies are adaptations to their existential situation, just as the behaviour, values, and pathologies of the affluent are adaptations to their existential situation" (Patterson, 1994 in Jordan, 2004: 19). This perspective demonstrates a dynamic interaction between culture, environment and behaviour, and is in this study considered to be fundamental in efforts to understand food insecurity dynamics and household strategies towards ensuring access to food at all times.

Poverty, as discussed above, is a complex notion. The concept must not be treated and understood in simplistic terms given the different dimensions and theoretical foundations embedded in the concept. Bearing this in mind, this study employs an all-encompassing approach in understanding poverty. In defining the concept of poverty, this study borrows from scholarly understanding of this concept based on the literature stemming out from developing countries. They argue against confining poverty to income, unemployment measures such as Gross Domestic Product (GDP), which measures the money that a country has spent, the goods and services that were sold and the income that was earned

(Business Dictionary, 2015). It diffuses both the structural and cultural theses to derive a definition that encapsulates or hinges on both the economic and social/cultural dimensions of poverty. The study defines poverty as a "lack of physical necessities, assets and income" (Chambers, 1995: 189) and includes vulnerability, powerlessness and lack of access to social amenities such as health and education facilities (Davis et al, 2001: 715; Suich, 2012: 2). It is the unfavourable circumstances within which people often find themselves that limit their access to basic resources such as food, opportunities and other related resources which an individual needs on a day-to-day basis (Burns, 2004; Suich, 2012). These circumstances continue to persist from one generation to another, and as a result become an accepted system with dysfunctional attitudes and values relative to mainstream societal values such as family, education and work (Jordan, 2004: 19; Gans, 1972: 275).

This understanding is important for the study as the individuals and households adopt various strategies, even though some are not for gaining an income, or employment related, to earn a living. This understanding of poverty will provide a basis to analyse the multiple strategies and dynamics around the involvement in various activities for livelihood purposes. The analysis will ensure that in thinking about supporting the urban poor, they have sustainable livelihoods; the City of Tshwane does not only focus on income poverty and employment, but must also addresses social issues as well as people's access to social facilities. All these need to be understood and addressed in a holistic manner and not be treated in isolation from each other as they affect each other be it in a direct or indirect way.

2.1.2. Vulnerability

The concept of vulnerability has in many instances been used as an alternating synonym of poverty (Chambers, 1995: 189; Moser, 1998: 3). In the study, this concept is not used with the understanding that it best describes one's state of being poor. Vulnerability is understood as being one dimension of deprivation along poverty, physical weakness, social inferiority, isolation, powerlessness and humiliation. The concept has been used in various bodies of literature such as ecological studies (which sought to understand natural hazards that the environment is exposed to), economic studies (with focus on risks and trends to the economy) and social studies which look into the risks and shocks which livelihoods are susceptible to. The concept was initially developed in the early 1990s by ecological writers who argued that the world is susceptible to dangers and risks which had to be mitigated for the protection of environmental ecosystems (Christmann *et al*, 2012: 2). Overtime, the concept was gradually borrowed and used in other disciplines with a similar foundation, which is to understand risks, shocks and hazards that any given system is exposed to.

In social sciences, the concept of vulnerability has been used as a synonym for poverty (Cannon *et al*, 2004: 4). But this received backlash from writers such as Chambers (1995: 189) who argued that vulnerability is the after effect or is a result of poverty. The assertion is that, when an individual is poor, their state of poverty exposes households to a myriad of circumstances, and thus vulnerability cannot be understood as a concept that best describes one's state of being poor. It should rather be understood as one dimension of deprivation along with poverty, physical weakness, social inferiority, isolation, powerlessness and humiliation (Chambers, 1995: 189; Moser, 1998: 3). The concept spans more than just lack of income or poverty more broadly defined (Chambers, 1995: 188; Cannon *et al*, 2004: 5). It involves an individual's exposure and feeling defenceless (Chambers, 1995). Even though, vulnerability is not as static as poverty is, people generally become vulnerable, and yet overtime can move away from that state of vulnerability. Thus, as Moser (1998: 10) says, "vulnerability is more dynamic and better captures change processes as people move in and out of poverty".

In this study, vulnerability is a state that comprises circumstances and processes which determine the exposure and susceptibility of an individual or a household to risks and hazards, and more importantly household capacity to respond effectively to the risks, be they physical, social, economic or environmental (Birkmann, 2007: 21; Christmann et al, 2012: 4). It is the seasonality, trends, and shocks that affect people's livelihoods (Moser, 1998: 3; DfID, 2000: 1). It is a state where an individual, household or a community is unable to resist these to ensure a sustainable livelihood (Chambers, 1995:190: IFR, 2012). It consists of both internal and external dimensions, where the external dimension is the exposure to resist shocks, stress and risks, and the internal dimension being the feeling of defencelessness, lack of means to cope without suffering physical illness, economic impoverishment, humiliation and psychological harm (Chambers, 1995: 189; Moser 1998: 3; Krantz, 2001: 11). As a result, vulnerability involves both sociological factors such as an individual's state of mind and their perception of the state of affairs, and the broader economic factors such as prices of food and levels of unemployment which implicitly affect the individual's efforts to ensure sustainable livelihood.

Following on the above, in efforts to understand vulnerability, one should not only look into the different types of stresses and shocks, but look into the characteristics and conditions of the people, types of livelihood strategies that the people engage in and impact of different shocks on these strategies (Cannon et al, 2004: 6).
In determining individual levels of vulnerability, it is important to explore the following factors:

- Well-being (nutritional status, mental health);

- Livelihood and resilience (assets and capital, income, education);
- Self-protection (degree of protection afforded by capability and willingness to for example build a safe home);
- Social protection (relationship and level of support from society);
- Social and political networks and institutions (institutional environment setting up good conditions for dealing with shocks); and,
- Physical access to assets (Cannon et al, 2004: 5).

The inclusion of conditions of the people in the analysis of risks is fundamentally important as people are affected by shocks in different ways, and their levels of vulnerability differ. This analysis acknowledges the sensitivity and differentiation in levels of vulnerability among the urban poor. In an effort to ensure the human dimension of vulnerability is considered in the study, the following matrix was used as part of the analysis of level of vulnerability of the people in Atteridgeville, in the City of Tshwane. The matrix looks into three (3) aspects, that is, physical, organisational and motivational aspects of assessing people's vulnerabilities. This matrix was used to analyse the vulnerabilities of people in Atteridgeville.

Table 3**:** Vulnerability matrix

Aspect	**Vulnerability**
Physical (what asset resources, skills and hazards exist?)	*Access to areas of economic activities and opportunities; ill health; safety.*
Organisational (What are the relations and organisation among people?)	*Policies, legislations and by-laws.*
Motivational (How does the community view its ability to create change?)	*Poverty; lack of access to information, social and physical exclusion.*

Source: Cannon et al, 2004: 9.

2.1.3. Assets

Literature on the concept of assets gained momentum in the early 1990s following a paradigm shift in the understanding of poverty, the causes and policy interventions and programmes to address poverty especially in countries of the developing world. Just as other concepts such as vulnerability, sustainable livelihoods and multiple livelihood strategies, assets as a concept owes much of its origin to the poverty discourse in the developing countries. As has been argued elsewhere in the study, poverty does not suggest income poverty and unemployment but spans and includes other societal issues such as powerlessness, humiliation and vulnerability (Krantz, 2001: 11; Moser, 1998: 3; Chambers,

1995: 189). This understanding suggests that international institutions had to rethink their interventions in addressing poverty and it is no surprise that in outlining its poverty strategy in 1990, the World Bank asserted that three (3) components must be considered in efforts to reduce poverty, and these are:

- economic growth, intensively using the poor's labour as their most important asset;
- investments in basic health and education (human capital) to enable the poor to use their labour productively; and,
- the provision of social safety nets to protect vulnerable groups and the very poor (Moser, 1998: 2).

In the years following this, a lot of literature was generated looking at the different assets that people could access to earn a livelihood. These strategies were endorsed by a number of development institutions and agencies, and "widely adopted for the development of poverty reduction solutions" (Moser, 1998: 3). The literature acknowledged that in efforts to ensure their livelihood, people access different kinds of assets (both tangible and intangible), that is:

- Human capital (such as labour capacity, education, skills);
- Natural capital (access to land and property resources;
- Financial capital (wages and access to credit);
- Physical capital (water, housing, communication infrastructure); and,
- Social capital (social status, family, other soft infrastructure and relations) (Moser, 1998: 4).

Worth noting is that these assets do not only enable individuals and households to get by but also offer opportunities for people to develop sustainable livelihoods in a number of ways, including education, employment training, financial literacy and savings programs, and support for development of small enterprise development as has been the case in most cities of the developing world (Krantz, 2001: 3; Moser, 1998: 1). To develop sustainable livelihoods, people need to be aware of the assets that they have easy access to and must manage these assets to transform them into income, food or other basic necessities (Moser, 1998: 3). In the same way, a variety of these assets ensure resilience of people's livelihoods as people are able to diversify their livelihood, through shocks, by accessing assets that will, at the time not be vulnerable to the shocks. It is therefore important that people continually seek ways to accumulate their assets to ensure that they can avoid shocks, threats and stress, and in turn be more resilient and economic self-sufficient (Momentum, 2012: 2; Solesbury, 2003: 5).

2.1.4. Livelihoods

Literature around the concept of livelihood has been widely developed. The concept first gained momentum in the mid-1980s to early 1990s when the discourse on the issue of poverty began to take a turn from draconian poverty relief programmes such as the Structural Adjustment Programmes and related traditional economic interventions, to the recognition of much more localised and multi-pronged approaches (Ashley & Carney, 1998: 4). During this period, the discourse on development and poverty alleviation began to be intertwined with the principles of participation, which essentially encouraged the involvement of communities in the decision making processes. Also important to note was the growing attention and recognition that there exists diversity in the communities (Ashley & Carney, 1998: 23). Communities are not one object, but are made up of people with different aspirations and living circumstances, and as result they adopt different livelihood strategies to address their circumstances (Ashley & Carney, 1998: 4 & 23). This recognition of diversity and the importance of communities in policy and decision making was further strengthened by Habermas' theory of communicative action or rationality which argues for reason and the rationalization of society, where people continually take decisions (teleological actions) towards the betterment of their lives and communities (Habermas, 1984: 57; Cecez Kecmanovic; Janson, 1999: 3; Healy, 2003: 113; Flynn, 2004: 435). This understanding of communities is crucial as it recognises that policies aimed at improving livelihoods must not be uniform and a one-size-fits-all, but rather they must acknowledge the diversity that exists in communities and that people adopt varying strategies to ensure their livelihood. Finally, the literature acknowledges that a livelihood is made up of different assets, as discussed earlier, and these form building blocks and complement each other.

In defining what the concept of livelihood means, this study borrows heavily on widespread literature by various scholars such as Chambers (1990, 1991 and 1995), Chambers and Conway (1991), Moser (1998), Beck (1989 and 1991), Corbett (1988) amongst others. In its simplest form, a livelihood suggests a means of earning or making a living (Chambers & Conway, 1991: 5). Making a living however is a complicated process and involves a multitude of factors. This complexity is reflected in the definition by the Advisory Panel of the World Commission on Environment and Development (WCED) in 1987 that livelihood is "adequate stocks and flows of food and cash to meet basic needs" (Chambers & Conway, 1991: 5). The Advisory Panel continued to argue that central to people securing their livelihood is security, which includes ownership and/or "access to resources and income earning activities" (WCED, 1987 in Chambers & Conway, 1991: 5). Resources were later described as capabilities and assets (Ashley & Carney, 1998: 5).

It is the above understanding of livelihood that is adopted in this study. The concepts of capabilities and assets are used as part of the framework to analyse and categorise different activities in which people are involved to make a living. Equally, the study appreciates the diversity and complexity of these activities, and relies heavily on people to understand the dynamics around their livelihoods.

2.1.5. Multiple livelihood strategies

Just as the concept of livelihood, multiple livelihood strategies emerged from literature dealing with poverty. It is however important to note that this concept was significantly influenced by literature on the issue of poverty (Owusu, 2001 & 2007; Chambers, 1995: 189; Moser, 1998:3; Green, 2012: 5; Odukoya, 2013,). Just as the discourse on poverty began to take a different turn, so did the discourse on informality. Many theorists and scholars began to see informality or the informal sector as it is widely known, not as a 'problem' to cities, but as an opportunity that offers a substantial number of urban poor and those excluded by the formal sector with employment opportunities (Chambers, 1995: 175; Ojong, 2011: 9). Urban scholars such as Owusu (2007: 450) argue for the importance of exploring and acknowledging the "usefulness of the informal economy and the survival approaches" to understand urban economies and opportunities that exist to address issues of poverty and unemployment.

This paradigm shift on understanding informality introduced important dynamics that exist in urban areas of the developing world. Not only did it recognise informality as offering opportunities for urban poor but also that people are involved in multiple economic activities both in the formal and informal economic sectors (Owusu, 2001: 6 and 2007: 5). This is as a result of the limited opportunities that can be accessed by the urban poor, who in most cases have low access to education (Chambers, 1995: 182; Green, 2012: 3). This is common in most cities and towns of the developing world. People from rural areas often travel to these areas in search for economic opportunities, social amenities and safe and secure living environments among other things (DCoGTA, 2013: 12; Moser, 1997: 78). In the event that they cannot find opportunities, particularly employment opportunities in these areas, individuals and families resort to diversifying their means of living (livelihood strategies) in order to increase their incomes, reduce vulnerability and improve quality of their lives, among other things (CoGTA, 2013: 25; Chambers, 1995: 192; Ojong, 2011: 8). In describing this dynamic, Chambers (1995: 192) likens people (urban poor) in cities and towns of the developing world as "foxes" which have a "portfolio of activities", as the various members of the household are all continually seeking "different sources of food, fuel, animal fodder, cash and support in different ways in different places at different times of the year". They differ

from those working in the formal sectors that often have one single source of livelihood. They, the urban poor, have multiple livelihood strategies.

Multiple livelihood strategy is understood in the study as various activities that individuals and households are involved in to earn a living (Owusu, 2007: 7; Ojong, 2011: 11). This concept is fundamentally important for this study as it captures the relationship between the formal and informal sectors of the economy. It also provides an analytical framework to better understand livelihoods of individuals and households engaged in both the formal and informal economy, as well as capturing dynamics that come with the dual involvement of individuals and households in the two sectors of the economy (Ojong, 2011: 11).

2.1.6. Sustainable livelihoods

In thinking about livelihoods, one is inclined to start relating the idea to issues of poverty, especially income poverty and unemployment as these sit at the heart of how people make a living. Traditionally, it is widely accepted to assert that for one to earn a living, they should have some sort of income generating activity, or should be employed (Green, 2012: 4; Moser, 1998: 3 & 4; Chambers, 1995: 182). Lack of income generating activities compromises one's livelihood, and this in turn gives way to that individual becoming poor. This explanation on its own is limiting. The introduction of the concept of sustainable livelihoods began to move away from this narrow understanding which had been mostly developed and entrenched in the modernist period where growth and development was largely associated with the accumulation of income (Green, 2012: 5).

As a concept, it was first coined by the Brundtland Commission with strategies on how to best develop the environment without depleting its natural ecosystems and the ecological services (Krantz, 2001:6; Solesbury, 2003: 4 & 5; Chambers & Conway,1991:5). In the following years, the concept was expanded to include livelihoods as part of the efforts towards the eradication of poverty (Ashley & Carney, 1998: 6). The underlying perspective was that of sustainable development which always sought to look into various variables of development than to narrowly focus on reductionist, conventional approaches to development. As a result, the concept of sustainable livelihoods then went beyond defining livelihoods through income to include other factors such as vulnerability and social exclusion. By doing this, sustainable livelihoods acknowledged that there exist various factors and processes which either constrain or enhance poor people's ability to make a living in an economically, ecologically, and socially sustainable manner (Solesbury, 2003: 5; Krantz, 2001: 6 & 10).

This understanding of livelihoods acknowledged three fundamental dimensions. Firstly, it acknowledges that while growing the economy remains crucial for poverty reduction, this however does not suggest automatic improvement of livelihoods. People will still need to have capabilities to take advantage of the growing economy and opportunities that come with growth. Secondly, this concept acknowledges that a livelihood is not solely about earning income but also includes factors such as vulnerability, health, education as well as access to social services. Thirdly, the concept speaks to the fact that people best understand their living circumstances, and if any attempts are made to improve their livelihoods, they must be central in the design and formulation of related policies (Krantz, 2001: 10; Scoones, 2009: 4; Solesbury, 2003: 9).

The discourse on sustainable livelihoods has not been in vain as it has been followed by solid policy programmes which aimed to improve livelihoods of people (Solesbury, 2003: 6; Krantz, 2001: 11; Ashley & Carney, 1998: 14). These programmes have in most cases been used to address the issue of poverty, which in itself is a fundamental concept in the discourse of livelihoods. The main institution that has employed, and in turn developed this concept further is the Department for International Development (DfID). This, however, is not to disregard the work of other international and national institutions that have similarly used and developed this concept, such as the United Nations Development Programme (UNDP) and CARE. DfID work and structure their programmes on improving livelihood across the globe particularly in rural areas of the developing world (Solesbury, 2003: 6; Krantz, 2001: 3).

In its efforts towards alleviating poverty and building sustainable livelihoods, DfID borrowed from the definition earlier been provided by Chambers and Conway (1991), that “a livelihood is sustainable when it can cope with and recover from stresses and shocks and maintain or enhance its capabilities and assets both now and in the future, while not undermining the natural resource base” (Krantz, 2001: 18). This definition has core principles that underpin it, forming the premise of this study.

These principles acknowledge certain imperatives, that for any development program or policy to be responsive, it should inter alia be:

i. People-centred

Ensuring that livelihoods are sustainable becomes a reality when external support focuses on what matters to people, understands the difference between groups of people, and works with them in a way that is consistent with their livelihood strategies and ability to adapt.

ii. Participatory

Just as the first principle, people must be key actors in identifying and addressing livelihood priorities. Those providing support must listen to the messages of the people, and provide guidance and advice where necessary.

iii. Multi-dimensional

As argued elsewhere in the study, due to high unemployment levels and poverty in urban areas, people are forced to engage multiple livelihood strategies, and because of this, studies into livelihoods have to be multi-dimensional in nature to ensure that they explore all the different facets, factors and dynamics around livelihoods in urban areas.

iv. Sustainable

Four dimensions underlie the principle of sustainability, that is, economic, institutional, social and environmental sustainability. These are crucial for developing sustainable livelihoods.

v. Dynamic

Support from external organisations must recognize the dynamic nature of livelihood strategies, respond flexibly to changes in people's situation, and develop longer term commitments (Krantz, 2001: 18; Ashley & Carney, 1998: 7).

These principles are important for this study since it is the its aim to explore the importance of involving and encouraging the participation of people in policy interventions and programmes aimed at improving their living circumstances. The study in the same way explores the dynamics of multiple livelihood strategies and therefore the principle of dynamism is fundamental for the study.

The concept of sustainable livelihoods thereof encompasses factors that are illustrated in the Figure below.

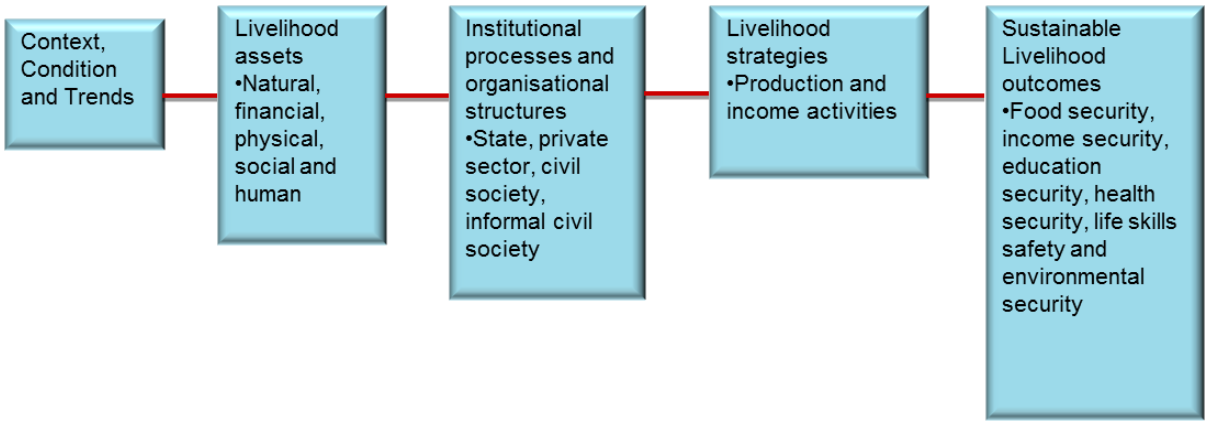

Figure 6: Dimensions of sustainable livelihoods
Source: Krantz, 2001: 19.

On the whole, achieving sustainable livelihoods involves a value chain with a number of activities that need to be undertaken to ensure individuals and households have access to asset resources at all times. The value chain of achieving sustainable livelihoods as discussed in the concepts above is better explained in the following conceptual framework or diagram which looks into the different activities and flows of assets resources and contexts, making it conducive for individuals and households to achieve sustainable livelihoods. This framework of concepts will form an integral part in the collection of the empirical data which will paint a vivid picture of the dynamics and livelihood activities that people are involved in for purposes of ensuring their livelihoods. Figure 7 overleaf illustrates the conceptual framework in the study.

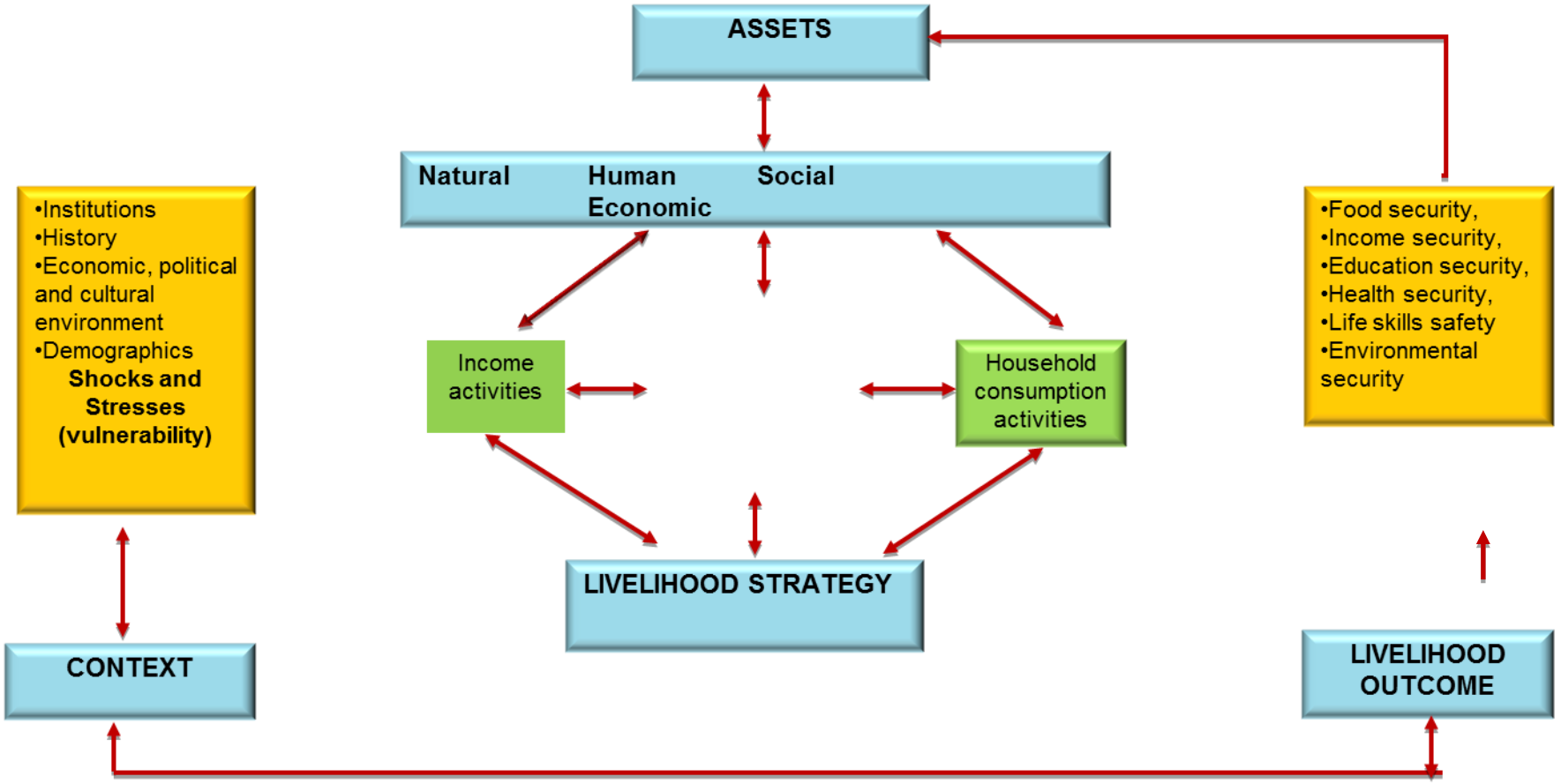

Figure 7: Conceptual framework for sustainable livelihoods
Source: Cannon et al, 2004: 45.

2.2. Livelihoods and space

The discussions above provide various views, definitions and understanding of the different concepts that are crucial for analysing livelihoods. Worth noting from the discussions is the prevalence of social and economic factors associated with livelihoods. This is obviously not astounding as a substantial body of work on livelihoods was developed by social theorists who focused largely on social and economic factors of livelihoods. Focusing only on the social and economic dimensions of livelihoods is however not encompassing for purposes of this study.

In their efforts to access various assets to ensure their livelihood, people must travel from one place to another. Taking an informal recycler as an example, he/she has to travel from their place of stay to areas where goods for recycling are collected, and eventually to an area where the goods are sold. The same can be said of an employee who has to travel from home to their workplace, and in turn earn a living. In both these cases, space is involved, and it dictates how for instance places where recyclables are collected are accessed.

The discussions of the different concepts as presented above do not relate explicitly to the spatial dimension. This study argues that the spatial dimension is fundamentally crucial for understanding the concept of livelihoods. When people are on a day-to-day basis involved in various activities, using their capabilities to access different assets, they are largely influenced by spatial dynamics and structure of space. As aptly asserted by King (2011: 297) livelihoods involve “collection of resources, integration to social networks and the movement of labour and capital are inherently spatial and thus require a spatial analysis to be properly understood”. Central to this understanding is the issue of access.

Access to assets is largely influenced by how space is shaped and structured. The structure of space is fundamentally important especially in South Africa given the history of spatially separate development which aimed to locate different race groups from each other. As King (2011: 300) argues, the country’s social and spatial history makes South Africa a “fitting example of the complex and reciprocal links between space and livelihoods”. The movement of people and their level of access to services and opportunities was largely influenced by spatial structure which dictated that people stay in areas that were isolated and far from centres of growth, development and opportunities (King, 2011: 300). The spatial dimension of livelihoods also brings to the fore the issue of infrastructure which is important for accessing livelihoods.

