THE RELATIONSHIP BETWEEN GENDER AND POVERTY IN A SOUTH AFRICAN TOWNSHIP

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Vanderbijlpark

To my son Ineza Ian NIYIMBANIRA

DECLARATION

I declare that

THE RELATIONSHIP BETWEEN GENDER AND POVERTY IN A SOUTH AFRICAN TOWNSHIP

is my own work and that all the resources used or quoted have been duly acknowledged by means of complete references and that I have not previously in its entirety, or in part, submitted it for obtaining any qualification at any university.

_____

Rachel Nishimwe-Niyimbanira

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The greatest words of thanks go to Almighty God, my creator, for His mercy, love and protection throughout my life. He granted me wisdom and guidance, without which this work would not have been possible.

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ABSTRACT

Poverty has been a challenge for many years and continues to exist in many parts of the world, especially in Sub-Saharan Africa. In many countries, poverty reduction programmes remain the main preoccupation in economic policies. Poverty is not gender neutral, as women tend to be more likely exposed to poverty because of their restricted access to labour and other markets and their general lower level of education than men. This study aimed at investigating the relationship between gender and poverty in a South African township of Kwakwatsi. The study used the Lived Poverty Index (LPI) as a measurement of poverty to analyse the extent and level of access to basic necessities among inhabitants of Kwakwatsi. The major focus of this study was on comparing the poverty status between female-headed and male-headed households. It was also important to investigate the relationship between poverty status and demographic and socio-economic variables.

A literature review of poverty indicates a multidimensional concept, with a need to be untangled from different perspectives. Poverty includes lack of factors such as food, income, sanitation facilities, shelter, health care, safe drinking water, education and information. The empirical portion of the study was based on data from a survey questionnaire with a sample of 225 households selected randomly from Kwakwatsi Township in April 2013. Various quantitative methods, including Principal Component Analysis (PCA), descriptive analysis (such as means core, cross tabulation and frequency tables) and regression analysis, were used to identify the level of access to basic necessities and how this access is influenced by identified demographic and socioeconomic variables among both female-headed and male-headed households. The LPI was used to assess people's ability to secure income, food, fuel for cooking, electricity, clean water for home use and access to medicines and medical treatment. PCA indicated that all six items of basic necessities could be loaded into one component of LPI, indicating that the measure was adequate for the study.

Households headed by females seemed to be poorer (53.62%) than those headed by males (45.51%), implying that female-headed households appeared more likely to experience the lack of basic necessities than male-headed households. Access to basic necessities such as medicines or medical treatment, water, electricity and fuel

for cooking have an effect on the quality of life. Access to medicines and medical treatment remains a lingering challenge for the inhabitants of Kwakwatsi, especially in female-headed households. Regarding the employment status of the participants, the unemployment rate of the head was found to be slightly higher for male heads than female heads, but the total number of employed people within a household was found to be less in households headed by females compare to those headed by males. The average total income in female-headed households was found to be lower than that of male-headed households. To add to this, a high number of female heads work in the informal sector, with low wages and poor working conditions. This was found to be associated with a higher level of illiteracy among female household heads, thus making it difficult for them to compete in the formal labour market. Deprivation levels were seen to decrease with the number of employed persons in female-headed households, while this was the opposite in male-headed households. The number of household members was found to increase with the poverty level in female-headed households, while there was no effect among male-headed households. Married male household heads were found to have less access to basic necessities than unmarried ones, while the relationship was the opposite where female married household heads appeared to have less access to basic necessities than those who are not married. Overall, descriptive analysis revealed that female-headed households tend to be deprived from stable and sustainable access to basic necessities. The results of the regression analysis showed that the number of household members who are employed, household head's income and other income of the household are significant predictors of poverty in Kwakwatsi.

The study recommends that the gender gap in income can be alleviated by empowering women labourers through collective action and increase of vocational education and training for better skills. There is a need for using public works programmes efficiently in order to address the problem of low income in the area. Furthermore, the importance of the informal sectors of the economy, especially in low income areas, should be acknowledged because it seems to be an important source of income for the residents of Kwakwatsi. Finally, there is a need to improve primary health care provision for the township of Kwakwatsi.

Key words: Poverty, Lived Poverty Index, feminisation of poverty, female-headed households, Kwakwatsi Township.