Physical infrastructure such as the road network is fundamentally important for location and access of different assets. With all factors remaining constant, it is a tradition that opportunities will locate in areas that are of easy access. For example, in a research study done by Sustainable Livelihoods Foundation (2011: 14), the study revealed that physical infrastructure or transport routes as they are referred to in the study, largely influence location of businesses especially in areas where they are able to attract significant pedestrian traffic. Environments in which we live are affected by various factors, and thus how people access opportunities is not only an issue of physical infrastructure, but also culture, preferences and perceptions. Thus, in understanding the choices people make to ensure sustainable livelihood, it is important not only to consider the argument that advocates for influence of physical infrastructure on access, but also the social and cultural factors that affect decision making of people's access to different assets and opportunities.

The various concepts discussed offer sociological insight for discerning the sociological and cultural factors which are fundamental in how people ensure their livelihood. A livelihood in its very nature has social dimensions to it. It involves the different activities that people get involved in to ensure they have for example, access to food and/or money. These activities therefore form part of the social dynamics which essentially define life at large. What is worth noting however is that these social dynamics occur in space. Spatial structure largely shapes and dictates the activities. While this is the case, it must also be noted that new manifestations are beginning to take shape where people are giving spaces new meanings by not adhering to the intended purposes of spaces. This is evident in most places where people are involved in multiple livelihood strategies, which are often referred to as informality or informal activities. This understanding of relationship between space and livelihood is critical for this study.

The concepts discussed above are embedded in a number of theories, theoretical perspectives and arguments. These theories and theoretical perspectives are analysed in this study to illustrate their relevance in understanding people's actions in engaging in the different livelihood activities and dynamics that are involved in the process of acquiring asset resources. Theories discussed and which are considered central for analysing people's choices of livelihood strategies are systems theory, complex theory and planning and development theories including participation theory, collaborative theory and communicative rationality theory. The study argues that dynamics of sustainable livelihoods should be understood within the context of post-modern thinking which among other things advocates for exploration of micro-level dynamics, diversity and involvement of communities in the decision making processes which eventually impact on their day-to-day activities. Reference

is made to the relation, interpretation and importance of these theories for the study. The theories are presented and discussed in the following order: complex theory, systems theory and planning theories including participation theory, collaborative theory and communicative rationality theory.

2.3. Fundamental theories in the study

2.3.1. Systems theory

Theory on systems offers an important framework through which to understand the different livelihoods strategies adopted by people, especially the urban poor, to earn a living. First developed in the 1930s, the premise of systems theory is premised on the idea that the world in which we live is connected through complex systems which are open to, and interact and form relationships with their environments (Laszlo & Krippner, 1998: 4). In the following years, discourse on this understanding of the world gained momentum with a notable group of scholars such as Ludwig von Bertalanffy, Alfred North Whitehead, Anatol Rapoport, Kenneth Boulding, Paul Weiss, Ralph Gerard, Kurt Lewin and Roy Grinker generating a lot of literature on systems and relationships between people and environments in which they live.

In reaction to the reductionist arguments for understand the world, these writers argued that the complex systems and relationships that exist between people and the world should not be neglected nor ignored as it had significant bearing on providing the premise for understanding life on earth (Laszlo & Krippner, 1998: 11). With this understanding, systems theory advocates that rather than reducing entities to properties of their parts or elements, the focus must be on the arrangement of and relations between the parts which connect them into a whole (Heylighen & Joslyn, 1991).

Systems theory is important in the study as it provides a trans-disciplinary framework for a critical and normative exploration of the relationships between people's behaviours and actions and the environment in which they live (Friedman & Allen, 2010: 5; Parsons, 1951: 3). By providing such analysis, the theory assists in dissecting the complex dynamic relationships that exist between human beings and the environments in which they live. Understanding these complex dynamic relationships requires a multi-faceted, holistic approach and systems theory provides such approach by not reducing the dynamics to a level of individual stimuli (Laszlo & Krippner, 1998: 5).

This study has argued that people are engaged in multiple livelihood strategies to earn a livelihood. These multiple livelihoods consist of existence of relationships between people, the environment and the different assets which they have access to. It is important to understand these relationships in this study for purposes of ensuring that people's access to assets is strengthened and improved. This will equally ensure that the opportunities, for exploring other livelihood strategies to ensure resiliency and sustainability of their livelihoods.

As alluded to elsewhere in the study, lack of assets or poverty is caused by a multitude of factors which themselves are dynamic. As a result, the urban poor adopt multiple strategies to ensure access and sustained livelihood at all times. These multiple strategies are a series of complex systems which cannot be understood by looking at one while neglecting the relationship it might have with the other.

2.3.2. Complex theory

Generation of literature on complex theory began gaining momentum in the 1960s from the work of the meteorologist Edward Lorenz who developed a meteorological model based on differential equations (Valle, 2000: 1). Scholars who have contributed to the discourse on the theory have argued that there exist three forms of complexity, which are algorithmic, deterministic and aggregate complexity (Richards, 2002: 99). While these three broad categories exist, some theorists such as Manson have argued that understanding of the theory must not only be limited to these. Manson (2001) in Richards (2002: 99) asserted that "complexity may be viewed simply as incorporating the continuum between order and chaos". Thus, the theory is concerned with relationships between systems, which in most cases give way to the formation of complex systems and/or as put by Richards (2002: 99) "random interaction between a number of deterministic systems".

Central to complex theory is the understanding that complex behaviours emerge from simple rules, and that all complex systems are networks of many interdependent parts which interact according to those rules (Valle, 2000: 4; Walby, 2007: 449; Levy, 1994: 168). Complex theory borrows from underpinning meanings and fundamentals of chaos. Complex theory "recognises that numerous independent elements continuously interact and spontaneously organize and reorganize themselves into more and more elaborate structures over time" (Valle, 2000: 4). These elements and systems can naturally evolve to a state of self-organized criticality, in which behaviour lies marginally between order and disorder.

Complexity theory seeks to reconcile the unpredictability of non-linear dynamic systems with a sense of underlying order and structure (Levy, 1994: 168).

However, recent literature has begun to introduce a new dimension to the understanding of the theory. Some scholars have argued that complex theory is not a unified body of theory, but a framework geared towards the advancement of postmodernism (Walby, 2007: 457). The theory has become a mere approach or framework with a set of theoretical and conceptual tools; not a single theory to be adopted holistically. These theoretical tools have developed across a range of disciplines such as natural and social sciences, ecology to mathematics (Walby, 2007: 465).

Complex theory has a close link to systems theory. Complex theory uniformly argues that the world must be understood through a set of relation systems. These social relation systems are commonly understood and referred to as class, gender and ethnicity (Walby, 2007: 466). Important to note is that these should not be reduced to concepts of culture or economy, but should be understood as social systems with broad ontological depth and interrelated to other social systems (Walby, 2007: 454). Taking gender relations for instance, it is not only formed by civil society, economy or institutions, but is also constituted by ethnic and class relations (Richards, 2002: 99; Walby, 2007: 466).

The understanding of complex social relations is crucial for this study. The theory provides a framework for understanding livelihoods by analysing various systems of social relations. The theory will assist in unpacking the influence social relations have in the decisions that people take regarding their livelihood strategies. Simply put, it will assist in providing meaning among other things on why households employ certain livelihood strategies over others, if the employed livelihood strategies a mere co-incident or planned, well sought strategies. Livelihood strategies are also determined by people's participation in the local economy, which eventually determines people's access to assets. People's participation in the local economy and access to assets can be best understood through the planning and development theories as discussed below.

2.3.3. Participatory planning theory

Participation as a concept began gaining momentum within the planning and development landscape following the growing protests and social movements in the 1960s (Yorkshire Forward, 2000: 12; Arnstein 1969: 1; Aragones & Sanchez-Pages, 2008: 1). The concept largely came out as a critique to the earlier rational comprehensive model with its premise on

centralising decision making processes and the state as the sole role player in decision making. Scholars such as Sherry Arnstein in her article titled “A Ladder of Participation” were so influential in shaping participatory and collaborative theories (Arnstein 1969: 2). Arnstein (1969) asserted that central to citizen participation is power. Participation is how power is redistributed in such a way that allows those citizens who are often on the margins, excluded from the political and economic processes are actively involved in the decision making processes (Arnstein 1969: 1; Yorkshire Forward, 2000: 6). Arnstein (1969: 2) further argued that participation was an approach through which “the have-nots join in determining how information is shared, goals and policies are set, tax resources are allocated, programs are operated, and benefits like contracts and patronage are parceled out. It is the means by which they can induce significant social reform which enables them to share in the benefits of the affluent society”. In essence, participatory theories argued for the decentralisation of power from the state to communities and civil societies as these had in their possession important indigenous knowledge which could always prove crucial for decision making. The state could no longer decide for the people. It had to ensure that communities and civil society had were mobilised and participated in the decision making (Aragones & Sanchez-Pages, 2008: 1; Arnstein 1969: 2).

While participation is important, this does not necessarily lead to sharing of power as there are different levels of participation. This is illustrated by the ladder of participation which indicated there exist eight (8) levels of participation as shown below.

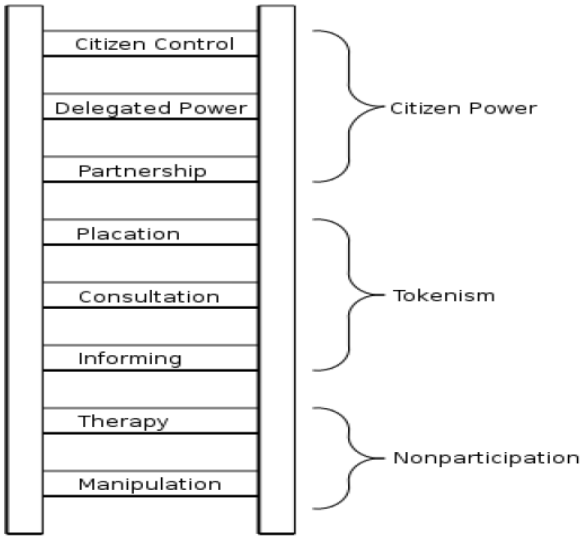

Figure 8: Ladder of participation
Source: Arnstein, 1969: 2.

The different levels of participation have a direct correlation with the levels of power transferred to the citizens. For example, in the first two lower levels of participation, that is, manipulation and therapy, no power is shared with the have-nots. Participation is so constrained in these levels to the extent that there is non-participation of citizens. Those in

power, merely use word participation as part of educating and curing the participants. In this case, citizens are not treated as active agents in decision making, but rather as passive recipients (Arnstein, 1969: 3; Yorkshire Forward, 2000: 8).

The next level of the participation consisting of informing, consultation and placation, to a lesser extent involves a degree of citizen power. During the consultation process, participants are presented with an opportunity to contribute, and in some instances influence the outcomes of the consultative process. It should also be noted though that the participation process is a mere informing process where participants are only there to listen to the information given to them. Owing to their lack of power, citizens can never ensure that their views are heeded as they cannot follow through to change current conditions (Arnstein, 1969: 2 & 3).

The upper end of the participation consists of partnership, delegated power and citizen control. This is the level where citizens have power in the planning and decision making process. This is important as it allows for people who are directly affected by decisions taken to be directly involved in the crafting of those decisions. It should be noted however that because of power dynamics, the have-nots do not usually enjoy a large degree of power. Their interaction is often limited to informing and consultation (Arnstein, 1969: 2 & 3).

This understanding of participation is fundamental in the study as it provides the premise for understanding the different levels at which the urban poor of Atteridgeville can be engaged by the City of Tshwane. As discussed, citizens need to form the central core of the participation process, and also more importantly, there should be a sharing of power between the power-holders and the powerless. This understanding will assist in understanding the power dynamics within Atteridgeville.

2.3.4. Collaborative planning theory

Participatory theory set the premise for the development of theoretical frameworks advocating for acknowledgement and empowerment of communities in the decision making processes that affect their day-to-day life activities. One of these theories is collaborative planning theory. Collaborative theory was introduced in the 1980s as a part of the response to the shortfalls of technocratic/comprehensive rational planning with its high dependence on experts and science analysis (Healey, 2003: 102; Shakeri, 2011: 1). Borrowing much of its content from critical theory of Jürgen Habermas, the theory was built on the idea of public involvement in planning and development matters. Collaborative theory however added

another dimension to the involvement of different stakeholders by asserting that stakeholders must always seek to create an environment where an authentic dialogue or honest discussion is engaged (Tewdwr-Jones & Allmendinger, 1997: 1976). In advocating for authentic dialogue, collaborative theory began to fundamentally challenge practices that had for years been accepted as customary within the planning landscape. It argued that decision making must be based on dialogue that satisfies a greater range of the needs of the affected and concerned participants rather than an adversarial approach in which the most powerful will usually prevail and force their decisions and beliefs upon the less-powerful (Margerum, 2002: 181). As a result, the theory sought to bring together different stakeholders to work collectively on controversial issues and build consensus rather than using majority rule (Margerum, 2002: 181; Healy, 2003: 102).

Just as other participatory theories, advocates of collaborative theory believed that engaging in honest discussions by a wide range of stakeholders is fundamentally critical as most of the controversial issues are complex and interrelated (Margerum, 2002: 182; Tewdwr-Jones & Allmendinger, 1997: 1976). Collaborative approaches are likely to derive their goals and objectives due to the fact that they identify mutually acceptable goals (Margerum, 2002: 181; Shakeri, 2011: 1). This, in turn gives way to achievement of high quality results.

Notwithstanding, the theory introduced an important dimension to be considered in planning, but it was not received and agreed to by all. Some scholars, most notably Foucault, critiqued collaborative theory arguing that it was “unrealistic due to its ignorance of power relations” which are always at play in society (Shakeri, 2011: 1). As a result of power relations, practice of collaborative planning often failed to enforce inclusion and authentic dialogue qualities as those with more power would always persuade and direct the dialogues (Tewdwr-Jones & Allmendinger, 1997: 1977). This however did not take away all the credit and importance of the theory and the approach it introduced in planning and development. The issue that needs to be borne in mind is that honest dialogue occurs without external factors such as power. Thus, in this study, it is argued that the theory of collaboration is crucial to improving livelihoods of the poor in Atteridgeville, but in advocating for collaboration of those concerned, power dynamics in the area must be well understood and not neglected.

2.3.5. Communicative rationality

The theory of communicative rationality is closely linked to collaborative theory largely because of its premise on consensus, but also because it was advocated for by the same theorist – Jurgen Habermas. The theory of communicative rationality is based on the notion

that all concerned stakeholders have clear, unconstrained "access to their own reasoning, possessing clear preference rankings and defendable rationales for their goals and values" (Rienstra & Hook, 2006: 1). The underlying notion is the concept of communicative action. Communicative action is a process where different stakeholders critically engage controversial and complex issues in an effort to agree upon common terms and cooperatively act upon the world. As asserted by Widdersheim (2013: 2), this is a "process oriented toward mutual understanding and consensus".

The ability of people to rationalise and have their own ideas allows them not to extend or defend their positions in a discursive interchange, but rather in a constructive manner where they can critically substantiate or understand their own rationality (Rienstra & Hook, 2006: 3; Flynn, 2004: 434; Bolton, 2005: 3). This in turn allows stakeholders to reach a common understanding and to coordinate actions by reasoned argument, consensus, and cooperation rather than strategic action strictly in pursuit of their own goals (Bolton, 2005: 4; Cecez-Kecmanovic & Janson, 1999: 3).

Nonetheless the theory to collaborative approaches in planning and development suggested that the theory also received similar criticisms regarding its rejection of unequal power dynamics vested in societies. This study acknowledges the existence of unequal power relations in communities especially in Atteridgeville community.

The theories discussed above offer insights which are more inclined towards a sociological / cultural ethos. As pointed out in the discussion of key concepts in the study, most, if not all theories discussed above do not explicitly relate to the spatial dimension. They are focused more on dynamics that affect relations between people implicitly overlooking the importance of space in shaping these relationships. This study acknowledges the importance and impact of space on livelihoods. As argued elsewhere in the study, access to different assets that form building blocks of individual or household livelihoods largely depends on the spatial configuration of space. To understand the importance of spatial aspect of livelihoods, the study therefore borrows the concept of action space which has been used largely in countries of the developed world such as Netherlands to understand complex, diverse activities and mobility patterns of individuals, households, companies and organisations (Dijst, 1999: 163).

Action space provides a framework for understanding the relationship that exists between space and livelihoods. Dijst (1999: 163) says that action spaces are "areas within which persons can undertake activities". These are the spaces which directly influence an

individual's choice of activities. Action spaces are categorised into three types, namely; potential action space, actual action space and perceived action space. Central to these spaces is the issue of access which outweighs proximity. In a network society with complex and diverse activities, people are increasingly concerned about how they can easily access areas rather than their close proximity to various assets (Dijst, 1999: 164: 165).

The dynamics of these spaces have however began to change especially in countries of the developing world where people are beginning to give their own meaning to space and are by the same token interpreting and using space in ways that best suit their needs (Simone, 2004: 407; King, 2010: 302). This is prevalent in most cities where people are involved in various activities, which are often referred to as informal activities, since they do not conform to the intended use of spaces. It is important to understand the experiences of people as they use these spaces, their perception and interpretation of these spaces. This will not only contribute towards a body of knowledge of planning for responsive spaces in cities, but will importantly form basis for discussions and policy making on how to improve livelihoods by planning towns and cities that support multiple strategies or activities of individuals and households.

2.4. Theoretical and conceptual viewpoints from various authors

This section of the chapter gives a range of perspectives on the notion of livelihoods from various authors and theorists. The section also seeks to outline the relevance of the concepts discussed in the study for purposes of analyses livelihood strategies in the Atteridgeville community in the City of Tshwane. This study looks at the authors who contributed considerably to the development and setting of discourse on the concept of livelihoods. The viewpoints of authors looked at in this study are those of Robert Chambers and Caroline Moser. It is important to note that central to the viewpoints of both Robert Chambers and Caroline Moser is the assertion that livelihoods form an integral part of understanding the dynamics and way of living for communities. A livelihood is a premise that better captures all the activities and behaviours of individuals and households, their attitudes, the decisions they make towards ensuring they always have access to the various assets, opportunities and resources that will assist in improving their lives.

Robert Chambers (1995: 174) in his research paper titled "Poverty and livelihoods: whose reality counts?" provides a perspective on how the anti-rhetoric on poverty and discourse of livelihoods unfolded. He provides the various meanings of poverty, ranging from traditional structural or economic definitions to much more nuanced definitions not only looking at

poverty from the economic point of view, but also from cultural and sociological perspectives. The paper consistently discusses the relationship between the concept of poverty and livelihoods, and in turn emphasises the commonplace view that poverty has significant impact on livelihoods.

For Chambers, the concept of livelihoods, unlike that of employment, better encapsulates a way of living especially for the poor. It captures what "realistic priorities are, and what can help them" and the activities which they must focus on to make a sustainable living (Chambers, 1995: 191). This viewpoint on the concept of livelihood has been shared by other authors such as Caroline Moser.

Caroline Moser began writing on livelihoods in the mid to late 1990s when she profoundly wrote on the subject of poverty and the strategies and/or responses by individuals and households towards ensuring that they dealt with their state of being poor. In the paper titled "The asset vulnerability framework: reassessing urban poverty reduction strategies", Moser (1998: 4) outlines the different types of assets that people need to access in order to address poverty. Just as Chambers' viewpoint on poverty, Moser acknowledges that poverty has multiple facets and as a result cannot be addressed using one-sided policy interventions focused only on the economic dimension of poverty. Moser (1998: 2) asserts that discourse on poverty and livelihoods needs to move from the "conventional objective approach that identifies income/consumption as the best proxy for poverty" to a "subjective, participatory approach that rejects the income/consumption approach as a narrow reductionist view, serving the technocratic needs of development professionals, while failing to understand the complex, diverse, local realities in which the poor live".

Other writers such as Terry Cannon, Francis Owusu, and Ian Scoones have also contributed towards studying the concept of livelihoods with much of their perspectives borrowing from the work of both Robert Chambers and Caroline Moser. Much of the recent work on the concept of livelihoods made a substantial effort to incorporate the informal ways of doing things especially in urban environments. In a research paper titled "Conceptualizing livelihood strategies in African cities: planning and development implications of multiple livelihood strategies", Owusu (2007) gives an analysis of what he refers to as 'multiple livelihood strategies' which refers to the various activities that people undertake as a way of making a living (Owusu, 2007: 7). This view began to introduce a different dimension to the livelihood discourse one where it is important to acknowledge informality as a sector offering opportunities especially for the urban poor to improve their livelihoods. This understanding was, and remains important for towns and cities of the developing world as informality both

in terms of informal trading/businesses and/or informal settlements continues to be widespread and offers opportunities to noticeable numbers of the urban poor.

The viewpoints by both Moser and Chambers were also adopted and/or shared by development institutions such the Department for International Development (DfID), World Bank, United Nations Food and Agriculture Organization (FAO), Oxfam and CARE International have done a lot of work and have aligned their development strategies to fit the subjective and participatory approach that rejects the income approach to poverty and livelihoods. The work of these institutions borrows from the work of Robert Chambers. The lessons learned from various programmes implemented by these institutions also contributed in the development and refinement of the concept of livelihoods. Today, a noticeable number of countries have in the development of their policies and programmes towards poverty alleviation and improvement of livelihoods ensured that these do not focus only on the economic dimension, but also on the social and cultural dimensions which were initially neglected. In South Africa in particular, there has been a move towards beginning to acknowledge and embrace urban informality as a sector that can be used to lift lives of many urban dwellers out of poverty. The discussions on the relationships between the first and second economy and how synergies can be enhanced between these are the testimony of the influence of the earlier perspectives by authors such as Robert Chambers, Caroline Moser and Francis Owusu on their plea to harness opportunities offered by urban informality.

As illustrated in Table 3 below, the concept of livelihoods has been widely studied and cross referenced in different disciplines. This concept is of importance for this study in that it looks at the dynamics of multiple livelihood strategies of the people of Atteridgeville in City of Tshwane, acknowledging and reflecting on the complex realities faced by the urban poor. The livelihoods approach is founded on holistic analyses which are people centred and participatory in nature.

The approach also acknowledges diversity, and the need to always consider the different assets and opportunities that people are exposed to while at the same time taking into account the different micro, meso and macro level factors (Hussein, 2002: 3). This understanding is fundamental for this study as it will not only allow for analysis that are based on factors impacting on household livelihoods but also on other factors such as political and institutional factors affecting households' capabilities towards accessing a livelihood at all times. This will therefore allow for the study to dissect not only the widely studied economic factors and household and individual responses to vulnerabilities, but also

more importantly the cultural and sociological factors affecting individual and household access to a livelihood. The honing into the cultural approach to household vulnerabilities is important for understanding the multiple activities (referred to in this study as multiple livelihoods strategies) which households and individuals are involved in for purposes of ensuring access to a livelihood at all times. A framework developed from this kind of analysis is more responsive as it incorporates vulnerability, poverty and assets with issues that are related to social capital, empowerment and household participation. This cuts across the main objective(s) of this study. The different theories used in the study, their main underlying themes, contributing writers and the discourse at the time are as follows:

Table 4: Summary of theories

Theory	**Main themes**	**Contributing writers**	**Period**	**Importance to the study**
Systems Theory	▪ Systems ▪ Complexity ▪ Connections ▪ Relationships	Ludwig von Bertalanffy, Alfred North Whitehead, Anatol Rapoport.	1930s	Understanding of various systems and relationships that people form for purposes of ensuring access to sustainable livelihoods.
Complex Theory	▪ Complexity ▪ Chaos ▪ Order ▪ Networks ▪ Connections ▪ Linear systems	Edward Lorenz	1960s	Understanding of various systems, relationships and complexities that people are faced with in their quest to ensuring access to sustainable livelihoods.
Participatory planning theory	▪ Participation ▪ Community ▪ Diversity ▪ Collaboration ▪ Citizens ▪ Power ▪ Decentralisation	Sherly Arnstein	1960s	Importance of ensuring participation of people in the decision making processes of the City of Tshwane.
Collaborative planning theory	▪ Participation ▪ collaboration ▪ Community ▪ Participation ▪ Power ▪ Diversity ▪ Decentralisation ▪ Resources	Jürgen Habermas Patsy Healey Michel Foucault	1970s	Importance of encouraging collaboration with the different stakeholders especially the less powerful to ensure their concerns are taken into consideration in the decision making processes.
Communicative rationality	▪ Communication ▪ Community ▪ Participation ▪ Power ▪ resources ▪ Diversity ▪ Decentralisation	Jürgen Habermas	1980s	Importance of ensuring that participation of those affected is not a mere rubber-stamping exercise, but rather a process for arriving a common understanding.

Source: Own construction

2.5. Concluding remarks

As the realties and scourge of unemployment, poverty and inequality continue to exacerbate, people living in urban areas are left without many options except to look for varied ways of ensuring that they have food on the table for their families. This suggests that more people will continue emigrating to urban centres to have access to quality living environments, increased employment opportunities and social amenities. Whereas this is a widespread and most held view, immigrating to cities does not often result in access to opportunities. Majority of urban migrants are therefore forced to seek other ways of doing things to earn a living. This is evident in most of South Africa's towns and cities where the majority of people are involved in informal activities to ensure a livelihood. Atteridgeville is not an exception. Whereas these informal activities are fundamental for survival purposes, it however can never be guaranteed as change in any of the assets results in complete negation of individual livelihood.

In terms of theory and theoretical perspectives, a noticeable number of these have been developed to understand the concept of livelihoods and the dynamics of day-to-day activities of people in their quest to earn a living. As it has been shown above in the discussions of the theories on Table 4, various theories from different disciplines such as sociology, political, economic and planning can be used as analytical frameworks of the concept of livelihoods. The use of various theories in the study is as a result of the multidisciplinary nature of livelihoods which cannot be understood through the use of a single theoretical framework.

It should however be acknowledged that a lot has been done both in terms of policy development and programmes towards improving livelihood strategies of the urban poor. Through its efforts to create what it referred to as a 'conducive environment' for urban inhabitants, the South African government assisted a noticeable number of small businesses, and in turn improved the lives of many in cities. This study however, argues that even with these efforts, the small-scale, often one individual selling along the street, informal traders have not benefited. The informal traders are often pushed to the margins and not catered for responsively in city development policies and framework. Many have argued that this is as a result of lack of understanding of the dynamics of informal businesses. Given the existing conceptual and theoretical framework and perspectives, this study aims to explore the importance of understanding livelihood strategies of the poor in Atteridgeville and how this can assist in building integrated cities, and in turn improve and build resilient and sustainable livelihoods for the urban poor.

CHAPTER THREE: POLICY AND LEGISLATIVE FRAMEWORK RELATING TOLIVELIHOODS

3. Introduction

Discourse and literature on the concept of livelihoods is not new. A number of scholars, writers, urban policy practitioners, civil society organizations (CSOs) and international development agencies began focusing their attention on the ways people ensure their livelihoods following growing poverty concerns. At the time, the commonplace view was that poverty was both a major cause and result of increasing deaths which were caused by hunger and degradation of the environment (Baumann, 2002: 3). Substantial work and intervention programmes have been designed towards ensuring alleviation of poverty especially in countries of the developing world. Overtime, the discourse on poverty and livelihoods has changed, and these changes have equally been matched with changing policy interventions. This chapter endeavours to track and outline the development trajectory of the livelihoods discourse. In tracking the trajectory of the discourse, the chapter will disaggregate how the concept has been studied at different levels, that is, international, national and regional levels by looking at the different reports done by various researchers and institutions such as United Nations, UK- Department for International Development (DfID), United States Agency for International Development (USAID), Oxfam International and other organisations dealing with livelihoods.

The chapter will also analyse the information (including policies and frameworks) gathered using both the qualitative and quantitative processes in order to deduct more scenarios related to the study at hand and further evaluate the outcomes thereof. The chapter will furthermore provide analyses of international and national perspectives on integrated cities and sustainable livelihood strategies. The Figure below illustrates the structure and outline of arguments in the chapter.

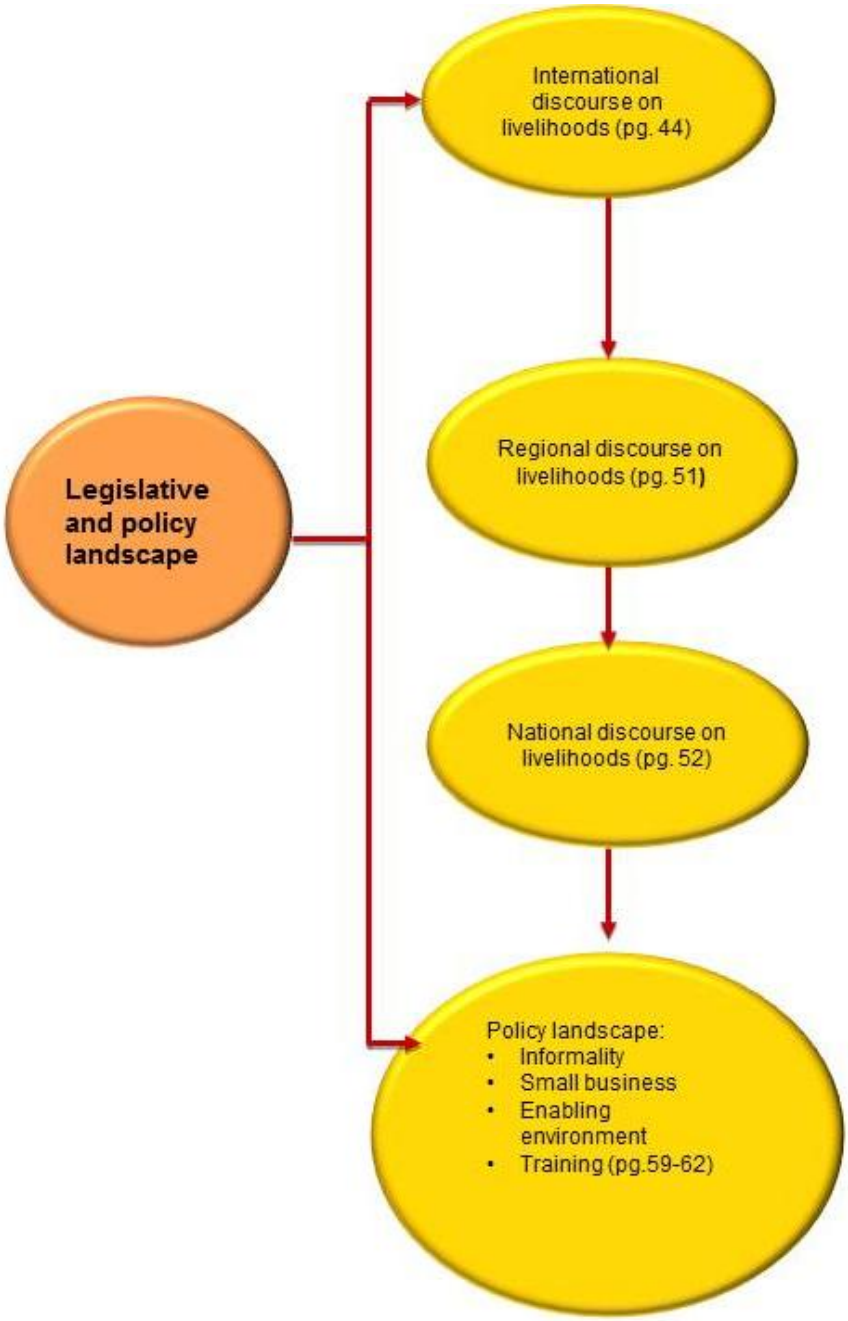

Figure 9: Structure of the chapter
Source: Own construction, 2015

3.1. International discourse on livelihoods

The global community plays a critical role towards the development and generation of literature on the concept of livelihoods. The concept first gained momentum in the mid-1980s to early 1990s when the discourse on the issue of poverty began to take a turn from draconian poverty relief programmes such as the Structural Adjustment Programmes and related traditional economic interventions to the recognition of much more localised and multi-pronged approaches (Ashley & Carney, 1998: 4; Solesbury, 2003: 1). During this period, the discourse on development and poverty alleviation began to be intertwined and rely heavily on the principles of participation, which essentially encouraged the involvement of communities in the decision making processes. Also important to note was the growing attention and recognition that there exists diversity in the communities (Ashley & Carney, 1998: 23; Cecez-Kecmanovic & Janson, 1999: 7). Communities are not one object, but are made of people with different aspirations and living circumstances, and as result they adopt different livelihood strategies to address their circumstances (Ashley & Carney, 1998: 4). This recognition of diversity and the importance of communities in policy and decision making was further strengthened by Habermas' theory of communicative action or rationality which principally argued for reason and the rationalization of society, where people continually take decisions (teleological actions) towards the betterment of their lives and communities (Habermas, 1984: 9; Cecez-Kecmanovic & Janson, 1999: 3; Healy, 2003: 106; Flynn, 2004: 435). This understanding of communities is crucial as it recognises that policies aimed at improving livelihoods must not be uniform or be one-size-fits-all, but must acknowledge the diversity that exists in communities and that people adopt varying strategies to ensure their livelihood. Finally, the literature acknowledged that a livelihood is made up of different assets, as discussed earlier, and these form building blocks and complement each other.

In defining the concept of livelihood, this study borrows from widespread literature by various scholars such as Chambers (1990, 1991 and 1995), Chambers & Conway (1991), Moser (1998), Beck (1989 and 1991), and Corbett (1988) amongst others. In its simplest form, a livelihood suggests a means of earning a living (Chambers & Conway, 1991). Earning a living however is a complicated process and involves a multitude of factors. This complexity is reflected in the definition by the Advisory Panel of the World Commission on Environment and Development (WCED) in 1987 where it was stated that a livelihood is "adequate stocks and flows of food and cash to meet basic needs" (Chambers & Conway, 1991: 5). The Advisory Panel continued to argue that central to people earning a livelihood is security, which includes ownership and/or "access to resources and income earning activities"

(WCED, 1987 in Chambers & Conway, 1991: 5). Figure 10 below is the diagrammatic track of the development trajectory of the concept.

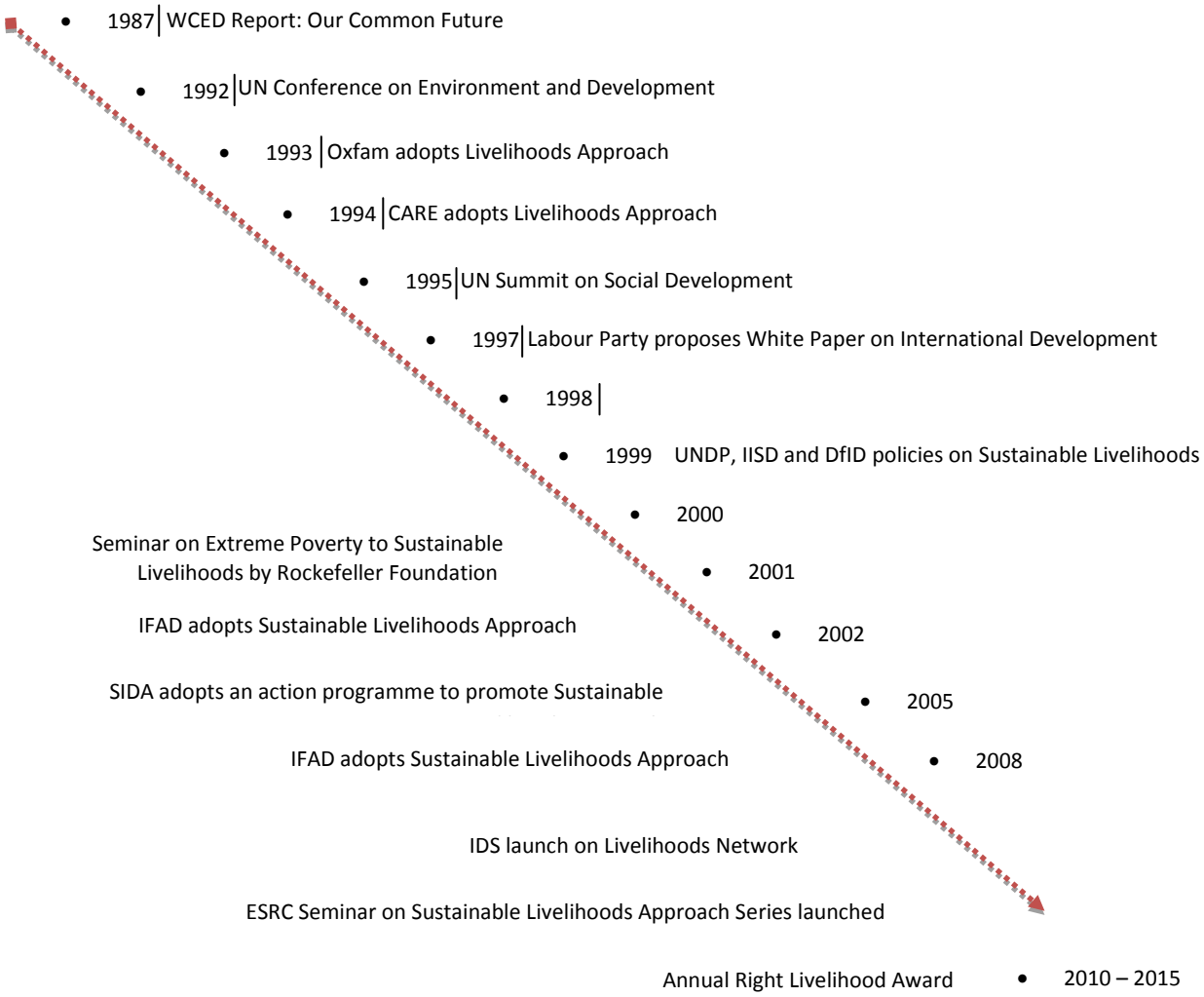

Figure 10: Development trajectory of the concept of livelihood
Source: Solesbury, 2003: 3.

Figure 10 represents a sequence of the major events and publications which contributed greatly towards the development of the concept of livelihoods. While the timeline begins in 1987 with the World Commission Economic and Development Report titled '*Our Common Future'*, it should be noted that the concept of livelihoods had received attention and been discussed in previous periods (Solesbury, 2003: 4; Krantz, 2001: 6). As it has been alluded to in this study, literature on the impact of poverty and unemployment especially in countries of the developing world did to a great extent contribute to development of the concept of livelihoods. Studies, reports and programmes towards alleviating poverty and unemployment were in effect directly addressing means of living of the people.. The issue argued in this

study however is that during this period, the discourse and generated literature did not focus profoundly on livelihoods, but rather on these traditional facets of development.

As depicted in the timeline, a lot of work has gone into developing the concept, linking it to other concepts and discplines. The most recognisable, and perhaps crucial development of the concept is the link with the concept of sustainability. Initially, the discourse on poverty focused more on efforts to ensure that countries reduced their poverty levels to an acceptable minimum levels. The sustainability part of livelihoods received less attention.

The concept of sustainability was crucial for livelihood studies as it introduced a different dimension; that is livelihood stability. Livelihood stability suggests that people must have access to adequate means of living at all times, and should not risk losing access to these means as a consequence of sudden shocks and cyclical events. Livelihood stability includes both the availability and access dimensions of livelihoods (FAO, 2002: 1). One of the influences of the concept of sustainability was felt in the World Food Summit held in Rome in 1996 where a new definition of one of the livelihood aspects, food security, was coined. The Summit resolved that food security must be understood as a state “when all people, at all times, have physical and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life” (World Food Summit, 1996 in FAO, 2002: 1).

It is essential to note that the concept of sustainability began to introduce a paradigm shift of understanding of livelihoods from a global or international level to local levels as at micro level, specific dynamics of livelihoods can be analysed and understood. Numerous writers realised that looking at country level statistics of for instance, food availability does not necessarily lead to food access to all people at local household and individual level. Reports by organisations such as Food and Agriculture Organization (FAO) and Oxfam indicated that at national level, countries had food available, however numbers of food insecure individuals and households continued to increase (Bouma *et al*, 1994: 8). Thus, while a regional or country outlook would be that depicting high levels of livelihood security, the dynamics at household and individual levels would be a complete opposite of outlook with much more complicated and nuanced intricacies into the livelihoods of people.

Other than the concept of sustainability, other facets have been used to better understand dynamics of livelihoods. While there are numerous of these facets, this study focuses on the most relevant to the objective of the study. These are discussed in the sections to follow.

3.1.1. Gender dynamics and livelihoods

The issue of gender cannot be neglected in understanding livelihoods. Whereas both male and female play an important role in ensuring that families have access to a livelihood, the increased number of women-headed households and the splitting of households has shifted the responsibility of ensuring security to livelihoods to women (Gender Action, 2011: 2; Food and Agriculture Organisation, 2015). For instance, reports indicate that women in the developing world account for more than two thirds of the world's poor and the majority of the world's small-scale farmers, and as a result bear the burden of rising prices and growing food insecurity in these countries (Gender Action, 2011: 2). Equally, at the household level, women are increasingly playing a decisive role in household decisions and health of the children (Food and Agriculture Organisation, 2015).

In rural areas, mostly in the developing world, the roles of men and women have shifted over the recent years. Rural men and women play different roles in efforts to ensure livelihood security for their respective households. In most instances, men are usually involved in the growing of field crops, while women on the other side often engage in the process of growing and preparing food consumed in the households and taking care of other household responsibilities (Food and Agriculture Organisation, 2014). Important to note however is that roles of rural women span over just household responsibilities. Rural women also carry out responsibilities such as looking for employment opportunities as well as making marketable products to ensure they can get income to obtain livelihood of their households. The income obtained from the selling of products is often used on basic necessities such as food and children's needs. This then goes to illustrate that women play a decisive role in ensuring security of livelihood of the household (Food and Agriculture Organisation, 2014; Asian Development Bank, 2013, 3).

3.1.2. HIV/AIDS and livelihoods

Coupled with the issue of poverty, especially in the developing countries is the issue of HIV/AIDS. HIV/AIDS is a serious issue in countries of the developing world given the lack of resources to deal with the pandemic which is also coupled with high levels of poverty and unemployment. Global estimates indicate that approximately 35 million people live with HIV/AIDS, and two-third of them are living in sub-Saharan Africa (The Global Fund, 2014; UNAIDS, 2014; AmFAR, 2013). The HIV/AIDS pandemic is said to be spreading, with 2.5 million people in 2011 said to have been infected. Recent studies have indicated that women are more vulnerable to getting HIV/AIDS than their male counterparts. This evidently signals

a fundamental implication on security status of household livelihoods given crucial role played by women in ensuring security status of livelihood of households.

HIV/AIDS has serious implications on people's access to secure livelihood status. The impact of HIV/AIDS can be threefold; firstly, chronic illness, secondly death of household member and thirdly supporting orphans as a result of death of parents (Masuku & Sithole, 2009: 4). These affect households in different ways, for instance, chronic illness may lead to loss of income and loss of outputs from agricultural activity – a double loss because the sick person is unable to work and "because household members have to spend time caring for the sick person" (Masuku & Sithole, 2009: 4). HIV/AIDS worsens household's livelihood by debilitation most of the productive household members who play a crucial role in providing basic needs such as food and shelter for the household. Equally, it decreases individual and household economic capacity while at the same time increasing dependency and care burden (Weiser *et al*, 2011: 1729). Illness of the individual providing livelihood or provision of care for orphans therefore shifts the spending patterns on essential items to non-essential items and therefore increasing the household's threat to livelihood security, as the economic and physical access dimensions to sufficient livelihood will be deterred. A reduction on household's income also threatens the household purchasing power, which also then gives way to livelihood insecurity (Masuku & Sithole, 2009: 6).

This begins to illustrate that the common consideration of HIV/AIDS as only a human health issue can no longer be encouraged. HIV/AIDS has significant implications on the livelihood security of households. The relationship between these is systematic and affects both the rural and urban inhabitants. This requires change in the development of policies addressing areas such as economy, social welfare and agricultural sector. The issue of vulnerability caused by the HIV/AIDS needs to be factored in policies.

3.1.3. Climate change and livelihoods

Climate change and the need to adapt and mitigate the change in our climate and extreme weather events has gained a lot of attention since the late 1980s and early 1990s. Many reports have showed how there has been increases in average air and ocean temperatures, changes in the frequency and severity of storms, alterations in precipitation patterns, and extreme weather events (Ziervogel & Frayne, 2011: 2; Asian Development Bank, 2013: 19). In North and South America for example, there has been apparent increase in the levels of precipitation, while on the other hand, countries such as Sahel and some parts of Sub-Saharan Africa are gradually becoming drier. Equally, Sub-Saharan Africa has for the last

few years experienced warming trends which are in line with global trend on increases in temperature levels (Ziervogel & Frayne, 2011: 15). In addition to this, there have also been reported incidences of floods in recent years.

This variability in climate has caused serious threats in the way people live and future projections indicate increase on prices of essential or basic livelihood items such as food and water (Oxfam Group, 2014: 1). In its media briefing report, the Oxfam Group argued that climate change threatens to put back the fight to eradicate it by decades (Oxfam Group, 2014: 1). The report also argues that impact of climate change on livelihood dimension such as global hunger will be worse than previously anticipated, with some suggesting that these could be as soon as 20 – 30 years mostly in the developing world (Oxfam Group, 2014: 2).

Worth noting is that impacts of climate change are far-reaching and in some instances are implicit, thus making it rather challenging to directly address root causes of climate change especially at micro, household levels. In countries of the developing world, it even becomes difficult for those whose sole concern is to acquire a stable security status of their livelihood. To date, most of the concerted effort towards adaptation and mitigation against climate change has been focused at a level where sizable production companies are requested to find innovative solutions to conduct their business in a way that mitigates exacerbation of climate change. Not much effort has been directed towards household responses to climate change, and this provides opportunities to be explored for contribution towards climate change adaptation and mitigation.

3.2. Migration patterns, urbanisation and livelihoods

Interesting to note are the gradually changing patterns in relation to the face of livelihood insecurity which in the last few years has increasingly become urban (UNFPA, 2011: 72). The world's population is now predominantly urban, and sub-Saharan African is reported to be the most rapidly urbanizing region. In 2007, the UNFPA reported that more than half of the world's population, that is, 3.3 billion people lived in cities (UNFPA, 2007: 1). It is expected that humanity will continue to be urban, and thus urbanisation trends are going to continue as people seek better economic and other related opportunities (Esbah *et al*, 2009 847; Wyly, 2011: 2). These urbanisation trends have seminal implications in terms of exerting pressures on the provision of services and the livelihoods of the peoples migrating into the urban areas.

Developing cities, together with smaller urban areas, continue to accommodate substantial amounts of urban population with estimates showing that approximately “52 per cent of urban population” lives in these cities (UNFPA, 2007: 9). Equally important to note is that growth and development trends in cities of developing countries differ from that of countries in the developed north. UNFPA (2007: 7) notes that the enormous increase in urban population of cities in the developing world is a result of the “second wave of demographic, economic and urban transitions”.

The second urbanisation wave is much bigger and faster than urbanisation in the first wave which took place between 1750s and 1950s (Swilling *et al*, 2011: 24; Wyly, 2011: 6). Today, the growth of cities in the developing world is “dynamic, diverse, disordered and increasingly space-intensive (UNFPA, 2007: 48). In Africa for example, it is estimated that between 2000 and 2030, urban population will “increase from 294 million to 742 million” (UNFPA, 2007: 9). Growth of these cities suggests need for investment in new built infrastructure systems, growth of the economy, provision of employment opportunities, provision of social amenities and other related services that humans need to secure their livelihood.

Equally, people moving to the cities and towns especially in the developing world are often poor (UNFPA, 2007: 1). In Mumbai for instance, it is said that 10 to 12 million people live in informal settlements or are squatters with high levels of poverty (Wyly, 2011: 11). Most cities of the developing world are faced with urbanisation issues related to shortage employment opportunities and infrastructural services, and as a result, this puts much pressure on these cities to grow their economies and infrastructure in efforts to get people out of poverty (UNFPA, 2011: 7; Swilling, 2011: 32). As a result, cities often focus their efforts on planning strategies which seek to create conducive environment for employment and provision of adequate shelter while at the same time ignoring the great need to address livelihood security issues in cities (Ziervogel & Frayne, 2011: 14, Swilling *et al*, 2011: 50; Wyly, 2011: 22).

The impacts of the second urbanisation wave cannot be ignored or neglected. This type of urbanization will bring severe challenges to household livelihood security given the aforementioned factors, that of, high rates of unemployment, increasing development of the informal sector, deteriorating infrastructure, overcrowding and environmental degradation (Ziervogel & Frayne, 2011: 21; Wyly, 2011: 11). One of the many challenges for government and other policy makers will be to show how to provide adequate quantities of nutritious and affordable food for more urban inhabitants within the context of less water, land and labour. Recent reviews of the impacts of climate change on for example, food security, indicate that

in Sub-Saharan Africa different facets of food security will be affected, including food availability, access, stability and utilization (Ziervogel & Frayne, 2011: 25; Masuku & Sithole, 2009: 5). This will obviously have adverse effects on the urban people but particularly the urban poor.

3.3. Regional discourse on livelihoods

It is a commonly shared and accepted view that the global literature on livelihoods will to a great extent influence discourse on the subject at the regional level as well as national and micro, local levels. In the African region, for example, numerous studies have been done focusing on issues relating to availability of fertile land, rural labour, gender issues, poverty and income, sustainable access to livelihoods and other livelihood facets that numerous writers have discussed at an international level.

Studies and reports on livelihoods in the African region have focused mostly on factors causing livelihood insecurity within the African region. While the recent literature has focused more on the diversified or multiple strategies that people use to acquire and obtain their livelihoods, initial studies focused more on orthodox issues, and one of the many motivators for this was the "catastrophic famine after major droughts in the early 1970 and mid-1980s" (Larson & Moseley, 2010: 2). This not only illustrates a pattern of understanding of the concept of livelihoods within the region, but also the framing of the problem at the country level. Statistics on hunger and famine during this period were always aggregated at national level as institutions concerned with development saw it appropriate that analyses of these factors at this level were fitting enough to motivate for need for funding of these countries by the relevant funding institutions including the World Bank and International Monetary Fund (IMF).

Equally, Africa forms part of regions of the developing world. It is therefore engulfed by many development challenges confronting regions of the developing world. Reports have indicated that approximately 1 billion people in the world do not have enough to eat, with the African region having the share of 239 million (World Health Organisation, 2014). This is an increase from 175 million people recorded between the period of 2004 – 2006 (World Health Organisation, 2014). It is therefore not surprising that poverty has received much attention given the high numbers of those considered poor in Africa. As a way to address poverty, much effort in Africa has been directed towards developing policy on ensuring sustainable livelihoods by focusing of basic needs such as food, water and shelter (Folaranmi, 2012; Alademerin & Adedeji, 2013: 30).

However, in recent decades, ground breaking literature has been generated on the concept of livelihoods in the African region. The literature has focused particularly on the multiple strategies that people in Africa and other developing regions have adopted for purposes of accessing livelihoods. Often considered as informality, or informal economy or informal trading activities, these are the strategies that many people and households particularly towns and cities of developing countries employ for livelihood. South Africa is one good example of a country where discourse on livelihoods has shifted in the recent past.

3.4. Livelihood discourse in South Africa

Substantial literature on livelihoods in South Africa has its origins in global discourse, but also more importantly on context specific issues in the country. South Africa has an interesting history given the unique political landscape that existed in the country. Planning and development in South Africa has in the past happened in somewhat an unconventional manner as some parts of the population were left out and forced not to participate in the mainstream economy. During this period, substantial literature on livelihoods focused on sustaining rural agricultural systems for food production to sustain population in these areas. The late 1980s experienced change in the political landscape, and as a result substantial portion of those who had been barred from the mainstream economy migrated to towns and cities. While this signalled important progress in terms of social inclusion, it also spelled serious developmental challenges for towns and cities. The impact of migration of people into cities is still evident today with most of the larger cities suffering infrastructural services backlogs and high numbers of unemployed people. Thus, the issue of migration, rural-urban linkages and effects of rapid urbanisation has dominated discourse on livelihoods in South Africa. Equally, as a signatory of the UN Millennium Declaration, South Africa has committed to all the MDGs including the need to eradicate extreme poverty and hunger (The Presidency, 2011: 10). There have also been many studies looking at impacts of issues such as HIV/AIDS, climate change and proliferation of women-headed households and its impacts on individual and household security (Battersby, 2012: 4; van der Merwe, 2011: 2).

Worth mentioning is that literature on urban development dynamics in South Africa has added another dimension on livelihoods. While initial livelihood studies often focused at national level, efforts to understand effects of rapid urbanisation in towns and cities has widened the debates of livelihood security to micro, household and individual levels, but also more importantly, to the importance of the informal economy (Battersby, 2012: 11). While there remains a lot to be explored within the informal sector landscape, recent indicators

have painted a picture that this sector of the economy has a role to play in growing the economy. It remains a contentious issue however whether or not the government has done a lot in terms of channelling support to develop a fertile ground for growth of the informal sector. There is a lot of contention regarding the definition of informal businesses and their status as meaningful businesses or mere survival strategies. South Africa has however developed legislative and policy frameworks in efforts to address development challenges facing the country including rigid small business landscape.

3.5. Policies and Legislative framework

3.5.1. Informal trading: Legislative and policy framework

A number of legislative frameworks exist in South Africa that directly and in some cases indirectly affect informal trading. In the wake of democracy in 1994, the South African set a constitution that is fair and non-discriminatory for all those who live in the country. In terms of trading, the constitution guarantees freedom of trade, occupation and profession, and those individuals who perceive themselves as having no option other than street trading are protected by the Constitution (The Presidency, 1996: 1331). The same document gives powers and functions regarding creating conducive environment for communities to trade and promote economic development to local government or municipalities. Thus, cities such as City of Tshwane must always ensure reasonable legislative and other measures within the available resources, make it possible for informal traders to trade freely, not discriminated against, and access opportunities for growth and development. Apart from the constitution, other legislative frameworks have been developed; these are outlined and briefly discussed below.