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LIST OF ABBREVIATIONS

AGDI:	African Gender and Development Index
ANC:	African National Congress
AWPS:	African Women's Progress Scoreboard
DHS:	Demographic and Health Survey
ECA:	Economic Commission for Africa
EFILWC:	European Foundation for the Improvement of Living and Working Conditions
FET:	Further Education and Training
FGT:	Foster, Greer and Thorbecke
FHH:	Female-Headed Households
GDI:	Gender-related Development Index
GEM:	Gender Empowerment Measure
GNP:	Gross National product
GSI:	Gender Status Index
HDI:	Human Development Index
HIV:	Human Immuno Virus
HPI:	Human Poverty Index
HSRC:	Human Sciences Research Council
IFAD:	International Fund For Agricultural Development
ILO:	International Labour Organization
LCS:	Living Conditions Survey
LFS:	Labour Force Survey
LPI:	Lived Poverty Index
MHH:	Male-Headed households
MRC:	Medical Research Council
NGOs:	Non-Governmental Organisations

NHI:	National Health Insurance
OECD:	Organization for Economic Co-operation and Development
PCA:	Principal Component Analysis
PIR:	Poverty and Inequality Report
PSLSD:	Project for Statistics on Living Standards and Development
SIGE:	Standardized Index of Gender Equality
SPSS:	Statistical Package for the Social Sciences
StatsSA:	Statistics South Africa
UN:	United Nations
UNDP:	United Nations Development Programme
UNESCO:	United Nations Educational, Scientific and Cultural Organization
UNFEM:	United Nations Development Fund for Women
USA:	United States of America
WHO:	World Health Organization

CHAPTER ONE: THE PROBLEM AND ITS SETTING

1.1 INTRODUCTION

The problem of poverty is evident in all parts of the world. In 2008, 24 percent of the world's population was living below the poverty line of $1.25 per day (UN, 2012:4). In Sub-Saharan Africa, the number of people living in extreme poverty grew by 100 million between 1990 and 2005 (World Bank, 2013). The proportion of the population in Sub-Saharan Africa living below the World Bank's international poverty line was 50.3 percent in 2005 (World Bank, 2013). In South Africa, approximately 50% of the population was found to be living below the poverty line in 2011 (Mail & Guardian, 2011). Poverty is a multidimensional problem. This was highlighted in 1995 during the World Summit on Social Development in Copenhagen, where 117 countries considered *absolute* poverty as a condition characterised by lack of basic human necessities such as food, shelter, sanitation facilities, safe drinking water, health, education and information (UN, 1995). Poverty can be understood as a condition of life in which basic needs are met, but just barely (Triegaardt, 2006). This is known as *moderate* poverty. Another degree of poverty is *relative,* which is generally perceived to be a household income level below a given proportion of average national income. Poverty can also be connected to the deprivation of sufficient consumption to afford enough calories and the deprivation of basic material needs (IFAD, 2001:1).

The Platform for Action at the Fourth World Conference on Women in Beijing in September 1995 adopted that, "More than one billion people in the world, the great majority of whom are women mostly in the developing countries, live in unacceptable conditions of poverty" (UN, 1996:37). Buvinic (1997:10) posits that women accounted for a growing percentage of poor people in the world. This is confirmed by UNDP, which states that 70% of the world's poor are women (UNDP, 1995). In developing countries, there has been a consistent increase in the percentage of female-headed households, thus increasing the burden of poverty by their having to take care of a household alone (Bongaarts, 2001:270).

Poverty has long-term ramifications for women. The lack of job training and education, poor working conditions and inferior status in society frequently make women financially dependent on men (UN Women, 2011; UN 2010:75). UN Women

(2011) argued than women are frequently paid less than men for their work. In 2008 the average gender pay gap was 17 percent worldwide (UN Women, 2011). Women are concentrated in unsafe, insecure, low-wage jobs and they experience discrimination when applying for credit for self-employment (UN, 2010: 75). This status perpetuates prejudiced perceptions of women as inferior and leaves them vulnerable to physical and emotional mistreatment. Therefore, there is a high chance that households headed by females would be poorer than those headed by males. Such poverty in female-headed households may lead to feminisation of poverty, which is defined as a change in poverty levels that is biased against female-headed households or women in general (Bridge, 2001:1). In other words, feminisation of poverty is an increase in the difference in poverty levels between females and males, or between male and female-headed households. Medeiros and Costa (2008) pointed out that the increase in poverty level caused by gender inequalities is also feminization of poverty.

Other studies on poverty and female headship have addressed the fact that female-headed households do not form a homogeneous group. It is helpful first to distinguish between *de jure* and *de facto* female-headed households. According to Lampietti and Stalker (2000), in *de facto* female-headed households the husband is temporarily absent, but may still play an active role in supporting the household through remittances, while in *de jure* female-headed households the male head is permanently absent. These include unmarried women, widows and those who are divorced or separated with their partners. Rogan (2011) and Kennedy and Haddad (1994) found that *de facto* female-headed households have a higher incidence of poverty than *de jure* female-headed households and male-headed households.

In the South African context, Rogan (2012:7) identified a third category of female-headed households in addition to the *de facto* and *de jure* categories. This third category is co-resident female-headed households. The co-resident female-headed household refers to a household headed by a married/co-residing female who lives with her partner. A study by the Medical Research Council (MRC) (2007:13) found that 42.4 percent of all households are headed by a female. In non-urban areas women head nearly half of households, compared to 39 percent of households in urban areas. In 2008, a third (30.9 %) of all South Africa's female-headed

households were *de jure* female-headed and a vast majority of these were living below the poverty line (69.4%) (Rogan, 2012:7). However, the highest levels of poverty are found in *de facto* female-headed households. *De facto* female-head households made up 7.2 percent, but 83.3 per cent of them were found to be poor (Rogan, 2012:7).