3.5.2. Micro, Small and Medium Enterprises Development Act, 2006

The South African government has always acknowledged the importance of small business enterprises. While there are other legislations such as the Business Act of 1991, the Micro, Small and Medium Enterprises Development Act, 2006 was one of the explicit government efforts towards providing support to small businesses. Central to the Act was the need to address challenges facing small businesses as well as the coverage and investment ceiling of the sector. The Act sought to facilitate the development of small businesses and enhance their competitiveness (Ministry of Micro Small and Medium Enterprises, 2006: 5).

A number of programmes were developed to ensure the realisation of set objectives. Among these programmes were Integrated Strategy on the Promotion of Entrepreneurship and

Small Enterprises, Draft Regional Industrial Development Strategy (RIDS), Broad-Based Black Economic Empowerment strategy (BB-BEE), National strategy for the development and promotion of franchising, Strategic framework on gender and women's economic empowerment, National youth enterprise strategy, Co-operatives policy and development draft strategy and the Draft strategy framework for forestry enterprise development (Department of Trade and Industry, 2006: 17). However, these only focused on the established small businesses in accordance with the traditional definition of small businesses. The programmes did not in any way acknowledge small businesses such as informal waste recyclers. So, while support has been established for small business, it did not reach out to the informal businesses as these did not meet the standard and definitions as set out in the Micro, Small and Medium Enterprises Development Act.

3.5.3. Spatial Planning and Land Use Management Act, 2013

Trading on space is directly and indirectly affected by many factors, one of these being the Spatial Planning and Land Use Management Act, No. 16 of 2013 (the SPLUMA). The introduction of the SPLUMA has signalled a new dispensation for planning and development in South Africa. The Act creates a coherent regulatory framework for spatial planning and land use management for the entire country that redresses the inefficiencies of the past planning and regulatory systems where spatial planning and land use management is concerned (SPLUMA, 2013: 2).

The introduction of SPLUMA is one of many efforts by the democratic government to put in place effective and efficient planning and land use management processes towards achieving inclusive communities (Berrisford and Visser, 2015: 9). The act has been proposed as a tool to effect the desired spatial transformation, which is underpinned by principles of inclusivity, mobility and access, economic development. Central to these is the notion that with proper implementation, these principles will be crucial for driving local and national growth prospects and transforms space in a manner that is socially and environmentally sustainable (SPLUMA, 2013: 1).

Chapter 2, S (7) of the SPLUMA provides for development principles that must be considered in the planning and development of communities today. These are principles that are looked are principles of spatial efficiency and good administration and spatial justice. It must however be underlined that this study focuses on the principle of spatial justice as it offers important insight and lens to understand dynamics of informal recycling.

The first guiding principle is the principle of spatial sustainability which emphasis the aspect of consistency of land use measures in accordance with environmental management instruments (SPLUMA 2013: 18). This principle suggests that regardless of the context of any area in question, land use management measures must be standardised and must always take into account the environmental dimension of development. Thus, in striving to ensure sustained economic growth, this must not be done to the detriment of the environment, more particularly pristine biodiversity, natural ecosystems and precious resources such as water. Such understanding is of course crucial today given the alarming rate of urbanisation more particularly in countries of the developing world. Equally, given growing concerns on issues of climate change and unpredictable weather patterns, it is crucial that this principle is upheld in development practices.

Efficiency is the second principle outlined by the SPLUMA. Central to the principle of efficiency is the notion that decision-making procedures must be designed to minimise negative financial, social, economic or environmental impacts. In the same way, the principle advocates that development application procedures must be streamlined with timeframes adhered to by all parties (SPLUMA, 2013: 18).This therefore suggests that in development, it is crucial to ensure that financial, social, economic and environmental well-being of communities is not compromised. This, to a greater extent relates to the principle of spatial sustainability, which, as discussed above, advocates for consideration of all the different dimensions of development, more particularly the environmental dimension which is often neglected in development.

The third guiding principle is spatial resilience. Spatial resilience underlies that flexibility in spatial plans, policies and land use management systems is practiced for purposes of ensuring sustainable livelihoods are not adversely affected (SPLUMA, 2013: 19). The principle emphasises that land use management systems must be developed in such a manner that acknowledges and is sensitive to the needs and livelihoods of communities, more particularly the vulnerable. This therefore suggests land use or land development must always promote sustainability of survival strategies of the disadvantaged, more especially in towns and cities where the number of people considered poor is increasing substantially. Informal waste recyclers also form part of the portion of the people considered to be disadvantaged, and thus it is important to ensure that planning systems take into account dynamics within the informal recycling landscape in an effort to improve working conditions and lives of informal recyclers.

The fourth guiding principle is good administration (SPLUMA, 2013: 19). The principle of good administration denotes that the different spheres of government must ensure an integrated approach to land use and land development that is guided by spatial planning systems that are underpinned by the SPLUMA. This must also be complemented by the preparation and amendment of spatial plans, policies, land use schemes as well as procedures for development applications through transparent processes of public participation affording all those concerned to actively provide inputs in matters that affect them (Berrisford and Visser, 2015: 12).

The fifth and last principle, which to a greater is related to this study, is the principle of spatial justice. Underlying the principle are the following assertions and assumptions that there need to be, among other things;

- improved access to and use of land;
- spatial development frameworks and policies at all spheres of government that prioritise inclusion of persons and areas that were previously excluded, with an emphasis on informal settlements, former homeland areas and areas characterised by widespread poverty and deprivation; and
- land use management systems must include all areas of a municipality and specifically include provisions that are flexible and appropriate for the management of disadvantaged areas, informal settlements and former homeland areas (SPLUMA, 2013: 19).

These underlying factors are crucial for the reconfiguration of the spatial patterns in South Africa as it begins to directly respond to the past spatial and development imbalances of planning and development practices. This therefore suggests the need to ensure that areas that were excluded from mainstream economy such as informal and former homeland areas. In so doing, spatial plans encouraging inclusive development must be developed for such areas and these must ensure these areas are integrated to areas of economic growth and opportunities.

The principle of spatial justice is crucial for understanding and proposing plans for developing places that will improve working conditions and safety of informal recycler. The need to integrate historically neglected areas into centres of economic activities and opportunities is crucial for ensuring that all people can be given an opportunity to actively participate in growing the economy of the country. The issue of access, more particularly physical access, remains critical given the fragmented nature of settlement planning. For

informal waste recyclers who have to travel longer distances, improving access does not only mean easy access to areas of work, but also improved safety, travelling times and access to opportunities.

The reconfiguration of space is crucial for informal trading as the issue of access and support for these activities remains partial. Most informal trading businesses operate in previously excluded areas, and thus inclusion of these areas will not only ensure spatial access, but also mainstreaming of these activities into the mainstream economy.

3.5.4. Policy framework

There exist a number of policy frameworks that are geared towards assisting small business development in South Africa. While there is still a need to develop local strategies to ensure effectiveness of these broad, national strategies, it is important to note the role of these and the strategic direction they have paved for small businesses in South Africa. The following is a brief analysis of the various policy frameworks and their impact on small business landscape in South Africa.

3.5.4.1. National Development Plan

The National Development Plan (NDP) is the overall guiding framework for the future development trajectory in South Africa. In projecting development dynamics for the next 15 years, the NDP sets out a number of proposals that must be achieved in the next 20 years to achieve a better South Africa. The Plan also provides analysis and scenarios in terms of the small and expanding firms.

The government has a fundamental role to play in ensuring the diversification, dynamism and linkages of the economy (The Presidency 2011: 117). A diversified and dynamic not only increases opportunities for employment, but creates a fertile ground for development of varied small businesses. Supporting small businesses is crucial for:

- high levels of competition;
- reduced levels of economic concentration; and,
- increased opportunities for broad-based black economic empowerment (The Presidency 2011: 118).

Thus, the plan obliges and encourages government to create an economic environment that is conducive to the dynamic development and expansion of new small businesses (The Presidency 2011: 118).

3.5.4.2. Integrated Development Plan and Spatial Development Framework

The Municipal Systems Act No. 32 of 2000 requires every municipality to produce an Integrated Development Plan (IDP), in which they map their short to medium term vision in line with development priority needs of the municipality. Given the spatially segregated pattern as a result of apartheid government laws, the IDP seek to address these by engaging a holistic planning that involves all the different stakeholders more particularly local communities in matters of local government (City of Johannesburg, 2015: 4). Thus, IDP is a crucial for ensuring support and integration of small businesses into the local economy.

As part of the IDP is the Spatial Development Framework (SDF). This is the spatial representation of all the strategic objectives and projects stipulated by the IDP. The SDF equally provides guidance in terms of ensuring future spatial integration, and thereby increasing access to small businesses that had historically been excluded from areas of economic opportunities (SPLUMA, 2013: 7). Considering the spatial dimension of the city is crucial for this study. Within the informal economy landscape, the spatial dimension relates to the issue of access, both in terms of physical access to facilities and access to various opportunities for growth and diversification. Whereas a number of cities in South Africa have attempted to improve physical access of informal traders to facilities, the same cannot be said in terms of improving access of informal trading to opportunities for growth and diversification. This has had serious impact in terms of stifling growth of the sector and its contribution to the overall economy. It is also important to note that, even in instances where access to facilities was provided, for instance, provision of market stalls, has tended to work against growth of these businesses as they are usually not built in areas where they can be easily accessible for trading of goods and services. In an effort to understand how accessible and integrated the City of Tshwane is towards accommodation and/or exclusion of informal waste recyclers through mapping the different assets used by the waste recyclers, their accessibility and whether the City is creating conducive environment for these to grow and develop into sustainable businesses.

3.5.4.3. By-laws on informal trading

By-laws are main local based frameworks that regulate dynamics of planning and development in municipalities. While these play an important role in ensuring control and order in municipalities, it can also have a negative impact on development, especially that of small businesses. Taking into account the developmental nature of the legislative and policy frameworks, there is a need for government, municipalities in particular to develop by-laws that encourage access and active operation of small informal businesses in areas of

economic opportunities. Thus, there is a need to rethink the by-laws in areas such as pedestrian movement, safety, advertising, public facilities and other related areas (Siqwana-Ndulo, 2013).

3.5.6. Informal trading in City of Tshwane Council

The City of Tshwane, just as other cities in South Africa is faced with numerous development challenges as people continue to move into the city in search of opportunities and better social amenities. As the city operates with constrained resources, it cannot meet the needs of all those in search of opportunities or those who choose to live in the city. As a result, people are forced to find creative ways to ensure they earn a livelihood. Often referred to as informal economy or informal activities or informal trading, this is the sector that has become fundamentally important in South Africa (Masonganye, 2010: 4; Ligthelm & van Wyk, 2004: 2). The informal economy offers opportunities to a large number of people in South African cities. The contribution of the informal trading can be assessed in two ways: - by measuring the numbers of people who have jobs or are involved in informal trading, and by measuring the value of the goods that these traders sell (Small Enterprise Development Agency, 2008: 13). The informal sector is reported to be contributing approximately five (5) per cent to the Gross Domestic Product (GDP), and about 1.5 million people are employed in the sector (Williams, 2014; Visser, 2014).

While many factors can be attributed to informal economy, Ligthelm and van Wyk (2004: 1) assert that the “emergence of the inform al sector is largely attributed to the divergence between the growth in especially the urban population and employment growth in the form al economy”. Thus when people cannot obtain employment in the formal sector of the economy, they are forced to find other ways to ensure they have access to a livelihood. City of Tshwane is also benefiting from the contribution to both the economic and social environment (Ligthelm & van Wyk, 2004: 2).

The nature of the composition of the informal economy is interesting as it comprises a variety of activities ranging from small commercial activities to small production and service enterprises (Ligthelm & van Wyk, 2004: 2). These are widespread in City of Tshwane, and the City has begun acknowledging this contribution by moving from punitive law enforcement towards creating an environment where informal trading can be supported to thrive. This however does not suggest that cases of abuse of informal traders are completely a thing of the past. There have been recent reports of police brutality and abuse of informal traders through the “operation clean up”. In the same way, the City has been reported to have on

several occasions refused to recognize Tshwane Barekisi Forum as a legitimate “umbrella body” for informal traders (Evans, 2014).

Generally, a number of challenges continue to confront informal traders in City of Tshwane. Apart from police brutality and lack of recognition from government, informal traders face the following challenges:

- Lack of access to finance;
- Lack of access to government support services such as support for technical business training;
- Poor business infrastructure such as water, storage services;
- Hostile government regulations such as public space and trading regulations;
- Crime; and,
- Traditional urban design techniques and urban fabric (Small Enterprise Development Agency, 2008: 11).

As alluded to earlier, cities including City of Tshwane have for some time been looking for ways to embrace and accommodate informal trading to enable this sector to contribute positively to the economy of the country. In 2008, the City of Tshwane partnered with Small Enterprise Development Agency (SEDA) to better understand the nature of informal trading activities, particularly street trading, composition, interface between the City and informal trading, contribution of this sector to the economy and policy issues regarding informal trading.

The City of Tshwane has also convened a process of formulating a policy on informal trading and related activities. Through the City of Tshwane Informal Trading Regulatory, Spatial and Economic Framework, the City has set fertile ground for growth of informal businesses. The policy provides diagnosis of the challenges faced by informal traders in the City and the need for policy to inform regulating mechanisms such as the by-laws on informal trading. The policy makes critical recommendations which the City needs to consider in support of informal trading. The framework or the policy targets the following broad areas of intervention:

- Spatial planning;
- Integrated planning system;
- Integrated Development Plan; and,
- Spatial Development Framework (Ligthelm & van Wyk, 2004: 60; Willimse, 2011: 8).

Central to all these areas of intervention is the spatial factor. The framework suggests that, the City of Tshwane needs to review its by-laws which in their current form are out-dated and ineffective (Ligthelm & van Wyk, 2004: 59). The framework recommends that "a properly drawn up set of by-laws, in pursuance of municipal policy must be implemented to properly regulate informal trading" (Ligthelm & van Wyk, 2004: 59). This is important from a planning and development point of view given that previously, regulatory frameworks into informal trading were based on draconian understanding small businesses which did not acknowledge importance of informal trading in contributing to the economy and employment of people. The development of policies and by-laws which are entrenched in the pragmatic principles which support and encourages growth of informal trading sector is crucial for ensuring sustainability of this sector.

This study argues that whereas studies and initial processes have been convened by the City of Tshwane in efforts to support growth of informal trading, the complexity of this sector of the economy must not be underestimated. Dynamics of informal trading are fluid, fickle and forever changing. One example of the complexity of this sector is the existence of waste recyclers. While a framework that regards informal trading in the City exists, it remains to be seen whether it responsively addresses the dynamics of the waste recycling landscape. This form of informal trading introduces new dynamics of trading as the traders have to move between various points, and in the process exposing themselves into a number of risks. Profound analyses need to be undertaken to explore the dynamics and intervention areas to consider for policy development.

3.6. Waste collecting and recycling: a survival strategy or informal small business

An interesting dynamic that this study raises is whether waste recyclers are carrying out this activity for trading purposes or mere survival. Determining nature of the activity is rather challenging to do due to the fact that a number of factors are at play. For instance, most of waste recyclers get involved in this activity as a result of lack of employment opportunities and the need for food. This illustrates a motive of survival strategy. However, once the waste recyclers are in the business of collecting recyclable materials, the motive changes. An entrepreneurial aspect of the recycling process begins to arise. While this study does not begin to suggest lots of money is accumulated by waste recyclers, it has been argued that this activity does present opportunities for development, and thus it must not only be treated as a survival strategy. One of the people who has recently recognised business development opportunities offered by waste recycling is Sifiso Ngobese, an economist who with the assistance of organisations such as Red Bull, has launched the Abomakgereza

Project (Manyathi, 2015: 1).Through the Abomakgereza Project, Sifiso Ngobese provides township waste collectors with durable carts that double up as billboards (Manyathi, 2015: 2). While improving safety and working conditions of the waste recyclers, they also:

- makes money charging for advertising space on the trolleys.
- 10 per cent of advertising revenue goes to the waste recyclers; and
- waste recyclers receive reflective gear; the trolley and money they earn from waste collection (Radio 702, 2015: 1).

Abomakgereza Project illustrates opportunities that exist for development of waste recycling into small businesses. For such initiatives to be a success, a fertile ground for support and development of such businesses need to be set. The question therefore relates to whether South Africa encourages development of small businesses.

South Africa presents an interesting case in terms of small business support and development. The country has in the last few years undergone substantive changes firstly following the introduction of the new government dispensation and more importantly massive migration to major towns and cities by both South African citizens and people from neighbouring countries. Not only has this introduced new meanings to how small businesses are understood and conduct their businesses, but it has also challenged how cities work and policies and strategies aimed at supporting small business. Challenges facing towns and cities have also increased in the last few years as increasing numbers of people demand increase in capacity of infrastructural services such as housing, water infrastructure, roads, sanitation and related social amenities. The changing dynamics of small businesses in cities has raised a lot of interested especially for those researchers and writers who have interest in African literature. In South Africa however, whereas studies have been done, there still remains a lot of implicit dynamics that need to be explored and unpacked. One of these is the fine line that exists between what can be regarded as a small business and a mere survival strategy. It is often the fine line between these that the government has grappled with in most instances, and has equally adversely received criticisms from those who regard the government policies of addressing challenges facing small business a failure.

However, it is important to underline that in the last few years; a lot has been done by the government to support small businesses. A number of support policy programmes have been developed to ensure support, growth and to an extent sustainability of small businesses. As asserted earlier, the question remains as to whether these various support

programmes are compatible with the realities and what this study argues, the true definition of what small businesses is today. The landscape has changed significantly in the last few years. As was highlighted by one of the respondents during the interviewing process, “things have changed in Tshwane. It is slowly becoming like Johannesburg. There are certain parts of the City where you would not even think you are in South Africa. The scent and voices as products are exchanged makes you feel you are in another African country not South Africa” (*Responded 6, pers. comm, 7 August 2015*). It is such nuances that this study argues need to be taken into consideration by government in its efforts to support small businesses. Such understanding is much needed in South Africa given challenges of poverty, food insecurity and unemployment facing the country. While there is contention and no clear estimates of the contribution of small business to employment, some reports have indicated most of the employment opportunities are provided by small businesses which in some cases are regarded as informal businesses. This assertion brings an important aspect of understanding small businesses.

A wide spread and orthodox definition of what constitute a small business is often defined along the lines of number of employees and turnover of the business over a specified time period, usually over 12 months (Business Dictionary, 2015: 1). In South Africa, a small business is understood to be an “industrial undertaking or a business concern or any other establishment, by whatever name called, engaged in the manufacture or production of goods, in any manner, pertaining to any industry specified” (Ministry of Micro Small and Medium Enterprises, 2006: 1). While this definition is not as explicit as orthodox definitions based on number of employees and turnover, most, if not all of the government support programmes have been designed based on traditional definition of what constitutes a small business. A few examples of these programmes are listed and briefly described below.

3.6.1. Black Business Supplier Development Programme (BBSDP)

The government, through the Department of Trade and Industry (DTI) offers the Black Based Supplier Development Programme (BBSDP) which is designed as cost-sharing grant offered to black-owned small enterprises to assist them to improve their competitiveness and sustainability to become part of the mainstream economy and create employment. The programme provides grants to a maximum of R1 million, which R800 000 must be spent on business needs such as tools, machinery and equipment, and R200 000 on business development and training interventions for purposes of improving business corporate governance, management, marketing, productivity and use of modern technology (Department of Trade and Industry, 2015: 1).

Another side to comprehend is the eligibility criteria that small businesses have to satisfy to qualify and access the grant. Among other things, small businesses have to satisfy the following criteria:

- R250 000 to R35 million turnover per year;
- Enterprises formally registered for VAT;
- One year in operation and trading as a business; and,
- Fifty per cent management positions held by black people or historically disadvantaged individuals. (Department of Trade and Industry, 2015: 1).

3.6.2. Incubation Support Programme (ISP)

The government has also developed an Incubation Support Programme (ISP) as part of its effort to develop incubators and create successful enterprises with the potential to revitalise communities and strengthen local and national economies. The primary purpose of this programme is to encourage partnerships between the government and small businesses to develop these businesses and nurture them into sustainable enterprises that can provide employment and contribute to economic growth. The intention is to have small businesses eventually graduate into the mainstream economy through the support provided by the incubators. The programme also has a set of criteria for selection of qualifying small businesses; which includes among other things, sharing of costs and the small business need must be for infrastructure and business development services, be a registered higher or further education institution and be a licensed and/or registered science council (Department of Trade and Industry, 2015: 1).

There are other programmes that have also been developed such as the Integrated Strategy on the Promotion of Entrepreneurship and Small Enterprises, Draft Regional Industrial Development Strategy (RIDS), Broad-based black economic empowerment strategy (BB-BEE), National strategy for the development and promotion of franchising, Strategic framework on gender and women's economic empowerment, National youth enterprise strategy, Co-operatives policy and development draft strategy and the Draft strategy framework for forestry enterprise development (Department of Trade and Industry, 2006: 17). These however only focus on the established small businesses in accordance with the traditional definition of small businesses. The programmes do not in any way acknowledge small businesses such as informal waste recyclers. The main disjuncture in the government support of small businesses is the need and push for businesses to follow certain strict processes for recognition.

It must be noted however that whilst the support programmes are still designed based on traditional understanding of small businesses, the government has begun at least in policy to acknowledge the dynamics of small business landscape. In the Integrated Strategy on the Promotion of Entrepreneurship and Small Enterprises, the government asserts that small businesses must include micro-enterprises, survivalist enterprises, informal sector enterprises, and formal small and medium-sized enterprises. It also covers businesses in all stages of evolution, from pre-establishment to start-up, emerging, stable or expanding, as well as enterprises in distress (Department of Trade and Industry, 2006: 5). This is an important assertion as it suggests that the government is moving from a draconian, one-size-fits-all understanding and support of small businesses. This understanding of what constitutes small businesses has filtered down to local level. City of Tshwane is one municipality that has sought to support development of small businesses of this nature taking into account the complexes and nuances that are associated with them.

3.7. Concluding remarks

Discourse on livelihoods has evolved in the last few decades. Substantial studies initially focused on issues around root causes of poverty and how these can be addressed at national or country level. In recent decades, the realisation was that there is a need to understand micro, household and individual dynamics of livelihoods as aggregation of analyses at country level did not offer real picture as local dynamics of livelihood security. In the developing countries such as South Africa, another dimension of livelihoods has been added which acknowledges multiple strategies (often referred to informal trading) that households and individuals employ to earn a livelihood. South Africa has gone an extra mile by acknowledging the crucial role played by informal trading activities in contributing to the employment of people and the economy. However, it should be pointed out that whereas the importance of informal trading has been appreciated, nuances and complexities still exist in this sector. One example that illustrates these complexities is the existence of waste recyclers in the City of Tshwane. Waste recyclers fall outside of the confines of traditional definitions of a small business, but it however presents opportunities and has a potential to grow and contribute towards the employment of people in cities. The City of Tshwane has directed some of its efforts towards addressing and supporting informal trading, street trading in particular to ensure its growth. Waste recycling on the other hand represents new dimension of informal trading, and it remains to be seen whether the City is able to address and support waste recyclers.

CHAPTER FOUR: EMPIRICAL STUDY

4. Introduction

This study has looked at a wide range of viewpoints, arguments and discourses on livelihoods and how the concept has developed over the last few decades. The understanding of the concept has changed significantly overtime with its foundation on structural or economic factors to incorporation of social factors and dimensions of livelihoods. It was however in the late 1980s that literature on livelihoods began to take a significant turn following the focus on livelihood strategies in the countries of the developing world. Given the magnitude of the informal sector in the countries of the developing world, literature on livelihoods began to shift from traditional understanding and definitions of livelihoods to contemporary thinking with emphasis on the strategies that people employ to ensure means living. This gave way to coining of concepts such as multiple livelihood strategies by writers such as Francis Owusu, which essentially sought to comprehend the intricacies and nuances that exist within the informal sector. The concept of multiple livelihood strategy suggests that people use a number of ways to ensure that they have access basic essential needs such as food, water and clothing. These multiple strategies therefore translate to different assets that are natural, financial, human, social and economic assets. The assets are the building blocks through which people access and ensure resiliency of their livelihoods. In the African region, the informality is commonplace in a number of countries including South Africa.

South Africa presents an interesting case with regards to understanding informality. While renowned as one of the most developed economies within the African continent, the country is equally confronted by high levels of poverty, inequality and unemployment. The government has attempted to put in place some measures to curb these by introducing among other things social grants to support those who are very poor, but also more importantly, it sought to create a conducive environment where businesses can prosper and in turn create employment opportunities. This kind of thinking is evidently linked to the notion that increased economic growth somehow gives way to an increase in the number of employed. This notion has been challenged on many fronts, and South Africa is a good example of where intensified economic growth has not led to a rise in employment levels. Substantial numbers of people remain unemployed, more particularly young people with reports indicating youth unemployment at approximately 70 per cent (UNFPA, 2014, 1). A number of reasons can be attributed to this, from the past separate development trajectory where the majority of South African citizens were excluded from mainstream economy to

poor education systems and high number of people with skills required in the formal economy. As a result, many people have been left with no choice but to find ways to ensure they have access to food and other essential basic needs. They have had to be involved in the informal economy as it was illustrated in through the study of informal waste recyclers in chapter 3 of the study.

Following from the analysis of the informal sector and the informal recycling in the City of Tshwane, this chapter investigates a specific community within the City in an endeavour to provide context specific analysis of dynamics and mechanisms that people have to put in place to ensure they access to livelihoods. This chapter introduces the community of Atteridgeville, introduces and locates assets in the community of Atteridgeville, maps assets that are used by the informal waste recyclers, identifies constraints for integration in the city and opportunities to achieve the ideal integrated city. The structure of the argument is illustrated by Figure 8 below.

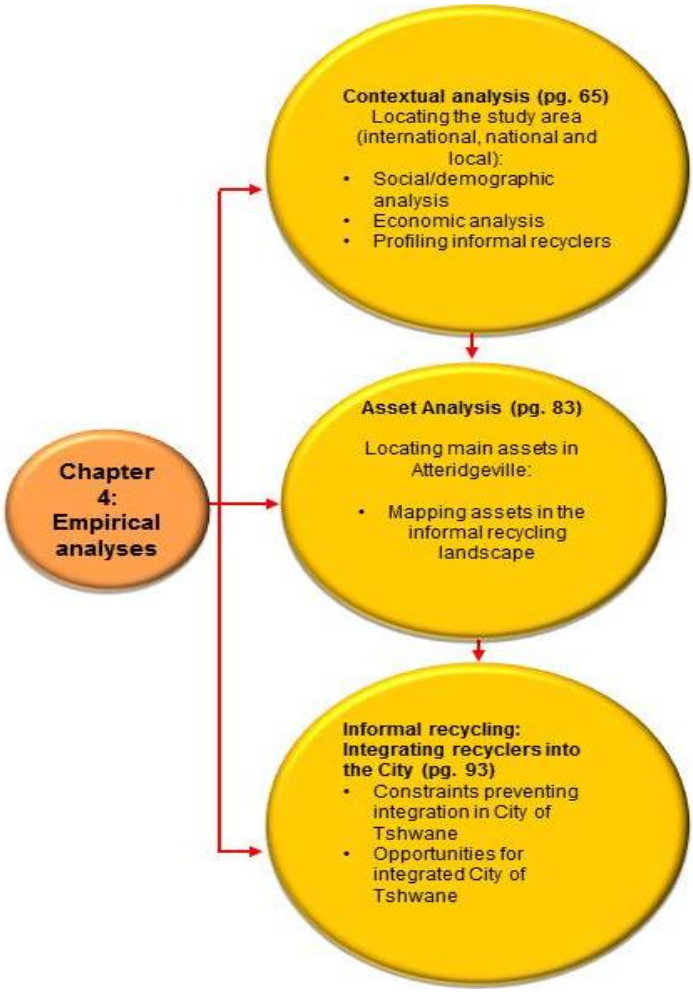

Figure 11: Line of argument in the chapter
Source: Own construction, 2015

4.1. Contextualising the community of Atteridgeville

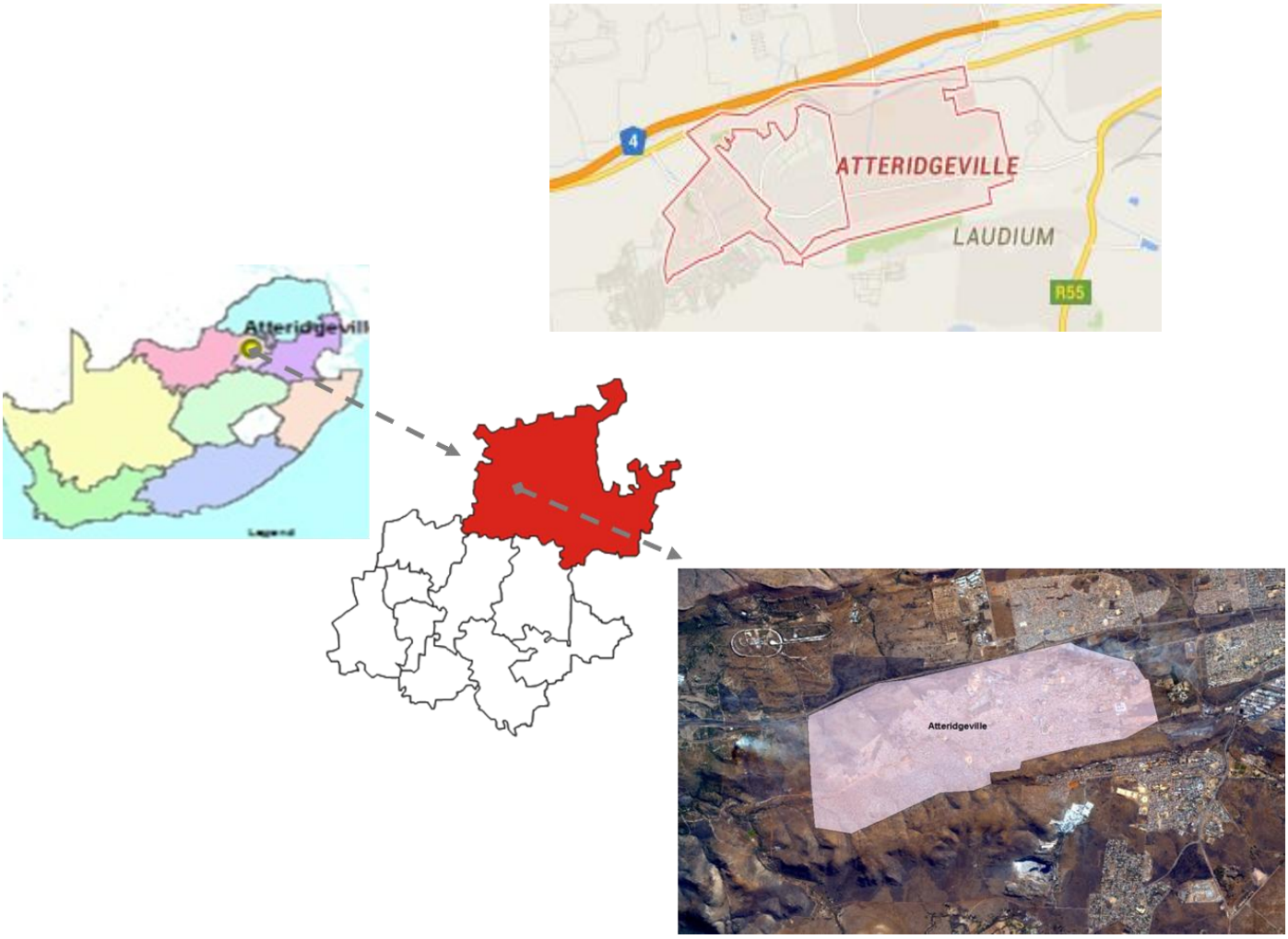

Figure 12: Locating Atteridgeville within national and regional context
Source: Own construction, 2015.

At the international level, Atteridgeville is located at the southern tip of the African continent, in South Africa. Regionally, the area is located in the Gauteng Province which is one of the 9 provinces in South Africa. The area falls within the City of Tshwane which is the administrative capital of the country.

Located in the west of the City, Atteridgeville is a township that was established in 1939, as a settlement for black people and is named after its founder Mrs. MP Atteridge, who at the time was a was chairwoman of the Committee for Non-European Affairs in the then Pretoria City Council. The area is bordered by Sausville to the west and the Proclamation Hill to the east and Laudium to the south (SA Web, 2015).

Just as other townships in South Africa, Atteridgeville has a history of development similar to other townships. Following the Slums Act of 1934, that granted the government of the time a

mandate to clean up all areas closer to city centres,that were occupied by non-whites; meaning that all non-white citizens were to be moved away from areas closer to the Pretoria city centre. -. People who were forcibly moved from areas such as Marabastad and Bantule settled in the new settlement called Atteridgeville. As years went by, more people moved into the area as a result of enactment of Native Trst Land Act of 1936 and the need for workorce for companies located in the city (SA Web, 2015: 1; SA History Online, 2015: 2). Atteridgeville was an ideal township as a result of its location within a 12 kilometre radius and close proximity to the industrial buffer zone separating it from the city.

It should be highlighted that even though areas such as Atteridgeville offered a sizeable workforce, the area was never planned as a permanent settlement but rather a temporary labour reservoir. As a result, there was no significant investment in terms of public facilities such as roads, electricity, schools, public parks and other related facilities. Lack of facilities therefore meant people had to find their own means to access facilities, and in some instances had to share facilities. People organised themselves into interest groups and self-help schemes within the community. The people turned to sport and culture to create new bonds and alleviate the poverty suffered by most of the residents. Even though employment opportunities were limited in the area, some small businesses were created by those who worked in city and had access to capital (SA History Online, 2015: 1).

The area has experienced many dynamics in the last few decades. As highlighted above, there are periods that are noticeable in the development trajectory of the area such as the 1960s where development was halted following the enactment of the Homelands Act, which confined development for black people in areas defined as homelands (SA Web, 2015: 1). It was only in the early 1980s that Atteridgeville was granted municipal status and development started occurring in the area. In the post-apartheid era, the area has received a lot of development as a result of its location in relation to the city centre. The area has also experienced in-migration from people coming from nearing provinces such as Limpopo, Mpumalanga, North West and KwaZulu Natal. As a result, the area has a mixture of all languages including northern Sotho, Tswana, IsiZulu and Sotho (SA History Online, 2015: 1). The understanding of the historical developmental trajectory of Atteridgeville is crucial for understanding what the waste recyclers in Atteridgevill regard as assets, as well as the location of these assets and factors influencing waste recycler movement patterns. The historical patterns and how people were settled has influence on spatial organisation of societies today, and Atteridgeville is not an exception.

As stated above, as a result of migration, there is also a presence of migrants from other African countries, particularly Sub-Saharan countries. Figure 13 below illustrates percentages of people by their region of birth.

Large parts of the population (96 per cent) in Atteridgeville are South African citizens (by birth). There is also 2 percent of the population which comes from other countries of Sub-Saharan Africa. Nonetheless, in the whole of the Tshwane region, 90 per cent of the population is South African and the other 10 per cent are from other Southern African Development Community countries.

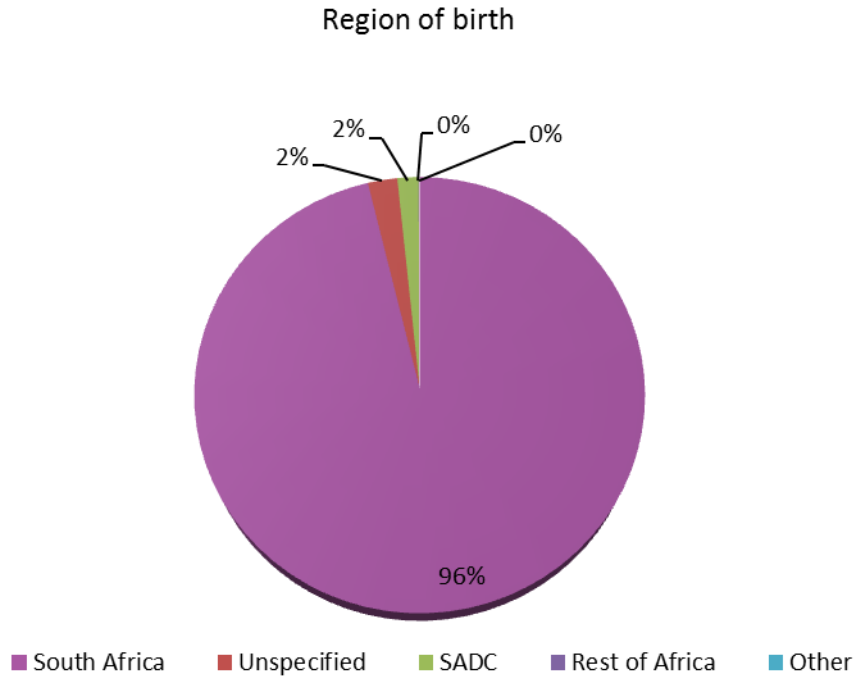

Figure 13: Region of birth in Atteridgeville
Source: StatsSA data, 2011.

Today, Atteridgeville is a well-developed residential area with a myriad of service provisions such as roads, bus facilities, clinics and hospitals, schools, recreation centres, public parks, high mass public lighting, pedestrian streets and shopping centres. The population of the area is projected at 88 690 with 51 per cent (45,675) being male and 49 per cent being female (43,015) in relation to the total population of 2 921 488 in Tshwane with 50.3 per cent being female and 49.8 per cent being male.

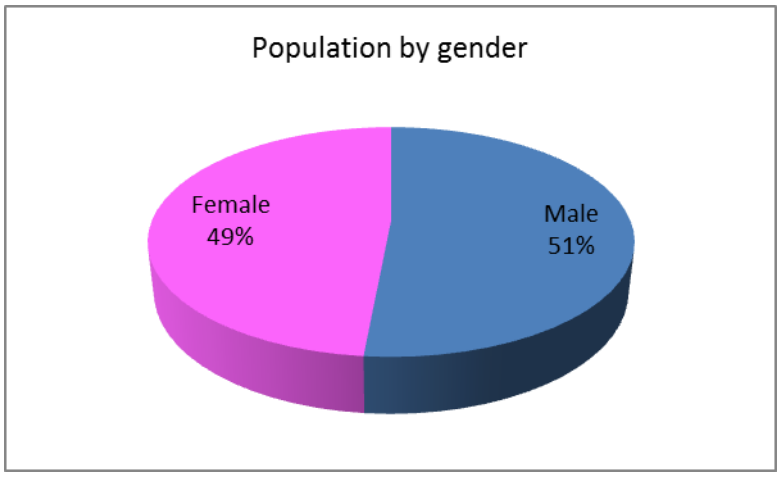

Figure 14: Population by gender in Atteridgeville
Source: StatsSA data, 2011.

In terms of access to the education, a noticeable portion of the population has acquired some level of education with approximately 47 per cent of the population having Grade 12 and 38 per cent having secondary education in comparison to the 40.4 per cent in Tshwane with Grade 12 and 24.4 percent with secondary education. The number of people with the higher education qualification decreases with increasing level of education. As illustrated in Figure 11, only 4 per cent of the population has a diploma or degree and 1 per cent has a post-graduate degree.

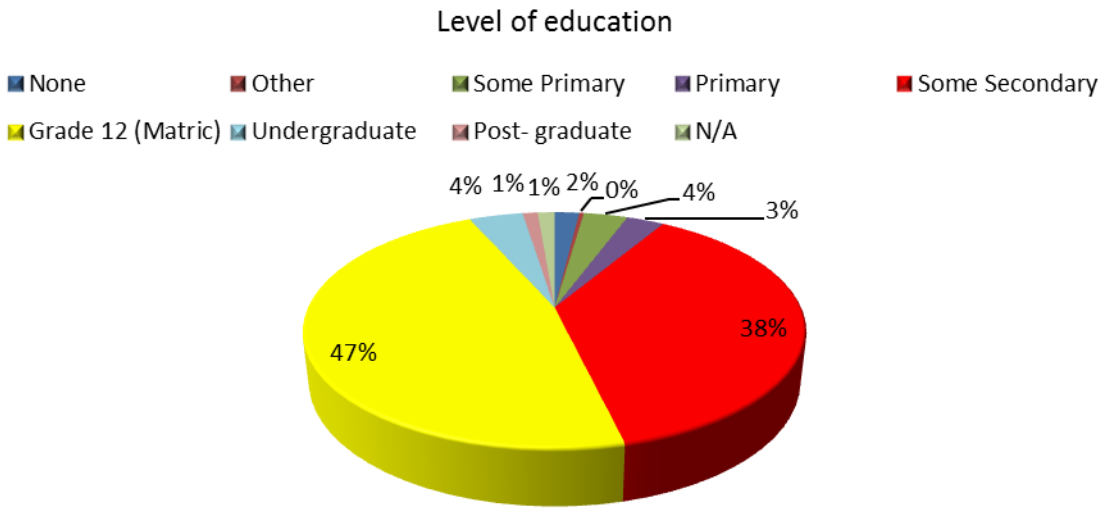

Figure 15: Level of education in Atteridgeville
Source: StatsSA data, 2011.

4.1.2. Atteridgeville local economy

The local economy of Atteridgeville has grown and diversified considerably in the last two decades. Unlike before where the area served as a dormitory for the workforce in the city and adjacent industries, the area today boasts its own diversified local economy offering both manufacturing and tertiary sector services. The area has benefitted greatly from government efforts aimed at revitalisation of townships and peri-urban areas in an effort to build and grow local economies of these areas and bring opportunities and social amenities closer to people. Since 1994, the area has seen three recognisable shopping complexes (that is Attlyn, Maunde Plaza and Atteridgeville Plaza) built (ePropnews, 2005: 1). These have gone a long way towards offering employment opportunities to both local people and those from the neighbouring communities (Strydom, 2006: 91). It is important to also note that there are local convenient supermarkets and spazza shops which offer employment for local people.

Poverty and unemployment remains rife in the area with reports indicating it to be at approximately 70 per cent. As a result, many people have had to find innovative ways to make a living. Often referred to as informal activities; these innovative ways range from informal settlements, spazza shops, selling of goods at taxi ranks to collection of waste materials for recycling and generation of income.

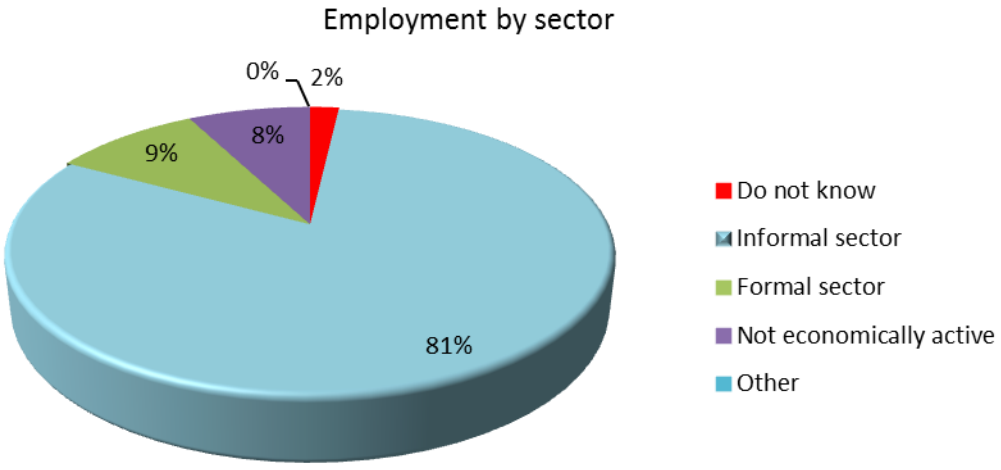

Figure 16: Employment by sector
Source: StatsSA data, 2011.

The informal sector employs a larger portion of the Atteridgeville population. Approximately 81 per cent of the people are in the informal sector in comparison to the 10 per cent of the people in Tshwane involved in the informal sector. While many reasons can be attributed to

this, it is stated in this study that prevalence of poverty and unemployment as well as low levels of skills are the main drivers for people to seek opportunities in the informal sector.

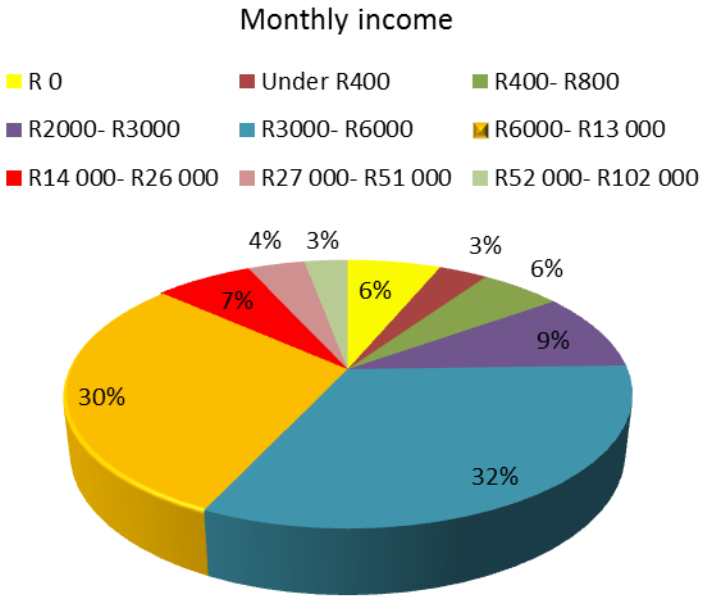

Figure 17: Income levels in Atteridgeville
Source: StatsSA data, 2011.

Income varies greatly in Atteridgeville. A large portion of the population falls within the R3000 – R6000 income bracket, whereas in the whole of Tshwane a large portion of the population earns between R2000- R3000. This is followed by the population that earns between R6000 – R13000 of income. Only 7 per cent of the population earns between R14 000 – R26 000 and 3 per cent earn income between R 52 000 – R 102 000.

The understanding of this development trajectory of Atteridgeville is crucial for this study for purposes of providing an entry point and setting the premise for understanding different attitudes and behaviours of people living in this area, the types of assets they have access to, opportunities and threats that their livelihoods are susceptible to and the strategies they use to ensure access to sustainable livelihoods. Thus, their choices, actions and behaviours are largely influenced by spatial form and structure. This said, it should also be mentioned that the area has developed, and the economy has also grown.

The section below provides the background of the waste recyclers that participated in the study. The section is therefore followed by the mapping of various assets that waste recyclers highlighted as the most important for maintain their livelihoods.

4.2. Profiling informal waste recyclers in Atteridgeville

It is crucial to understand the profile of people that are dealt within the study before the mapping of assets. This assists in shedding light towards the reasoning behind why people choose certain livelihood strategies over others. Based on the interaction with the participants, it became clear that resorting to informal waste recycling is influenced by factors discussed below.

4.2.1. Gender

In terms of gender, it was revealed that 76 per cent of the waste recyclers who participated are male and 24 per cent are female as indicated in Table 5. This to a large extent has to do with demands of recycling such as having to walk lot distances sometimes with no water and food. There is also an understanding that women have to take care of the children and thus cannot be involved in the waste recycling business. It should be highlighted however that there were women who had children who participated in the study. They mentioned however that it is difficult having to work and look after the baby. Also, their children often get sick as a result to sun and waste exposure with some waste containing hazardous chemicals.

Table 5: Gender distribution of waste recyclers (n=50)

Gender	*f*	%
Male	38	76
Female	12	24

Source: Survey data, 2015

A study on recycling at Uitvalfontein Landfill Site, in Randfontein, West Rand District carried out on waste recyclers indicated that recycling in the area is done on an informal basis and there are no records of the amount of waste being recycled. Waste recyclers at this site consist of 120 women and 230 men which form 66% of the total waste recyclers' population in the area of which most of them are immigrants. These waste recyclers engage in this informal trade as a coping strategy due to the socioeconomic realities they face on a daily basis (Bhawandin, 2013. 59).

4.2.2. Population group

There is a perception that the landscape is male dominated because most of the waste recyclers are foreign nationals as indicated in Table 6. One of the questions asked during the interviews sought to find out whether waste recyclers were born in Atteridgeville to which 66 per cent answered 'no'.

Table 6**:** Country of origin (n=50)

Gender	*f*	%
South Africa (Atteridgeville)	17	34
SADC country	33	66

Source: Survey data, 2015

Another site engaging in informal waste recycling is the Marie Louise Landfill Site in Roodepoort, City of Johannesburg. This site has 140 women and 160 men involved in informal waste picking and recycling. Only 25% of the waste recyclers at this site are immigrants from Southern African Development Community (SADC) countries (Bhawandin, 2013. 61).

4.2.3. Household dynamics

Waste recyclers were also asked whether they lived with their families in Atteridgeville. A noticeable 75 per cent of the participating waste recyclers indicated that they do not live with their families in Atteridgeville. Coupled with this is that 96 percent of interviewed waste recyclers pointed out that informal waste recycling is their only source of income, with 4 percent involved in other activities such as gardening, domestic work and street cleaning. Given that the waste recyclers do not live with the rest of their families in Atteridgeville, this suggests that income earned from recycled material has to be shared between the rest of family members and the recycler. The sharing of income raises some challenges as most, if not all, waste recyclers do not have access to banking services. Respondent 9 explained how money is shared. He noted "*I always have to go home to Mamelodi every Friday after work. I then spend Saturday at home with my family and then come back to Atteridgeville on Sunday. The travelling does costs me a lot of money which I was going to use it for buying food if I was staying with my family*." (Respondent 9, *Pers. Comm*, 16 September 2015).

Table 7: Household dynamics (n=48)

Living with household in Atteridgeville	*f*	%
Yes	36	75
No	12	25

Source: Survey data, 2015

Majority (70 per cent) of the waste recyclers are sole breadwinners of their families. This points to the importance of waste recycling in providing livelihoods to families of waste recyclers. As noted by Respondent 3, "*This work is very important to me and my family. If it was not for these materials I collect, my children and I would have died by now*." (Respondent 20, *Pers. comm*, 18 September 2015).

Table 8: Household breadwinners (n=50)

Waste picker as sole Breadwinner	***f***	**%**
Yes	35	70
No	15	30

Source: Survey data, 2015

4.2.3. Level of education

While a large number of waste recyclers had no primary education (28 per cent), most of the waste recyclers had some primary education, with 46 per cent of the waste recyclers indicating that they had some form of primary education. The percentage of waste recyclers decreased with increasing levels of education. Only 24 per cent of the waste recyclers had some secondary education and 2 per cent with a national diploma qualification. Perhaps it is important to highlight the point that even people with diplomas are now involved in informal waste recycling. This evidently points to the severity of unemployment and poverty in the City and South Africa as a whole. A common assumption is that upon completion of a national diploma, one is able to access employment opportunities.

Table 9: Highest level of education by waste recyclers (n=50)

Level of Education	***f***	**%**
Primary school education	14	28
High school education	23	46
Diploma qualification	12	24
Degree qualification	1	2

Source: Survey data, 2015

This points to the fact that such an assumption is entirely false, and thus should not be held as the truth that education automatically leads to access to formal employment opportunities. The availability of waste recyclers with some level of primary and secondary education presents an opportunity for further training and improvement of skills of waste recyclers.

4.2.4. Income from recycling

This issue is the most critical for the waste recyclers. All the efforts that they put in are ultimately for purposes of having access to financial resources. The waste recyclers were asked to indicate how much they make from recycling waste on a monthly basis to which 10 per cent replied between R601 – R700, 12 per cent between R701 – R800 and 44 per cent indicate they make over R1000. The difference in levels of income accumulated is interesting to note because from the engagements, all the waste recyclers alluded to the fact that they all put a lot of effort in ensuring that they get as much money as they can. Based on the observation, the different income levels is as a result of the following:

- size of the trolley;
- type of material collected;
- Familiarity with other waste recyclers and Atteridgeville; and,
- gender (men indicated that they make over R1000 while women stated that they make less).

Table 10: Income accumulated by waste recyclers in a month (n=50)

Income accumulated	***f***	**%**
R101- R200	1	2
R201-R300	2	4
R301-R400	1	2
R401-R500	3	6
R501-R600	4	8
R601-R700	5	10
R701-R800	6	12
R801-R900	2	4
R901-R1000	4	8
More than R1000	22	44

Source: Survey data, 2015

It should also be noted that waste recycling is not the only source of income for waste recyclers. Waste recyclers were also asked to indicate whether they received any government support in terms of social grants. Most of the waste recyclers (83 per cent) alluded to the fact that they do not receive any grants from government, expect for the social grant which 17 per cent mentioned that they do receive child support grant. Lack of government support is as a result of nationality status since most of the waste

recyclers are foreign nationals and as a result do not satisfy the criteria for various government support grants.

Table 11: How long income sustains the waste recyclers (n=50)

Period	***f***	**%**
Enough for a day	4	8
Enough to sustain for 1week	26	52
Moderate to sustain for 2weeks	20	40
Enough to sustain a month	0	0

Source: Survey data, 2015

Despite the income earning opportunity from the informal recycling, it still provides very little scope for improving their livelihoods. The income generated is solely dependent on weather recycling material is available or not and the quantity thereof, over which they have no control.

52 per cent of the waste recyclers in Atteridgeville stated that the income they generate from waste picking in a month is only enough to sustain the household for a week, while 40 per cent revealed that the income can sustain the household for two weeks at most.

With the income, the waste recyclers are only able to afford the basic or fundamental necessities that they can access to better their livelihoods such as food, clothing, household necessities, schooling and healthcare.

Table 12: What waste recyclers manage to satisfy with income: (n=50 for each satisfaction)

Said yes to satisfying their access to:	***f***	**%**
Food	50	100
Schooling	24	48
Clothing	34	68
Household necessities	30	60
Rent	27	54
Transport	50	100
Healthcare	50	100

Source: Survey data, 2015

4.2.5. Age profile of waste recyclers

Table 13: Age of the waste recyclers (n=50)

Age group	*f*	%
13-25	6	12
26-35	16	32
36-45	17	34
46-59	10	20
60+	1	2

Source: Survey data, 2015

A study by Wilson, Parker, and Kan (2007:40) reports on the increasing trends in the discrimination against older job candidates and concludes that age is a limiting factor in finding employment, even though the older candidates have the same or in some cases greater human capital attainment than the younger candidate. Therefore, the likelihood of older people find employment and the accompanied return for seeking a job is low (Wilson *et al*., 2007:40)

The majority of waste recyclers in Atteridgeville are adults aged between 36 and 45 and young adults between the ages of 26 and 35. The majority of the waste recyclers in the age group between 46 and 60 highlighted that they resorted to waste picking as a result of being retrenched from their previous employment while still having families to provide for.

4.2.6. Material collected by waste recyclers

Waste recyclers collect many different types of material to recycle that are easily accessible to them. The material that the waste recyclers in Atteridgeville access are weighed at four different recycling companies, namely; Nampak, The Waste Group, Remade recycling, and Epic recycling that all have specification and pricing on the recyclable material that they agree to take.

Table 14: Material collected by waste recyclers (n=50 for each material collected)

Material type	*f*	(%)
Plastic	17	14%
Glass	19	38%
Cans	28	56%
Newspapers	21	42%
Cardboards	33	66%
Bottle caps	3	6%
Scrap metal	4	8%
Plastic bottles	46	92%
White office paper	16	32%

Source: Survey data, 2015

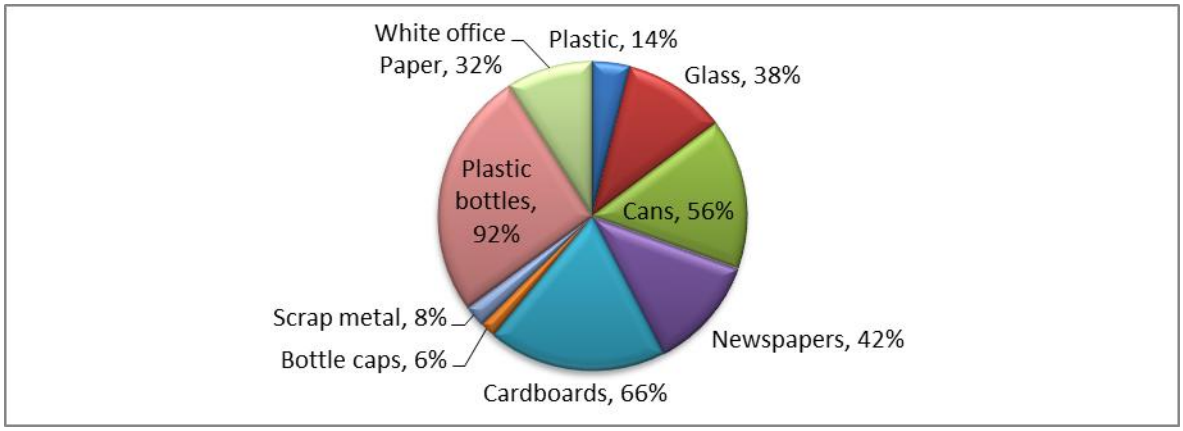

Figure 18: Breakdown of material recycled by waste recyclers
Source: Survey data, 2015

Majority of the waste recyclers collect plastic bottles (92 per cent) followed by cardboard from boxes (66 per cent) and mixed cans (56 per cent). Newspapers (42 per cent) and glass (38 per cent) are also popular to waste recyclers. These are the materials that yield a higher profit when weighed at recycling companies.

Table 15: Remade recycling pricelist per (kg)

Type	Price per (kg)
Plastic	R0.95
Glass	R0.40
Cans	R0.50
Newspapers	R0.60
Cardboards	R0.80
Bottle caps	R2.00
Scrap metal	Do not trade anymore
Plastic bottles	R2.30
White office paper	R1.65

Source: Remade recycling, May 2015

4.2.7. Mode of transportation of waste

Table 16: Mode of transportation of collected material (n=48 for each mode of transport)

Mode of transport	*f*	%
Walking trolley	46	96
Rented van	0	0
Private vehicle	0	0
Recycle truck	0	0
Bicycle	2	4

Source: Survey data, 2015

The street waste recyclers in Atteridgeville collect their materials from various suburbs and business retail companies in Tshwane. They carry heavy loads which mostly since being disposed of. Because they walk to various suburbs on a daily bases, they usually move heavy loads over long distances. 96 per cent of waste recyclers in Atteridgeville use trolleys to move their waste from one place to another. Only 4 per cent of the waste recyclers have access to a bicycle that they can use to drag the waste with.

4.2.8. Labour hours

According to the information gathered, the majority of the street pickers have long working hours that can begin at 1am ending at 5pm in order to start collecting recyclable waste as

early as possible, from as many household dustbins of different suburbs that are scheduled for waste collection on a particular day before the municipal trucks collect the dustbins. 78 per cent of the waste recyclers begin their day between 1am and 3am, 18per cent begin their day between 4am and 6am. Majority of the waste recyclers work a full 12hours or more a day.

Table 17**:** Length of working day (n=50)

Work starting hours	***f***	**%**
00:00am	2	4
Between 01:00am-03:00am	39	78
Between 04:00am-06:00am	9	18
Between 07:00am-09:00am	0	0

Source: Survey data, 2015

All the waste recyclers in Atteridgeville travel on foot for many hours covering distances of over 10 kilometres a day. A higher profit per month can only be achieved should the waste recyclers travel to more waste collection points and cover a longer distance. Gill (2007) argued that waste recyclers exhibit the lowest rate of mobility towards better jobs, making it impossible for them to move out of their current work into alternative occupations.

A study by Gowan (2009) found that in the city of San Francisco, the informal trash (bottles, plastics, cardboard, and aluminium cans) collectors make between US$56 and US$20 a day, many working up to 12 hours daily, taking in two or three loads of 50 to 100 kilogram of trash each. According to an article by Jooste (Finweek, July 2009) Petco reported that approximately 5.4 billion beverage bottles were recycled in 2008 in South Africa.

Table 18: Length of working day (n=50)

Work ending hours	***f***	**%**
15:00pm	2	4
16:00pm	18	36
17:00pm	11	22
Later than 17:00pm	19	38

Source: Survey data, 2015

4.2.9. Reason for collecting waste

Despite the harsh physical conditions of waste picking, many individuals still get involved in waste picking. The reason for getting involved highlighted by 46 per cent of the waste

recyclers is that it gives them convenient wages that they are fully in control of on either a daily, weekly or monthly basis.

However, receiving an income is not the only reason for engaging in waste picking activities. 44 per cent of the individuals stated that they do not have any qualifications that can allow them to enter into the formal income generating sectors, while 36 per cent alluded that they have no other choice but to engage in waste picking due to circumstances at home of being sole breadwinners.

Table 19: Reasons for being a waste picker (n=50 for each reason)

Answered yes to the following reasons	***f***	**%**
No qualification	22	44
No access to work opportunities	17	34
Forced by circumstances at home of being a breadwinner	18	36
Only way to make an income	16	32
Convenient wages	23	46

Source: Survey data, 2015

Through the easy access of becoming a waste picker, a large percentage of the waste recyclers have been involved in this form of informal trading for many years. 74 per cent of individuals have been involved in waste picking for more than two years whereas only 16 per cent being new to waste picking with only 6months.

4.2.10. Period of involvement in waste picking

Table 20: Period involved in waste picking (n=50)

Period of first involvement in waste picking	***f***	**%**
1week- 2weeks ago	0	0
4weeks- 8weeks ago	0	0
12weeks- 24 weeks ago	8	16
36weeks- 48weeks ago	5	10
More than 2years ago	37	74

Source: Survey data, 2015

4.3. Locating assets of the waste recyclers in Atteridgeville, Tshwane Municipal Council

In the review of literature, the study stated that assets comprise of human capital, natural capital, social capital, physical capital and financial capital that individuals or households use to earn a livelihood. These can be summarised as follows:

- Human capital (such as labour capacity, education, skills);
- Natural capital (access to land and property resources);
- Financial capital (wages and access to credit);
- Physical capital (water, housing, communication infrastructure); and,
- Social capital (social status, family, other soft infrastructure and relations) (Moser, 1998: 4).

The location of assets within the Atteridgeville community is situated within this framework. While there exist many assets in the Atteridgeville community at large, the assets highlighted in the study are those that were indicated by the participants in the study. The various assets are indicated by the Figures below.

4.3.1. Physical assets

4.3.1.1. Healthcare facilities

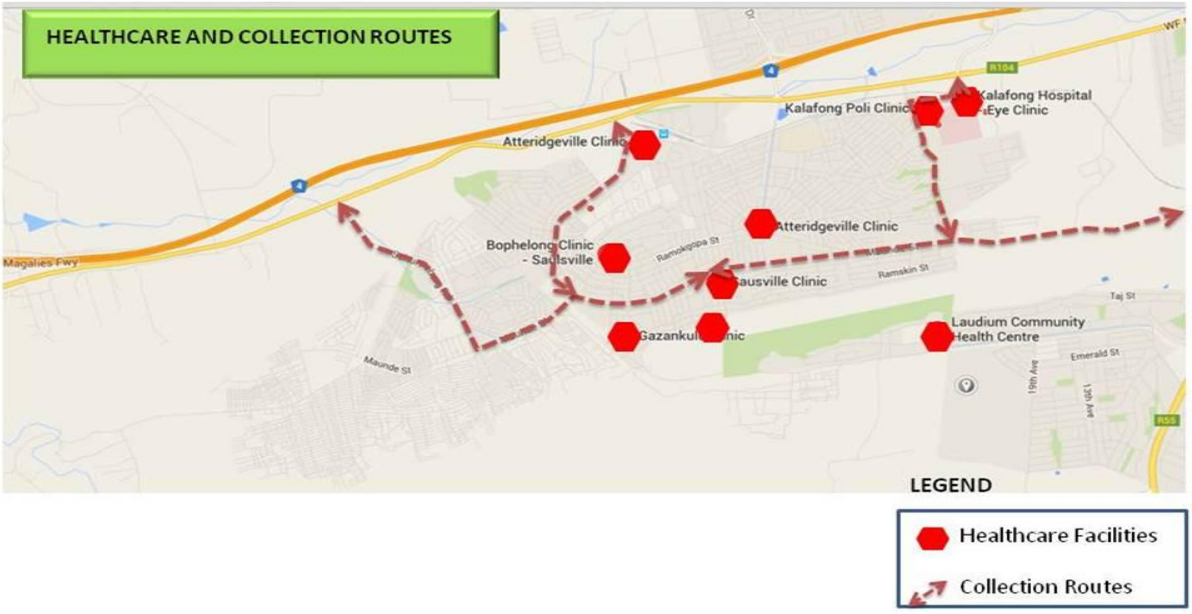

Figure 19: Health facilities as collection points in Atteridgeville

Source: Own construction, 2015

During the interviews, a number of waste recyclers indicated that they regularly visit clinics and hospitals to collect recyclable materials. Respondent 13 specifically stated that "*I visit Kalafong Hospital three times a week; on Monday, Tuesday and Thursday. I manage to collect a lot of stuff from the hospital especially cans, plastics and cardboards*. *The security guards know me now, and they do not give me any problems. I have made friends with some of them" (Respondent 13, Pers. Comm, 18* September *2015).* Respondent 3 and 42 also echoed similar sentiments regarding the usefulness of the Kalafong hospital for collection of recyclable materials. Respondent 3 highlighted "*during the first days when I started recycling, I would not collect a lot as I do now, and there would be misunderstanding between others who also collect here and myself. After sometime however, we started to talk with each other that some people must collect on some days, and others on other days. I now collect on Wednesday and Friday. This arrangement is good because I now do not have to compete with material with a lot of people even though I still have to wake early in the morning to make sure that I collect as much as I can*" (Respondent 3, Pers. Comm, 15 September 2015).

Kalafong Hospital is not the only local health facility visited for collection of recyclable materials. Other areas used as physical assets for collection of recyclable materials are:

a) Atteridgeville Clinic;
b) Gazankulu Clinic;
c) Phomolong Clinic;
d) Saulsville Clinic;
e) Laudium Clinic; and,
f) Laudium Community Health Centre.

4.3.1.2. *Schools*

A number of waste recyclers indicated that they take their kids to the local schools in the area. Respondent 21 indicated that "*I have to take kids to school before I start working. The good thing is that the school is not far from the place where I stay, so I do not have to waste lots of time while I walk my children to the school or even pay the little money I make here collecting this stuff."* (Respondent 21, Personal Communication, 21 September 2015). The easy access to schools is crucial for various reasons. One, it gives waste recyclers time to be able to go out and work knowing that their children are safe. Secondly, access to education by children of waste recyclers provides hope for breaking the vicious cycle of poverty by creating fertile ground for development of skills for these children to take

opportunities in future. While the schools do not act as direct physical assets, they however play a critical role in terms of allowing waste recyclers to continue with their work without having to worry about the safety of their children.

Figure 20: Schools as collection points in Atteridgeville
Source: Own construction, 2015

4.3.1.3 *Roads*

Roads are the other critical physical assets that waste recyclers have redefined their use to suit their need. Just as the health facilities, roads play a crucial role for waste recyclers as they connect places of collection and places of trading of the collected recyclable material. While the roads are crucial for transportation of material, there are also issues that prevent waste recyclers from working freely. Firstly, waste recyclers have to travel long distances from their homes to places where they collect recyclable materials. Respondent 2 stated that "*we have to travel long distances to collect material. Sometimes you get to a place and find that other people have collected, and therefore have to go to other places to get more material. Last week I had to go to Laudium clinic to look for more material as I could not find stuff here in Atteridgeville*." (Respondent 2, *Pers. Comm*, 15 September 2015).

The travelling distances have serious implications to the health of waste recyclers especially considering that they have to use roads which are also used by vehicles.

Figure 21: Roads used transportation of material

Source: Own construction, 2015

Having to travel long distances, often with no food and water leads to fatigue, which can lead to light-headedness which further exposes to waste recyclers to further risk of being hit by moving traffic. Respondent 20 mentioned that "*we always have to be on the lookout for cars not to hit us. The taxis are the ones that we have to be careful of mostly as they often just stop anywhere, and often veer off the road when they do so. It is difficult to travel on the roads especially when the trolleys are full of materials after collection has been done*." (Respondent 20, Pers. Comm, 21 September 2015).

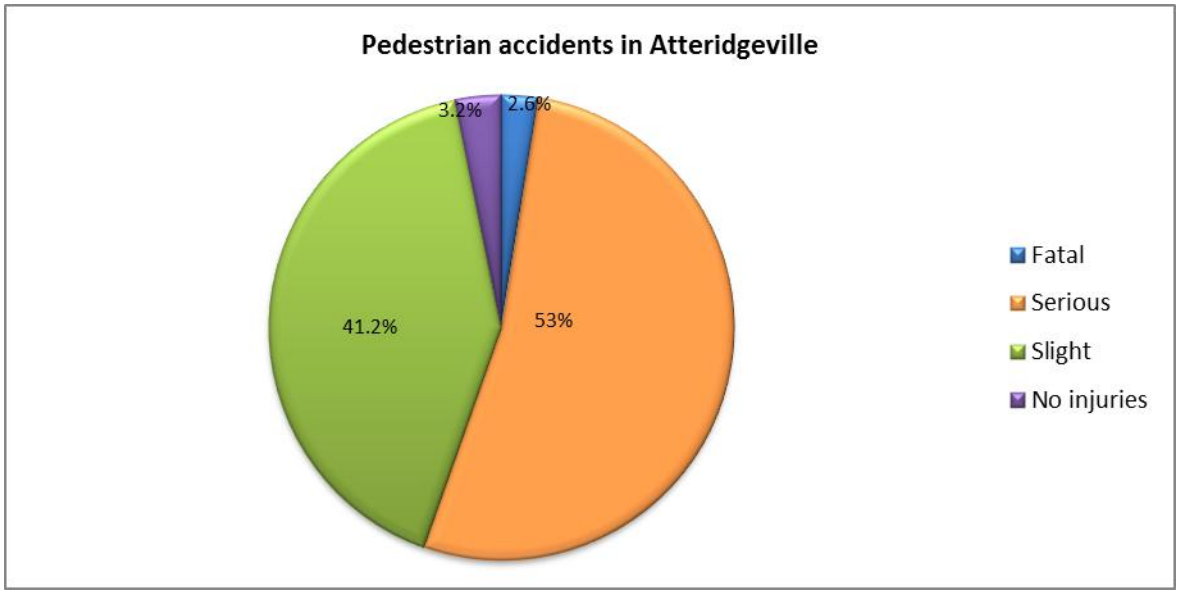

Figure 22: Vulnerability of pedestrians in Atteridgeville: Risk to pedestrian accidents
Source: City of Tshwane Comprehensive Integrated Transport Plan, 2015:14

4.3.1.4. Recycling companies

Map 4 illustrates recycling companies that are located within the City of Tshwane. The waste recycling business has been growing following requests by the government and corporations for recycling of materials to reduce production costs, high demand for natural resources and more importantly gas emissions. The recycling companies form a crucial part of the physical assets of waste recyclers as this is where the value of collected materials is attached. As a result, ensuring easy access to these is crucial so that waste recyclers are assisted to:

- lessen travelling times with full trolleys;
- improve working times of the waste recyclers;
- lessen exposure to health risk of travelling on roads; and,
- allow waste recyclers to have more time to spend with families.

Waste recyclers indicated that they do not have easy access to recycling companies. They have to travel long distances to places out of Atteridgeville to sell their recyclable. Respondent 28 noted that "*What is not nice about this kind of work is that I have to travel long distances collecting the materials, and then after still have to travel long distances to Rosslyn to sell materials. Sometimes I even prefer not to go and sell I would be tired and hungry and would not be able to travel such a long distance*." (Respondent 28, *Pers. Comm*, 21 September 2015).

Figure 23: Recycling companies within the City of Tshwane

Source: Own construction, 2015

Figure 24: competition for roads
Source: Survey image

Figure 25: competition for roads
Source: Survey image

Lack of easy access and even distribution of recycling companies has serious impact on health and safety of waste recyclers. During the interviews, it was acknowledged that waste recyclers have to compete for roads with vehicles especially in major transport routes and smaller collecting internal roads. As noted by Respondent 20 "*it is difficult to operate in busy roads like WF Nkomo and R55 because you have to look out for trucks and taxis. The taxis are even worse because they stop at any time. Also in the smaller roads, it becomes difficult moving trolleys because most part of the trolley falls on the road, and when a car approaches, you have to stop and wait for it to pass." (*Respondent 20, Pers. Comm, 21 September 2015).

The equitable distribution of recycling companies within the Atteridgeville area will not only ensure easy access, but will also reduce health and safety issues that waste recyclers are vulnerable to.

Figure 26: Household bins as assets for waste collecting
Source: Survey image

4.3.1.5. Household and retail outlet bins

Retail outlets and households are the biggest consumers' resources and producers of waste. As a result of this, these are the greatest assets of waste recyclers as they provide lots of material for collection as indicated in Figure 27. Crucial to note are the relationships that are developed between waste recyclers, households and retail outlets. As noted by Respondent 19 "*I love coming to Pretoria Industrial because I always manage to collect lots of material of high value. Because I have also been coming here for some time, I am not known and the security guards do not give me any problem when I come to collect. The only thing they ask is that I do not leave the place dirty after collecting the material I need. I know I am always guaranteed of collecting material when I come here*." (Respondent 19, Pers. Comm, 18 September 2015). Respondent 47 also stated "*the families on the Maunde road are very nice. They now know me and even go as far as sorting materials such as plastic bottles in their yard and give it to me when I come. This makes me very happy because I always know that there is material I can count on*." (Respondent 47, Pers. Comm, 23 September 2015). These relationships are important as they foster a culture of recycling which has serious positive impact on future demand of resources.

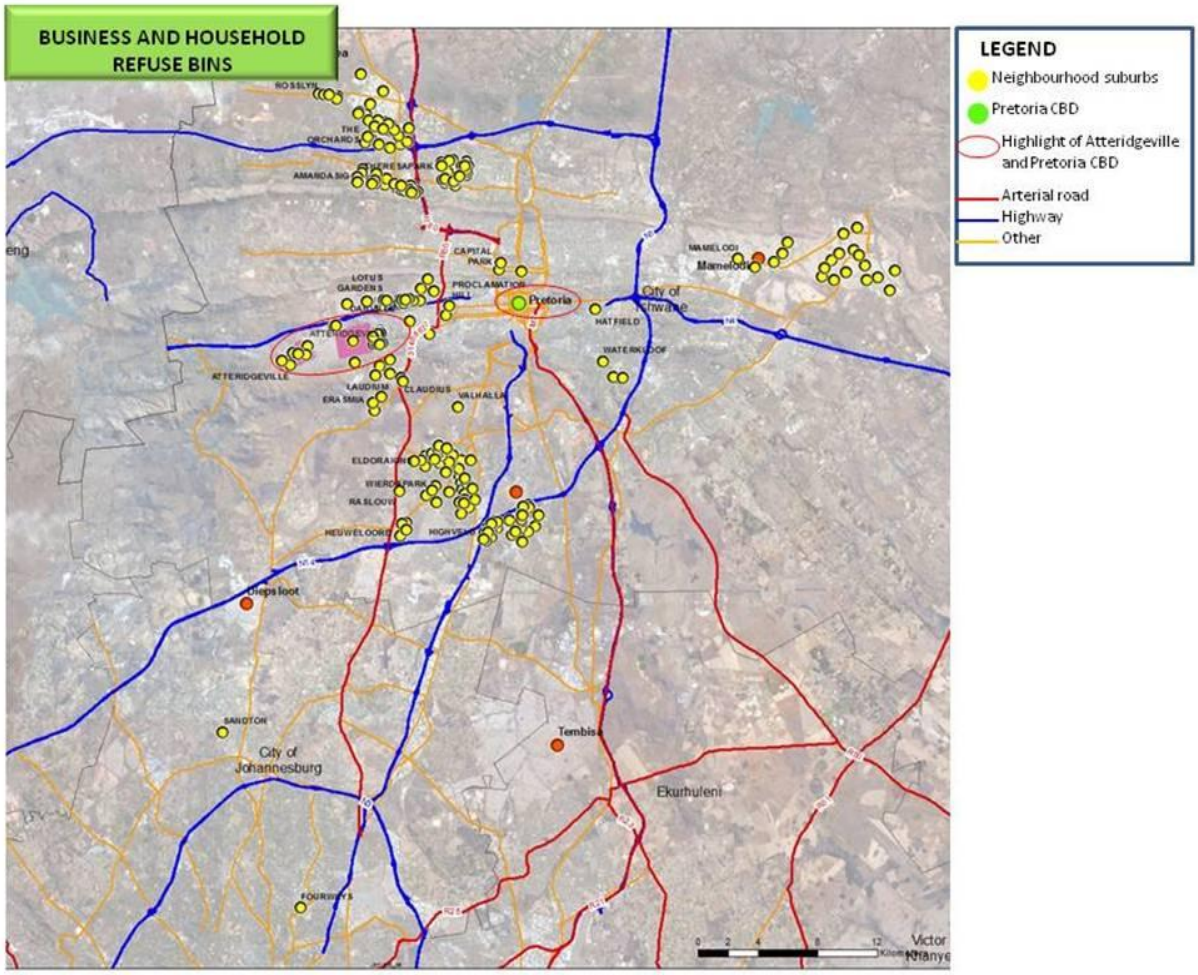

Figure 27: Neighbourhoods and Pretoria CBD as assets for collection of recyclable materials
Source: Own Construction

4.3.2. Further discourse

The above analyses on physical assets begin to offer critical nuances and insights about the waste recycling landscape and generally, the informal sector. What is important to note from all the Figures representing physical assets used by waste recyclers for purposes of collection of waste is how function and use of some of these has been redefined by the waste recyclers. For instance, hospitals or clinics were never intended to perform the function of providing recyclable materials to waste recyclers. However, as a result of high poverty and unemployment rates, waste recyclers are left with limited or no choices, but to use these as their source of livelihood. Understanding this kind of local level dynamics of livelihoods is crucial as it begins to set the premise for analysis of how people who are unemployment somehow manage to continue to have access to livelihoods. Also, it begins to raise an important debate on the resiliency of people, their will to always look for ways to earn a living even in conditions that does not support for their development.

4.4. Social capital

Figure 24: Social networking among waste recyclers
Source: Survey image

Social capital assets present an interesting dynamic in that unlike the physical assets, they cannot be touched or quantified, yet they play a significant role in sustainability of livelihoods. A noticeable number of waste recyclers pointed to the importance of having to form positive working relationships with other waste recyclers. Forming close ties is crucial for various reasons, including:

- acclimatising quickly in the waste recycling industry;
- understanding nuances and intricacies of waste recycling, for example, materials to collect because of their high exchange value;
- having people who can protect you against crime; and,
- having friends to offer assistance when one is tired or not feeling well.

The importance of social capital assets was highlighted by Respondent 7 who noted that "*it is difficult to work alone. In fact, it is almost impossible because you always need someone to help you by either pushing the trolley when it is stuck or telling you about the next place where more material can be collected. This job also needs lots of energy, so we get tired all the time. When you alone, you will therefore not have anyone to talk to during the time when you rest which can be dangerous because some people might think you have money and want to take it from you*." (Respondent 7, Pers. comm, 15 September 2015).

4.5. Human capital assets

Figure 25: Women carrying recyclable materials
Source: Survey image

Collecting material that is of high value and packing all the material in the trolleys is a skill that is developed overtime. This was indicated by Respondent 24 who stated that "*you have to know which materials to collect. You cannot just collect anything because at the end, you will have a heavy load which will not get you decent money. Usually glass bottles, cans and iron are good because lots of money is paid for these. It is also import to know how pack the materials in such a way that allows you to push the trolley well. Packing your material well is important because we travel long distances collecting the material, and still have to travel longer distances to get to the places where we sell materials*" (Respondent 24, Pers. Comm, 21 September 2015).

These skills possessed by the waste recyclers provide an opportunity that can be utilised by both government and recycling companies for purposes of improving waste recycling techniques and efficiency. Packaging remains one of the key factors in recycling, and organisations can learn from the intrinsic skills that are possessed by waste recyclers.

The above analyses on informal waste recyclers are critical for the following reasons:

- providing an entry point to understand constraints preventing integration in the city; and,
- setting a premise for utilising opportunities to foster an ideal integrated city.

4.6. Constraints preventing integration of informal recycling in City of Tshwane

This study has looked at the different assets that waste recyclers access to secure livelihood. The analyses follow a generic process which defines assets into different categories. The implicit thread in the study is that in an effort to understand livelihoods and how it could be improved, there is a need to understand level of vulnerability and resiliency of individuals to threats. In determining the individual level of vulnerability, it is important to explore the following factors:

- Well-being (nutritional status, mental health);
- Livelihood and resilience (assets and capital, income, education);
- Self-protection (degree of protection afforded by capability and willingness to for example build a safe home);
- Social protection (relationship and level of support from society);
- Social and political networks and institutions (institutional environment setting up good conditions for dealing with threats); and,
- Physical access to assets.

The analyses of different assets have indicated a number of risks that waste recyclers are vulnerable to at an individual level. These included among other things issues on lack of food and water resources, health and safety issues and easy access to assets. These vulnerabilities exist as constraints for better working conditions for waste recycling through integration of informal recycling into the formal waste management planning.

The existence of constraints points to lack of political will and policy drive to ensure responsive support for waste recyclers. This lack of support was to a larger extent illustrated during discussions with city officials who alluded to fact that waste recyclers are still defined within the context of informal trading activity. As alluded to by the Official in the Department of City Planning and Development "*while there is a policy looking at the informal trading activities in the city, not much is said of waste recyclers. This then obvious suggests that not much can be done in terms of supporting these waste recyclers as there is no guiding framework on how these should be supported*" (City Planning and Development Official, *Pers. Comm*, 12 October 2015).

It should however also be pointed out that an official from Department of Economic Development highlighted that the city is beginning to understand the role played by informal waste recyclers in ensuring that materials that can be used are recycled and not wasted (Economic Development Official, 12 October 2015). As a result, this reduces the quantity of waste that the city has to dispose and also more importantly it releases pressure on waste

dumping sites. In response, the City is in process of developing a short-medium term strategy to address issues within the informal recycling landscapes. The strategy will look into the opportunities that can be exploited to better working conditions of waste recyclers and improving waste recycling landscape at large.

4.6.1. Constraints on the current formal waste management system

Unlike general waste collection, recycling in Tshwane is privatized and managed by several different companies. This system is however costly to the municipality in paying sector service providers with service charges and the distance of the landfills which requires waste removal fleet maintenance and fuel which has an environmental impact of fuel emissions. The waste recyclers walk long distances to the landfills and to the recycling companies, which is less costly, but health endangering.

Although there are some disadvantages to the current formal collection system, the waste is still managed and most of it is collected in some way.

4.7. Opportunities for integrated City of Tshwane

Understanding of livelihoods and particularly building blocks for livelihood is crucial for the following reasons:

- identification and mobilisation of individual and community assets to increase opportunities for development and growth;
- growing the ability to leverage external resources from outside through further investment into the community assets; and,
- building on already existing partnerships, and as a result create new partnerships and/or relationships to leverage resources by linking individuals, institutions, and organizations through identifying common goals and interests.

Analysis into the different assets of waste recyclers as indicated in Figure 30 has to a larger extent highlighted opportunities for building integration and improving the informal waste recycling landscape. From the analysis, integration needs to take place in the following ways:

- integration of informal waste recyclers to the form waste management systems of the City;
- integration to economic opportunities; and,
- physical integration to improve access for both collection and distribution of materials.

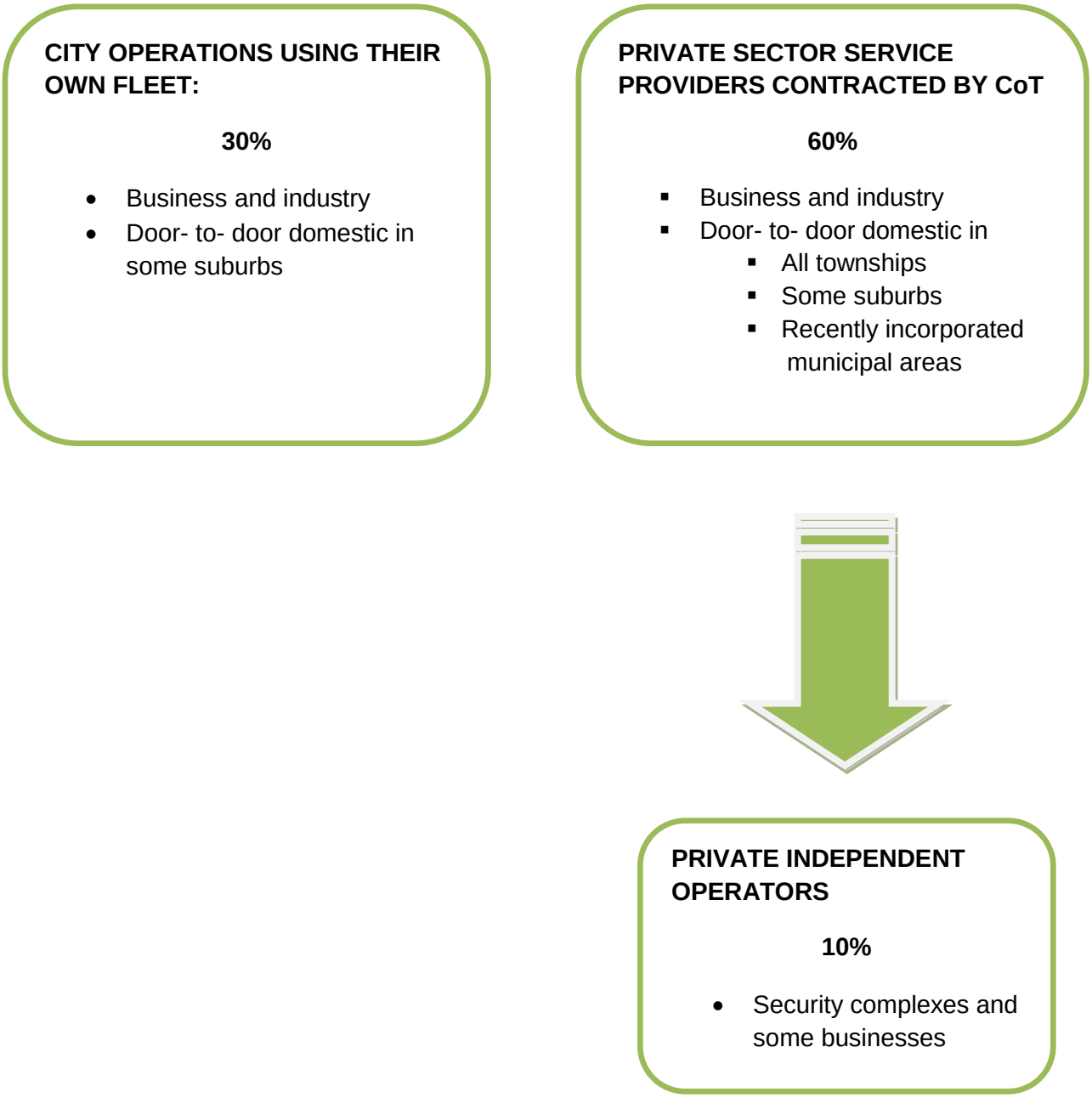

Figure 26: Tshwane collection, transportation and solid waste disposal
Source: City of Tshwane Environmental Management Services, 2014/2015:4

4.7.1. Integration of informal waste recycling into waste management processes

Throughout the analyses, the study has indicated the important role played by waste recyclers in the City of Tshwane. The waste recyclers provide a range of services to the City such as collection of waste from communities that would not otherwise have access to this service. They are also cost saving as they, for instance, prolong landfill life and prevent

transport costs. As it has been shown in the analysis, the informal waste recyclers are part of the entire recycling supply chain, and a result benefits formal businesses and entire local economies.

Waste recyclers also illustrates that there is a great opportunity to increase recycling rates by using labour-intensive solutions, which in turn create jobs and support the development of a better urban environment in the cities. Given high levels of poverty in South Africa, it is perhaps important for local government to consider informal waste recyclers as an integral part of these processes as they are usually responsible for solid waste management at local level.

4.7.2. Integration to economic opportunities

There are relationships that have been created between private businesses (recycling companies) and the informal waste recyclers. These relationships have however not been developed further as the understanding is limited to waste recyclers doing informal work. There is a need to therefore explore other opportunities for expansion of informal waste recycling to ensure growth and development of these. Formation of cooperatives that can be funded is one option that must be explored by the City.

4.7.3. Physical integration

Easy access to both areas of collection of materials and recycling depots is crucial. While the waste recyclers are able to access these, they are at the same time vulnerable to a number of factors such as violence on the roads and having to travel long distances to access recycling depots. It is important that recycling depots are an integral part of waste management planning processes to ensure that these are easily accessible. Not only will this reduce traveling distances but it will also reduce their health and safety risk as a result of exposure to traffic. Provisions of lanes on busy roads such as R55 and WF Nkomo which can be used by both cyclists and informal waste recyclers would also go a long way in minimising the risk. These processes must form part of broader waste management planning in local government.

4.7.4. Policy on informal waste recycling

While a lot has been written on informality and informal recycling, a policy which will focus on supporting development of informal recycling rather than imposing draconian, traditional regulations is needed. The unpacking of micro level dynamics of waste recycling not only reveals lived individual realities of informal waste recyclers, but also ensures that

development of policies is informed and responsively addresses issues within the waste recycling landscape.

4.8. Integration of informal waste collection and formal waste collection

The formal and informal waste collection programs each have their own strengths and weaknesses. A unified system that integrates the two waste collection systems could theoretically be more cost effective and environmentally friendly than the current formal system, as well as create jobs for the informal waste collectors (Jacobsen et al, 2014)

Instances of combining of informal and formal waste collection occur in other areas of the world. In the city of Kampala, Uganda, the solid waste management has distinct sectors, the formal and the informal (Katusiimeh et al, 2013). The formal sector is a combination of public services with private companies collecting waste in designated containers. However, the formal collectors are not usually capable of going door to door to collect the waste at the poorer households on the outskirts of the city. Informal waste collectors take advantage of this opportunity and rent their services to these households for the removal of their waste (Jacobsen et al, 2014).

A similar situation occurs in the city of Managua, the capital of Nicaragua (Campos, 2013). In Uganda, the formal municipal waste collection does not adequately serve the informal settlements which leads to the inability of many residents to properly dispose of their waste (Katusiimeh *et al*, 2013). Similar to Windhoek, Managua is comprised of many informal settlements. Informal collectors see this as an opportunity for income from residents willing to pay to have their waste collected. They serve the communities using carts to collect waste. Informal waste collection systems tend to arise as the result of formal waste collection services not meeting the needs to the people (Campos, 2013).

4.9. Concluding remarks

This chapter sought to map and analyse assets of informal waste recyclers in Atteridgeville. The chapter began by setting the context through the introduction of the study area and its dynamics. Contextualising the case study area is crucial for providing an entry point to understanding the dynamics of livelihoods in that particular area and also more importantly its relationship with its neighbouring areas. Different assets were mapped using the general framework of physical, economic, human, social and natural assets. Interesting to note, is the informal waste recyclers' idea of assets has been redefined and used for different purposes.

There is still a lot to be done in terms of providing support for informal waste recyclers. Risks that informal waste recyclers are vulnerable to also relate to the responsibility of the state to ensure safe and healthy living environment. However, there are opportunities that can be exploited in efforts to ensure sustainable support to informal waste recyclers, and this will in turn eliminate all the risks and threats to livelihood of informal waste recyclers.

CHAPTER FIVE: CONCLUSION FROM THE RESEARCH

This study has looked at extensive issues relating to livelihoods. As a concept, livelihood is a complex concept with its foundation largely influenced by many factors ranging from social, political and economic realms. This suggests that for purposes of setting the basis for understanding the concept, it is important to unpack theoretical foundations that have got its origins from social and structural foundations.

In an effort to understand livelihood dynamics, the study analysed and mapped different assets which the poor people of Atteridgeville have access to for purposes of having access to means of making a living. In mapping the assets, the question raised relates to how access to these assets can be improved to ensure sustainable livelihoods, and more importantly build an ideal integrated city. Improving access in the City of Tshwane is a very complicated process as it relates to a number of other factors. As it was indicated in the study, access does not only relate to physical access, but also to very critical issues such as access to opportunities. As a result, ensuring integration by improving access to opportunities and physical access to assets needs a multifaceted approach which looks at different factors relating to the concept of integration.

The asset framework which defines assets as being physical, economic, social, human and natural served as a critical tool to understand the different assets that are used by informal recyclers in Atteridgeville. The most important dynamic to understand stemming out the analysis of the assets is how the recyclers have sought to redefine the use of assets in Atteridgeville. As indicated in chapter 4, assets such as roads, schools and hospitals are now used not only for their intended purposes, but also as assets for collection of recyclable materials. Waste recyclers are also going as far as forming relationships with people who are working in these different areas for purposes of ensuring that they have easy access to recyclable material. The redefinition or introduction of new uses of these assets signals critical implications for planning and enforcement of controls by the City. The question becomes whether or not the City is inclined towards allowing such activities to continue to take place with the understanding that these play a crucial role towards collecting materials that can be recycled and in turn contributing towards sustainable use of resources.

5.1. Theory and practice

The understanding of dynamics of waste recycling raises interesting analyses on theories that are often used as lenses to understand informality. The study has looked at a number of theoretical frameworks including systems theory, complex theory and participation planning

theory, collaborative planning theory and communicative rationality. These theories are crucial for understanding social dynamics of life, and provide important premise for understanding relationship between people and the environment in which they live. Systems and complex theories in particular are critical for analysis of relationships and the interconnection between objects to form one complete object. Complex theory continues to assert that these relationships and interconnections emerge from simple rules, and that all complex systems are networks of many interdependent parts which interact according to those rules. These analyses are crucial for understanding the informal waste recycling landscape as it provides a trans-disciplinary framework for a critical and normative exploration of the relationships between people's behaviours and actions and the environment in which they live (Friedman and Allen, 2010: 5 and Parsons, 1951: 3). By providing such analysis, the theory assists in dissecting the complex dynamic relationships that exist between human beings and the environments in which they live. Understanding these complex dynamic relationships require a multi-faceted, holistic approach and systems theory provides such approach by not reducing the dynamics to a level of individual stimuli (Laszlo & Krippner, 1998: 5).

In the study, relationships between the informal recyclers and the environment were explored and these can be discovered in using the lens of both systems and complex theories. There exist many relationships, and sometimes complex relationships between various objects, be it between recyclers and other recyclers, recyclers with security guards at health facilities or recyclers with household owners. While having a full understanding of how these relationships are developed and maintained overtime, the underlying factor is the fact that these are a result of common understanding of people as human beings to support each other in the quest for earning a living. Taking households who assist with the sorting and keeping of material for waste recyclers for example, these are not obliged to do this, but solely do it as a gesture understanding of the difficulties waste recyclers go through in their quest to earn a livelihood.

In building these relationships and interconnections, the most common thread is trust. Arriving at the point where for instance security guards allow certain waste recyclers to collect material with ease access did not happen suddenly but took time. Building trust amongst different actors is critical as it determines the type of relationship that the different actors have with each other. As it was indicated in the study, recyclers who had formed relationships with either households or security guards were able to collect lots of material as they always had material that was saved for them. The relationships in turn made it easier for some of the recyclers to carry on with their work.

The other noticeable interaction is one that exists between the waste recyclers and the environment in which they work. Unlike the relationship that they have with either household owners or security guards which is geared towards facilitating better working condition for the recyclers, the interaction with the environment is rather constrained. Two examples can be used to highlight this, and these are transportation routes and the dumping sites. In terms of transportation of material, the waste recyclers suffered health and safety issues such as risk being hit by vehicles. The fact that they have to push trolleys which in some cases are big and in some part of the road increased their vulnerability to a point where they had to regularly stop whenever a truck or bigger vehicles pass by them. Similar analyses can be drawn from the interaction between informal recyclers and the different places, more particularly the dumping sites. While the dumping sites are also assets that recyclers use for collection of recyclable material, these also have a negative impact on the health of waste recyclers especially those who work in the presence of their children. One would ask why recyclers would continue to work in an environment which poses risks to their health, and the answer would relate to lack of choices in the type of livelihoods for waste recyclers.

The study also discussed various planning theories which offer an important lens through which to understand the dynamics of waste recycling. Central to the planning theories looked at in the study is the notion of encouraging participation of different actors in the activities that concern them. Taking participation theory for example, the theory places a lot of emphasis on the need to encourage involvement of people, particularly those who are less powerful and do not have access to resources. The theory raises an important issue of distribution of power which is very critical in participation processes. It underlines power must be distributed and/or decentralised to allow for those actors who are often in the margins of decision making processes, ones who are often excluded from political and economic processes to be given an opportunity to be actively involved in the decision making processes (Arnstein 1969: 1; Yorkshire Forward, 2000: 6). In more ways than one, informal waste recyclers represent a group of people with less or no power and are excluded in political and economic processes as a result of among other things, their foreign national status, low levels of education, their gender status and perceived lack of skills that are necessary for demands of formal economic setup.

This understanding of the notion of power and the need to distribute it among those who are often excluded is important especially for purposes of addressing and supporting informal waste recycling in the City of Tshwane. In the City's attempt towards addressing or supporting informal waste recyclers, it is crucial that the City understands the specific backgrounds and profiles of the waste recyclers. This will allow for thorough understanding

of power relations of the waste recyclers. For instance, a recycler of South African origins in possession of a National Diploma will have more power than a recycler who is of foreign origin, does not have permit to work in South Africa and has a low level of education. The level of power of each recycler will determine how easy it will be for them to access support and opportunities offered by the City. Equally, lack of power could lead to a total depletion of waste recycler's livelihood. This will be the case for the informal recyclers who are the country illegally. Notwithstanding the skills that they might have developed in recycling of materials, these will not be able to benefit from any support from the City of Tshwane as they would be in the country illegally and will not be permitted to work. Their livelihoods can even be destroyed further if the state decides to deport them as a result of their illegal immigration status.

In encouraging participation of all actors in matters that concern them, it is fundamental to ensure decisions that are made are as a result of consensus between different actors. Both collaborative and communicative rationality underline the need to ensure that those who are the most powerful and have access to resources do not influence decision making processes. While these theories do not place lots of emphasis on the notion of power, they however underline that different actors must always be allowed to critically engage controversial and complex issues in an effort to agree upon common terms and cooperatively act upon the agreed terms. Widdersheim, (2013: 2) calls this a "process oriented toward mutual understanding and consensus".

As it has been illustrated in the study, informal recyclers are the most knowledgeable about the dynamics, challenges and to an extent, opportunities of informal waste recycling. The recyclers have lived experiences of informal waste recycling, and thus must always form central part of decision making processes. It would not be responsible for the City or any concerned urban practitioners to devise any ways of addressing or supporting waste recyclers without active involvement of the recyclers. The involvement should also not be done in a way that assumes passiveness of the recyclers, but it should be a meaningful involvement which will allows different recyclers with different levels of power to meaningfully participate in the process until consensus is reached. Striving to reach consensus is important for ensuring that the decisions that are agreed upon are a true reflection of lived experiences of the informal waste recyclers.

Along with the above discussed theories is the concept of multiple livelihoods which provides a premise to understand dynamics of informal recycling. The concept of multiple livelihood strategies is critical particularly in the context where there are high levels of poverty, inequality and unemployment. The concept puts emphasises on the need to acknowledge

the usefulness of the informal economy and the survival approaches to understand urban economies and opportunities that exist to address issues of poverty and unemployment (Owusu, 2007: 450). The study illustrated how the City of Tshwane and Atteridgeville in particular, are affected by high levels of poverty and unemployment. It is in fact established in the study that people are left with not many options by to get involved in the collection of recyclable materials to have access to a livelihood. While informal waste recycling gives access to basic livelihood needs such as food, it is not able to provide them with a sustainable access to these livelihood needs. As a result, some respondents alluded to the fact that they have to do other activities such as gardening and street cleaning to supplement income accumulated from informal waste recycling. This is the essence of the concept of multiple livelihood strategies which underlines that people in the informal sector often get involved in different activities for purposes of accumulating more income and in turn strengthen their livelihoods.

The City will have to understand these dynamics for purposes of ensuring that its efforts towards addressing and supporting informal waste recycling. In addressing waste recycling, the City must not only be treated as the only livelihood strategy of the recyclers, but as one of many which recyclers might be using to access livelihoods. This will in turn ensure that measures designed to address waste recycling are not confining waste recyclers to only waste recycling, but will give them an opportunity to get involved in other activities to supplement their income.

CHAPTER SIX: RECOMMENDATIONS AND LESSONS LEARNED IN THE STUDY

6. Lessons in the study

The unpacking of dynamics in informal recycling has raised important lessons in the study. These lessons are briefly discussed below:

6.1.1. Importance of informal economy

In a country where high levels of poverty, inequality and unemployment are common, informal economy will always play a significant role to cater for those who cannot be absorbed by the formal sector of the economy. The existence of informal waste recycling in the City of Tshwane and South Africa as a whole, and also involvement of people who also have higher levels of education signals the importance of informal sector. As it was indicated in previous chapters of the study, not only does the informal economy provide employment opportunities to a considerable number of the people, but it also contributes to the growth of the national economy.

6.1.2. Multiple livelihood strategies: innovative ways to survive

The study has illustrated that regardless of the circumstances that people are confronted with; they are always able to find innovative ways to ensure that they have access to a livelihood. Taking informal waste recyclers for instance, they have managed to make use of collecting what many see as waste into an asset that could generate income for a better livelihood. Also, not only are they focused solely on waste collection, but they are continually searching for other opportunities to strengthen their livelihood strategies.

6.1.3. Opportunities for growth in the informal sector

People in the informal sector are not confined to one way of accumulating income to earn a livelihood. As it has been illustrated in this study, they continually seek new innovative ways to earn a livelihood. This therefore suggests that unlike people in the formal sector of the economy where there is often a single source of income, people in the informal sector have more opportunities to grow and diversify their livelihood for sustainability purposes. Informal waste recyclers illustrated this through their involvement in different activities in a quest to supplement income accumulated from collection of recyclable materials.

6.1.4. Alleviating poverty a daunting and challenging task

The issue of poverty is a serious socio-economic developmental challenge. Poverty relates to various factors which cannot all be addressed simultaneously. Taking waste recyclers for example, the majority of these have low levels of education, are often discouraged to seek employment in the formal sector and do not have skills that are required by the formal sector. These characteristics cannot all be addressed all at once, but need a multifaceted approach and involvement of different of actors. Neither formalising nor providing training for waste recyclers will completely uplift them out of poverty. A concerted effort by different actors needs to be directed towards addressing the different contributors of poverty to ensure that people are incrementally moved out of poverty.

6.1.5. Empowering, transforming and integrating marginalised groups into the economy

Informal waste recyclers indicate the number of the many people who continue to live in the margins of the city in terms of participation in social, political and economic decision making processes. As a result of their energy sapping work where they have to travel long distances between places of material collection and recycling depots, recyclers are left with no time to actively participate in other activities. Their quests for the earning a living excludes them from participating in activities that can in turn introduce them to opportunities. While they continue to work relentlessly, their efforts cannot be maximised as a result of the 'informality' status. Unlike other small businesses, waste recyclers do not get any assistance from the City. Coupled with this is the fact that they do not have much control over the valuing of the material they collect. Recycling companies have the sole discretion of determining prices of the recyclable material.

The lessons learned in the study have in many ways led to recommendations which suggest what the City should do in efforts to support informal recyclers and improve working conditions within the informal recycling landscape. The recommendations are categorised in terms of short to medium term and long term recommendations. This is done for realisation that maximising opportunities in the informal waste recycling landscape will take time and different interventions will have different impacts.

6.2. Recommendations

6.2.1. Short – medium term interventions

a) Introduction of reflective, protective gear for improved visibility

Informal waste recyclers work long hours and are often forced to work till late hours of the evening. During these times, these are not easily identifiable and are at risk of being hit by vehicles especially on busy routes. Improving their visibility through the introduction of the reflective, protective gear would go a long way into ensuring that injuries and fatalities are reduced. The city can work collaboratively with the waste recyclers to find a way to finance the gear. Private sector and concerned non-governmental organisations can also be lobbied to assist in procurement of the gear.

b) Introduction of durable trolleys and bicycles for collection of waste

The use of sacks and other loosely built iron sheets as trolleys for collection of material needs serious attention. Not only does this inconvenience waste recyclers' time in terms of having to continuously fix the trolleys, but it also disadvantages them in terms of the quantity of the material they can collect. Coupled with this is the fact that they have to struggle with pushing non-stable trolleys for long distances between collection points and recycling depots. The introduction of better built, durable trolleys and bicycles will go a long way into preventing wastage of time through loosely built trolleys and travelling on foot. The use of bicycles is crucial for reduction of utilisation of fossil fuels and gas emissions. Also, bicyclers are of low maintenance costs, and as a result will not prove a financial burden to waste recyclers.

c) Training for informal recyclers

Through their involvement in informal waste recycling, the recyclers have developed various skills including sorting of recyclable material and building trolleys. The City in partnership with the waste recyclers can look at how these and other skills can be developed in line with the demands of waste management and skills shortages in the City. Skills development is important as it will within a short time period benefit both the City (employable workforce) and waste recyclers (skills for further growth and development).

d) Organise the informal recyclers

Currently, there exists no formal organisational structure in the informal waste recycling landscape. Any form of organisation is confined to small groups for friendship and safety and security purposes. Perhaps for purposes of increasing changes of recyclers to have access to services such as credit, it would be responsive for these to be organised into

cooperatives. This will also allow these to have a formal structure which can communicate on behalf of the recyclers, but also more importantly improve effectiveness of waste recyclers. The City can play a major role in assisting waste recyclers organise themselves into cooperatives.

e) More studies to understand dynamics of informal recycling

Many challenges and opportunities characterise the informal recycling landscape. Challenges can only be addressed and opportunities exploited through generation of context specific and responsive solutions that are tailored to these. Tailored solutions can only be developed through generation of more literature which seeks to address informal waste recycling.

6.2.2. Long term interventions

a) Integrate informal waste recycling into waste management processes

When designing infrastructure and waste management systems, the City must consider not only the waste management and resource recovery needs but also the social side of the system. In order to be effective, efforts to upgrade waste management services must also consider opportunities for formalisation and integration of the informal waste recycling. The City can learn a lot from countries such as Bogota and Colombia which have managed to change the outlook of government on informal waste recycling. In Colombia for instance, informal waste recyclers are recognised as public service providers as part of the acknowledgement of their contribution to the environment and public health of the city.

b) Improve physical integration of physical assets (recycling depots and dumping sites)

There is currently little or no consideration of spatial coordination of dumping areas and recycling depots. As a result, informal waste recyclers have to travel for long distances from areas of waste collection to recycling depots. In the City's effort to integrate informal waste recycling to the waste management system, strong emphasis should be put on ensuring better spatial coordination and integration of waste collection areas (dumping sites) and recycling depots. This will be crucial for reducing travelling times and safety risk issues.

c) Improve movement infrastructure for waste recyclers

Informal recyclers are exposed to a lot of safety risks arising from their sharing of roads with vehicles more particularly on busy roads. While roads are not primarily meant to cater for trolleys of waste recyclers, the fact that they now play role as movement infrastructure for

recyclers suggests that an intervention be undertaken to minimise the risks. The City is currently promoting use of sustainable greener modes of transport. This then suggests that road infrastructure needs to be developed to accommodate this type transport. Use of bicycles by waste recyclers will form part of the greener transport plan, and as result will not require any development of infrastructure as it will use that will already be provided.

d) Better integrate informal waste recycling in waste management policy

This is perhaps the most important action that needs to be taken as an intervention by the City, to properly address the issue of policy intervention on informal waste recycling. This issue borders on both waste management and economic development, and thus it is important that a middle ground is determined and a responsive way is found to integrate this into the waste management system while at the same time ensuring that a fertile ground is created for economic development.

e) ***Change of mind-set***

In the long term, there is need for a change in mind-set. The world today is not the world of full employment, and thus there is need to nourish and take care of the employment and livelihoods that have already been developed. Urban practitioners must understand that the labour informal waste recycling provide livelihoods to a large portion of waste recyclers in towns and cities of South Africa. The informal waste recyclers must be allowed to continue with the work they do, and their access to materials must be ensured. They should be recognised and respected for securing a livelihood while providing services to the city.

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ANNEXURE A:

Interview with the informal waste recyclers in Atteridgeville, Tshwane Metropolitan Council.

QUESTIONNAIRE

Building Integrated Cities: Mapping Assets of the Urban Poor in Atteridgeville, Tshwane council

I, Katlego Semono, hereby request that you assist me in completing the attached questionnaire. I am a Masters student at the University of Potchefstroom, currently undertaking a study on Building Integrated Cities: Mapping Assets of the Urban Poor in Atteridgeville, Tshwane Council.

The study aims to inter alia, analyse dynamics of informal trading in the Tshwane Council, it traces the movement patterns of the informal waste recyclers, the choices they make and more importantly examines the legislative and policy landscape regarding informal trading activities and the informal sector in the Council.

The questionnaire will at most take approximately 20 minutes to complete. The collated information will be analysed for the purpose of partial fulfilment of the requirements of Masters of Science in Urban and Regional Planning at University of Potchefstroom. The information will therefore be treated with confidentiality.

Your participation in this survey is highly appreciated.

The questionnaire is administered by: Ms. Katlego Semono
: University of Potchefstroom
: M ART ET SCIEN in Urban and Regional Planning
: Faculty of Natural Sciences
: Email: s.katlego@gmail.com
: Cell: +27 (83) 264 0128 / +27 (73) 182 8981

Signed…… Date……

This outlines questions that will be used to gather the information for purposes of understanding dynamics of informal waste recycling in the City of Tshwane. The questionnaire is informed by three factors as outlined below.

a) Key objectives of the study

The questions outlined are formed and embedded in the key objectives of the study which is to:

- analyse local scale dynamics of informal trading activities in Atteridgeville, City of Tshwane;
- trace movement patterns of informal recyclers in Atteridgeville; and,
- understand the policy and legislative landscape regarding informal trading activities in the City of Tshwane;

b) Key components of informal waste recycling

The questionnaire also considers core components of informal recycling such as routes taken for collection and selling of material, type of material collected, the revenue accumulated as well as infrastructure (both physical and soft) that is needed for collection purposes.

Two sets of questionnaire are developed, one for informal recyclers and another for Council officials dealing with policies administering informal trading and related activities.

SECTION A

1. INFORMAL RECYCLERS

Generic questions

1. Please select your gender:

Male	1
Female	2

2. What is your age at your last birthday?

Statement	**Yes**	**No**
3. *Were you born in Atteridgeville? If No, where were you born?* - *3.1.*_____ _____	1	2

Statement	**Yes**	**No**
4. Do you live with your household in Atteridgeville? If no, where does your household live? *4.1.*_____	1	2

Statement	Number of members
5. *How many adult members sleeping overnight do you have in the household?*	
6. *How many children sleeping overnight do you have in the household?*	

7. What is your highest level of education? Please select the highest level

No schooling	*1*
Primary school education	*2*
High School education	*3*
Diploma qualification	*4*
Degree qualification	*5*

Honours/ B-Tech qualification	*6*
Masters qualification	*7*

SECTION B

Economic circumstances

Statement	**Yes**	**No**
1. *Is the waste recycling your only* source of income?	1	2

Statement	**Yes**	**No**
2. *Are there other activities you are involved in to make an income?*	1	2

Statement
3. *If yes, what are the activities* _____ _____

Statement	**Yes**	**No**
4. *Are you the only breadwinner in the household*?	1	2

5. If no, who are the other breadwinners?

Statement	**Yes**	**No**
5.1.Spouse	1	2
5.2. Brother	1	2
5.3. Sister	1	2
5.4. Daughter	1	2
5.5. Son	1	2
5.6. Aunt	1	2
5.7. Uncle	1	2
5.8. Friend	1	2
5.9. Grandmother	1	2
5.10. Grandfather	1	2
Please specify what they do for an income? *5.11*_____ _____		

Statement	Yes	No
6. *Does your household receive social grant?*	1	2
6.1. Old age grant	1	2
6.2. War veterans grant	1	2
6.3. Disability grant	1	2
6.4. Grant in Aid	1	2
6.5. Child support grant	1	2
6.6. Foster child grant	1	2
6.7. Care dependency grant	1	2

Statement
7. If yes, in total how much in social grants does your household receive? _____

8. *Can you indicate how much you make from recycling waste on a monthly basis?*

R0 - R100	1
R101 – R200	2
R201 – R300	3
R301 – R400	4
R401 – R500	5
R501 – R600	6
R601 – R700	7
R701 – R800	8
R801 – R900	9
R901 – R1000	10
> R1000	11

9. *To which extent does your income per month sustain your household needs? Please choose one option*

Enough for a day	1
Enough to sustain for a week	2
Moderate to sustain for two weeks	3
Enough to sustain for a month	4

10. What do you manage to satisfy with your income?

Statement	**Yes**	**No**
10.1. Food	1	2
10.2. Schooling	1	2
10.3. Clothing	1	2
10.4. Household necessities (water, electricity, toiletries)	1	2
10.5. Rent	1	2
10.6. Transport	1	2
10.7. Healthcare	1	2

SECTION C

Informal recycling landscape

1. *When did you first start getting involved in recycling?*

1 week-2 weeks ago	1
4 weeks-8 weeks ago	2
12 weeks- 24 weeks ago	3
36 weeks- 48weeks ago	4
>2years ago	5

2. *Why did you get involved in informal recycling?*

Statement	**Yes**	**No**
2.1. No qualification to get formal work	1	2
2.2. No access to work opportunities	1	2
2.3. Forced by circumstances at home of being a bread winner	1	2
2.4. Only way to make an income	1	2
2.5. Convenient wages	1	2

3. *What type of material do you collect?*

Statement	**Yes**	**No**
3.1. Plastic	1	2
3.2. Glass	1	2
3.3. Cans	1	2
3.4. Newspapers	1	2
3.5. Cardboard	1	2
3.6. Bottle caps	1	2

3.7. Can pins	1	2
3.8. Scrap metal	1	2
3.9. Oil	1	2
3.10. Textiles	1	2
3.11. Tyres	1	2
3.12. Batteries	1	2
3.13 Plastic Bottles	1	2
3.14. Rubber	1	2
3.15. White office paper	1	2

4. *How are the recycled goods charged?*

Statement		**Yes**	**No**
4.1. Plastic	*Per kilogram*	1	2
	Per plastic bag	1	2
	Per full sack	1	2
	Per trolley	1	2
	Per bin	1	2
	Per bundle	1	2
	Per litre	1	2
	Per Meter	1	2
	Per millimetre	1	2
	Per milligram	1	2
If there is any other way, please specify?			

Statement		**Yes**	**No**
4.2. Glass	*Per kilogram*	1	2
	Per plastic bag	1	2
	Per full sack	1	2
	Per trolley	1	2
	Per bin	1	2
	Per bundle	1	2
	Per litre	1	2
	Per Meter	1	2
	Per millimetre	1	2
	Per milligram	1	2

If there is any other way, please specify?

Statement		**Yes**	**No**
4.3. Cans	*Per kilogram*	1	2
	Per plastic bag	1	2
	Per full sack	1	2
	Per trolley	1	2
	Per bin	1	2
	Per bundle	1	2
	Per litre	1	2
	Per Meter	1	2
	Per millimetre	1	2
	Per milligram	1	2
If there is any other way, please specify?			

Statement		**Yes**	**No**
4.4. Newspapers	*Per kilogram*	1	2
	Per plastic bag	1	2
	Per full sack	1	2
	Per trolley	1	2
	Per bin	1	2
	Per bundle	1	2
	Per litre	1	2
	Per Meter	1	2
	Per millimetre	1	2
	Per milligram	1	2
If there is any other way, please specify?			

Statement		**Yes**	**No**
4.5. Cardboard	*Per kilogram*	1	2
	Per plastic bag	1	2
	Per full sack	1	2
	Per trolley	1	2
	Per bin	1	2
	Per bundle	1	2

	Per litre	1	2
	Per Meter	1	2
	Per milligram	1	2
		1	2
If there is any other way, please specify?			

Statement		**Yes**	**No**
4.6. Bottle caps	*Per kilogram*	1	2
	Per plastic bag	1	2
	Per full sack	1	2
	Per trolley	1	2
	Per bin	1	2
	Per bundle	1	2
	Per litre	1	2
	Per Meter	1	2
	Per millimetre	1	2
	Per milligram	1	2
If there is any other way, please specify?			

Statement		**Yes**	**No**
4.7. Can pins	*Per kilogram*	1	2
	Per plastic bag	1	2
	Per full sack	1	2
	Per trolley	1	2
	Per bin	1	2
	Per bundle	1	2
	Per litre	1	2
	Per Meter	1	2
	Per millimetre	1	2
	Per milligram	1	2
If there is any other way, please specify?			

Statement		**Yes**	**No**
4.8. Scrap metal	*Per kilogram*	1	2
	Per plastic bag	1	2

	Per full sack	1	2
	Per trolley	1	2
	Per bin	1	2
	Per bundle	1	2
	Per litre	1	2
	Per Meter	1	2
	Per millimetre	1	2
	Per milligram	1	2
If there is any other way, please specify?			

Statement		**Yes**	**No**
4.9. Oil	*Per kilogram*	1	2
	Per plastic bag	1	2
	Per full sack	1	2
	Per trolley	1	2
	Per bin	1	2
	Per bundle	1	2
	Per litre	1	2
	Per Meter	1	2
	Per millimetre	1	2
	Per milligram	1	2
If there is any other way, please specify?			
Statement		**Yes**	**No**
4.10. Textiles	*Per kilogram*	1	2
	Per plastic bag	1	2
	Per full sack	1	2
	Per trolley	1	2
	Per bin	1	2
	Per bundle	1	2
	Per litre	1	2
	Per Meter	1	2
	Per millimetre	1	2
	Per milligram	1	2
If there is any other way, please specify?			

Statement		**Yes**	**No**
4.11. Tyres	*Per kilogram*	1	2
	Per plastic bag	1	2
	Per full sack	1	2
	Per trolley	1	2
	Per bin	1	2
	Per bundle	1	2
	Per litre	1	2
	Per Meter	1	2
	Per millimetre	1	2
	Per milligram	1	2
If there is any other way, please specify?			

Statement		**Yes**	**No**
4.12. Batteries	*Per kilogram*	1	2
	Per plastic bag	1	2
	Per full sack	1	2
	Per trolley	1	2
	Per bin	1	2
	Per bundle	1	2
	Per litre	1	2
	Per Meter	1	2
	Per millimetre	1	2
	Per milligram	1	2
If there is any other way, please specify?			

Statement		**Yes**	**No**
4.13 Plastic Bottles	*Per kilogram*	1	2
	Per plastic bag	1	2
	Per full sack	1	2
	Per trolley	1	2
	Per bin	1	2
	Per bundle	1	2
	Per litre	1	2
	Per Meter	1	2

	Per millimetre	1	2
	Per milligram	1	2
If there is any other way, please specify?			

Statement		**Yes**	**No**
4.14. Rubber	*Per kilogram*	1	2
	Per plastic bag	1	2
	Per full sack	1	2
	Per trolley	1	2
	Per bin	1	2
	Per bundle	1	2
	Per litre	1	2
	Per Meter	1	2
	Per millimetre	1	2
	Per milligram	1	2
If there is any other way, please specify?			

Statement		**Yes**	**No**
4.15. White office paper	*Per kilogram*	1	2
	Per plastic bag	1	2
	Per full sack	1	2
	Per trolley	1	2
	Per bin	1	2
	Per bundle	1	2
	Per litre	1	2
	Per Meter	1	2
	Per millimetre	1	2
	Per milligram	1	2
If there is any other way, please specify?			

5. *Where do you collect materials?*

Statement	**Yes**	**No**
5.1. Dumping site	1	2
5.2. Dustbins on the streets	1	2
5.3. Household bins in neighbourhoods	1	2

5.4. Street	1	2
5.5. Offices	1	2
5.6. Retail spaces	1	2
If there is any other way, please specify? _____ __		

Statement	**Yes**	**No**
6. Do you have enough and appropriate storage space for the waste collected?	1	2

7. *Where do you store the waste?*

Statement	**Yes**	**No**
7.1. At own household	1	2
7.2. At a site close to the household	1	2
7.3. At a community centre	1	2
7.4. At the recycling company	1	2
7.5. At the dumping site	1	2

Statement	**Yes**	**No**
8. Do you have specific areas where you collect material?	1	2
8.1. Please list the areas below:		

9. Are there any reasons why you collect in these areas?

Statement	**Yes**	**No**
9.1. Easy access	1	2
9.2. User friendly	1	2
9.3. More materials along these roads	1	2
9.4. Agreement with household/ company	1	2
If there is any other reason, please specify? _____		

Statement	Yes	No
10. Do you have any relationship with families or organisations where you collect the material?	1	2

11. If yes, what kind of relationship do you have with these people?

Statement	**Yes**	**No**
11.1. Household owner	1	2
11.2. Recycling company owner	1	2
11.3. Neighbourhood agreement to collect	1	2
11.4. Contractor	1	2
11.5. Office owner	1	2
11.6. Retail shop owner	1	2

12. If not, what kind of the relationship would you like to have?

Statement	**Yes**	**No**
12.1. Formal charge agreement and schedule with the household owner	1	2
12.2. Formal charge agreement and schedule with the recycling company owner	1	2
12.3. Have an assigned contractor with work and payment agreements	1	2
12.4. Be recognised as an entrepreneur	1	2

Statement	Yes	No
13. Have you received any support from the City of Tshwane?	1	2

14. If yes, what kind of support have you received? Please specify below

15. If no, what kind of support would you mainly like to receive from the City? Please choose one answer

Be assigned to a formal contractor who will manage the work and income	1
Provide convenient material weighing and charging points within our collection vicinities	2
Provide user friendly waste collection carts	3
Arrange for communal recycling material pickup and weighing trucks to collect materials	4
Have laws in place that protect the recyclers	5

Please specify other reasons *-* _____ ___	

Statement	**Yes**	**No**
16. Do you have transport to take you to the recycling companies?	1	2

17. What is the transport mode that you use to move the material around?

Statement	**Yes**	**No**
17.1. Walking trolley	1	2
17.2. Rented van	1	2
17.3. Private vehicle	1	2
17.4. Recycle truck	1	2
17.5. On a bicycle	1	2
If there is any other mode of reason, please specify? _____		

18. What are your transport costs?

18.1. Walking trolley	*No costs*	1
	R10 to R49 per return trip	2
	R50 to R99 per return trip	3
	>R100 per return trip	4

18.2. Rented van	*No costs*	1
	R10 to R49 per return trip	2
	R50 to R99 per return trip	3
	>R100 per return trip	4

18.3. Private vehicle	*No costs*	1
	R10 to R49 per return trip	2
	R50 to R99 per return trip	3
	>R100 per return trip	4

18.4. Recycle truck	*No costs*	1
	R10 to R49 per return trip	2
	R50 to R99 per return trip	3
	>R100 per return trip	4

18.5. On a bicycle	*No costs*	1
	R10 to R49 per return trip	2
	R50 to R99 per return trip	3
	>R100 per return trip	4

19. How far on average are the recycling companies?

Between 500meters and 1km away	1
Between 2km and 5km away	2
Between 6km and 9km away	3
10km away	4
>10km away	5

Statement	**Yes**	**No**
20. Do you have specific routes you use for collection?	1	2

21. If yes, which routes do you use monthly to collect this material?

Statement	**Yes**	**No**
21.1. National roads	1	2
21.2. Regional roads	1	2
21.3. Local main roads (e.g. M1)	1	2
2.1.4. Connecting internal roads	1	2
Please specify route names:		

22. Why do you prefer to use the roads you use?

Statement		**Yes**	**No**
22.1. National roads	*Easy access*	1	2
	User friendly with space to walk on	1	2
	More materials along these roads	1	2

	Leads to more than one neighbourhood	1	2
	Shorter route	1	2

Statement		**Yes**	**No**
22.2. Regional roads	*Easy access*	1	2
	User friendly with space to walk on	1	2
	More materials along these roads	1	2
	Leads to more than one neighbourhood	1	2
	Shorter route	1	2

Statement		**Yes**	**No**
22.3. Local main roads (e.g. M1)	*Easy access*	1	2
	User friendly with space to walk on	1	2
	More materials along these roads	1	2
	Leads to more than one neighbourhood	1	2
	Shorter route	1	2

Statement		**Yes**	**No**
22.4. Connecting internal roads	*Easy access*	1	2
	User friendly with space to walk on	1	2
	More materials along these roads	1	2
	Leads to more than one neighbourhood	1	2
	Shorter route	1	2

23. Where do you take the materials for weighing?

Statement	**Yes**	**No**
23.1. Recycling companies	1	2
23.2. Dumping site	1	2
23.3. Scrapyard	1	2
23.4. Community centre	1	2

24. What is the relationship between you and motorists like? Please choose one answer

Very Bad	1
Bad	2
Not good	3
Good	4
Very good	5

25. To which extent does this job endanger your life? Please choose one answer

This job puts my life in grave danger	1
This job puts my life in danger on some days	2
This job is a risk, but I am willing to endure it	3
This job does not put my life in danger	4

26. To which extent does this job endanger your health? Please choose one answer

This job puts my health in grave danger	1
This job affects my health on some days	2
This job may risk my health, but I am willing to endure it	3
This job does not affect my health	4

Statement	**Yes**	**No**
27. Do the locations where you take the materials have access restrictions or requirements?	1	2

28. Which days do you collect materials?

Statement	**Yes**	**No**
28.1. Monday	1	2
28.2. Tuesday	1	2
28.3. Wednesday	1	2
28.4. Thursday	1	2
28.5. Friday	1	2
28.6. Saturday	1	2
28.7. Sunday	1	2
28.8. Public holidays	1	2

29. Why do you collect on these specific days?

Statement	**Yes**	**No**

29.1. Waste collection day	1	2
29.2. Arrangement with households	1	2
29.3. Recycle day	1	2
29.4. Arrangement with recycling companies	1	2
29.5. Days I have no other commitments to attend to	1	2

30. What times of the day do you mainly collect the materials? Please choose one answer

Morning	1
Afternoon	2
Evening	3

31. What time on average do you start your day? Please choose one answer

00:00am	1
Between 01:00am-03:00am	2
Between 04:00am- 06:00am	3
Between 07:00am- 09:00am	4

32. What time on average do you end your day? Please choose one answer

15:00pm	1
16:00pm	2
17:00pm	3
Later than 17:00pm	4

Statement
33. Are there any reasons why you work at these times? _____

34. To which extent is the frequency of your waste collection and recycling days convenient for your business and sustaining an income?

The frequency is not enough at all	1
The frequency is enough to sustain income for a day	2

The frequency is enough for sustaining an income for a week	3
The frequency is more than enough to sustain an income for a month	4

35. How often are the recycling companies/sites available for recycling? Please choose one answer

Daily	1
Once a week	2
More than twice a week	3
Monthly	4

36. How often would you like to send in your materials for recycling? Please choose one answer

Daily	1
Once a week	2
Twice a week	3
More than three times a week	4
Monthly	5

Statement	**Yes**	**No**
37. Do you work with others in collecting and recycling the material?	1	2

38. If yes, who are these people?

Statement	**Yes**	**No**
38.1. Family member	1	2
38.2. Spouse	1	2
38.3. Friend	1	2
38.4. Colleague	1	2
38.5. Business partner	1	2

Statement
39. Please explain the working arrangement between you and them. _____

Statement	**Yes**	**No**
40. Do you share the profits?	1	2

41. How is the profit shared? Please choose one answer

41. Not shared	1
41.2. Given to household head/ company head	2
41.3. Shared equally	3
41.4. Shared based on collected material	4
41.5 Combining and sharing the profits at the end of the week	5
41.6 Combining and sharing the profits at the end of the month	6

Statement	**Yes**	**No**
42. Would you leave the job that you are currently doing if you had a more formal job offer?	1	2
THANK YOU		

ANNEXURE B: Interview with City of Tshwane officials.

QUESTIONNAIRE

Building Integrated Cities: Mapping Assets of the Urban Poor in Atteridgeville, Tshwane council

I, Katlego Semono, hereby request that you assist me in completing the attached questionnaire. I am a Masters student at the University of Potchefstroom, currently undertaking a study on Building Integrated Cities: Mapping Assets of the Urban Poor in Atteridgeville, Tshwane Council.

The study aims to inter alia, analyse dynamics of informal trading in the Tshwane Council, it traces the movement patterns of the informal waste recyclers, the choices they make and more importantly examines the legislative and policy landscape regarding informal trading activities and the informal sector in the Council.

The questionnaire will at most take approximately 20 minutes to complete. The collated information will be analysed for the purpose of partial fulfilment of the requirements of Masters of Science in Urban and Regional Planning at University of Potchefstroom. The information will therefore be treated with confidentiality.

Your participation in this survey is highly appreciated.

The questionnaire is administered by: Ms. Katlego Semono
: University of Potchefstroom
: M ART ET SCIEN in Urban and Regional Planning
: Faculty of Natural Sciences
: Email: s.katlego@gmail.com
: Cell: +27 (83) 264 0128 / +27 (73) 182 8981

Signed…… Date……

CITY OF TSHWANE: DEPARTMENT(S)

Department:

Designation:

Statement
1. *What is the main function of your department?* _____

2. *What is your department's role in relation to informal trading activities, more particularly informal recycling?*

Statement	**Yes**	**No**
a. *Regulation*	1	2
b. *Law enforcement*	1	2
c. *Policy development*	1	2
d. *By-law development*	1	2
e. *Programme development and support*	1	2
f. *General administration*	1	2
If other, please specify below:		

3. *How does your department view informal recycling?*

Insignificant	1
Minor activity	2
Less significant	3
Vital	4
Very significant	5

Statement	**Yes**	**No**
4. Have there been efforts to address informal recycling?	1	2

5. If so, what are these efforts?

Statement	**Yes**	**No**
a. Support programmes	1	2
b. Developmental informal trading policy framework	1	2
c. Developmental informal trading by-law	1	2
d. Spatial restructuring to accommodate informal trading	1	2
e. Acknowledging contribution of informal recycling	1	2
f. Inclusion in the Integrated Development Plan and Spatial Development Frameworks	1	2

6. Why is the department supporting informal recyclers?

Statement	**Yes**	**No**
a. Informal recycling contributor to employment	1	2
b. Important contributor to local economy	1	2
c. Ensuring clean environment	1	2
d. Recycling and contributing to efficient resource use	1	2
e. Contribution towards climate change mitigation	1	2
f. If other reasons, please specify below:		

7. If not, why has the department not made efforts to support informal recyclers?

Statement	**Yes**	**No**
a. Not the department's responsibility	1	2
b. No resources to support informal recycling	1	2
c. No clear way to support informal recycling	1	2
d. No designated unit that deals with providing support	1	2

e. Not in the departments mandate	1	2

8. How does the department aim to support informal recycling in future?

Statement	**Yes**	**No**
a. Develop support programmes	1	2
b. Develop policy supporting informal recycling	1	2
c. Develop by-law supporting informal recycling	1	2
d. Provide finance for informal recyclers	1	2
e. Sensitive importance of informal recycling	1	2
f. No unit allocated specifically to support informal recycling initiatives	1	2

Statement	**Yes**	**No**
9. Does the city have a medium term plan for the management of informal recycling?	1	2

10. If so, when was this strategy formulated?

a. 1 year ago	1
b. 2 years ago	2
c. 3 years ago	3
d. 4 years ago	4
e. 5 years ago	5
f. > 5 years ago	6

11. How often is the strategy reviewed?

Annually	1
Every 2 years	2
Every 3 years	3
Every 4 years	4
Every 2 years	5
> 5 years	6
Quarterly	7

12. If not, how is the city planning and managing for informal recycling?

Statement	**Yes**	**No**
a. Use of law enforcement officers	1	2
b. Completely disregard it	1	2

c. Just let it happen	1	2
d. Include in development programmes	1	2
If other initiatives are in place, please specify below:		

Statement	**Yes**	**No**
13. Does the city have a long term plan for the management of informal recycling?	1	2

14. If yes, how long is the city's long term plan for the management of informal recycling?

5 years	1
10 years	2
20 years	3
30 years	4
> 40 years	5

15. What challenges does the city face in terms of planning for informal recyclers?

Statement	**Yes**	**No**
a. Invasion of public spaces	1	2
b. Disturbance of vehicle movement	1	2
c. Health and safety issues	1	2
d. Conflicts with households	1	2
e. Trouble designating a unit that will be responsible for managing and planning for them	1	2
f. Allocating tariffs/charges for recycling	1	2
g. *If other reason, please specify*		

Statement	**Yes**	**No**
16. Is informal recycling budgeted for in the budgeting processes?	1	2

17. If not, why are there no budgeting plans in place?

Statement	**Yes**	**No**
a. Constrained resources	1	2
b. No framework for regulation and support	1	2
c. Still not prioritised	1	2

d. Other pressing mandates such as services and housing	1	2
e. Efforts underway to budget for informal recycling	1	2
f. Included in the Service Delivery and Budget Implementation Plan	1	2

18. What else do you think must be done to support and improve conditions in which informal recyclers work?

Statement	**Yes**	**No**
a. Avail more resources to support informal recycling	1	2
b. Prioritise informal recycling in IDP	1	2
c. Begin spatial restructuring to accommodate informal recyclers	1	2
d. Do campaigns on the importance of informal recycling	1	2
e. Develop more support programmes for informal recyclers	1	2
f. Regulate the informal recycling landscape	1	2
g. If other reasons, please specify		

Statement
19. What other initiatives are in place regarding planning and management of informal recycling in the City? _____ _____ _____ _____ _____ _____

THANK YOU