There are two primary causes for female headship, namely non-marriage and male labour migration (Posel, 2001). This suggests that the marital status of women has an impact on the poverty status of a household. A series of policies and practices comprised by the now-defunct apartheid system produced gendered, racial and spatial segregation. Apartheid policies included forcible relocation of African populations into the land rural areas, centred on the rural labour reserves and designed as Bantustans (homelands) and rigorous limitation of movement (Coovadia *et al.*, 2009:819). Collinson (2009:9) argued that in rural areas a number of African women became heads of households because their partners were recruited to work in urban areas and were not allowed to take their families with them. This provided a breeding ground for female headship and increased incidence of poverty.

1.2 PROBLEM STATEMENT

In 2007, two-thirds of children were female, with no primary education (UN, 2010:43). There were about 876 million illiterate women worldwide (UN, 2010:43). It was confirmed by the UNDP (2003) report that 41 percent of females older than 15 years were illiterate, compared to 20 percent for men of the same age group. Half a million women die from poverty-related health problems (UN, 2010:19). This arises mainly when women encounter difficulties in supporting themselves and their children. Women assume almost all the responsibility to assure a sustainable well-being of their families. However, UNFEM (2010) stated that in the estimation of the world's income and means of production, they are given only a share of 10 percent and 1 percent, respectively. Women, who find jobs, either in the formal or informal sector, are concentrated in vulnerable work or face wage differential. However, society bears the greatest costs of feminised poverty, as it results in lower economic growth and tremendous social repercussions.

A number of studies have been conducted on poverty and gender. Over 60 studies from Latin America, Africa and Asia concluded that in two-thirds of cases female-headed households were poorer than male-households (Buvinic & Gupta, 1997). These studies were based on various indicators of poverty such as household income and consumption, mean income per adult equivalent, expenditure, access to services and ownership of land and assets (Buvinic & Gupta, 1997). Buvinic and Gupta (1997) reviewed 61 studies on the relationship between female-headed households and male-headed households and found that, in the majority of these studies, female-headed households were over-represented among the poor. Haddad *et al*. (1996) reviewed approximately 10 studies on the relationship between poverty and gender of the household head in developing countries. A higher incidence of poverty was found among female-headed households, compared to those headed by males.

They conclude that both male and female-headed household features and the process of household formation are the major determinants of the extent of poverty among female-headed households. Quisumbing *et al*. (1995), using per capita, adult equivalent indicators and other poverty measurements analysed the extent of poverty in male and female-headed households in 10 developing countries. They did not find convincing evidence supporting the difference in poverty levels between male and female-headed households. Female-headed households were found to be more deprived only in two countries (Ghana and rural Bangladesh). Other studies disagree that households headed by females are poorer than those headed by males (Aggarwal, 2012; Chant, 2006). This is confirmed by Koster (2008), who found that, in Rwanda, households headed by females are not the poorest of the poor and added that to refer to households headed by women as poor is improper victimisation.

In the South African context, various studies have shown that there is a relationship between gender and poverty. Most of these studies revealed that households headed by females are relatively underprivileged in terms of assets and income or are significantly over-represented among the poor (Budlender, 1997; Dungumaro, 2008; Ray, 2000). However, Mtshali (2002:115) discovered that in rural areas of KwaZulu-Natal male-headed households are poorer than women-headed

households. This is because female-headed households tend to diversify their income-generating activities more than male-headed households do and the majority of the able-bodied men left the rural areas of KwaZulu-Natal to engage themselves in non-agricultural activities in the mines, factories and services in urban areas.

Overall, these studies reveal that the gender of the head of the household has an impact on the status of poverty. However, the issue of “feminisation of poverty” was not fully addressed. The term “feminisation of poverty”, was first coined in the 1970s (Pearce, 1978). Numerous studies, mostly conducted on female-headed households in sub-Saharan Africa, Latin America, and the Caribbean, found that female household heads struggle to procure resources for housing and agriculture (Chant, 1985; Dwyer & Bruce, 1988). Furthermore, female-headed households tend to have less access to well-paid jobs, land, capital, credit and they are likely to have a higher dependency ratio; as a result, they are vulnerable to poverty. This may be the case with women living in South African underdeveloped urban areas known as townships. This study will conduct analysis of gender poverty in Kwakwatsi Township in order to identify whether or not there is feminisation of poverty.

Kwakwatsi is a former black residential township located approximately 180 km south of Johannesburg and 280 km north of Bloemfontein in the Free State province of South Africa. The area is part of the Ngwathe Local Municipality, with its head office in Parys (Ngwathe Municipality, 2009). The area could be classified as a semi-urban township, with little economic activity. The nearest industrial town of Sasolburg is 70 km away. The estimated population size of Kwakwatsi is 15 095. A study by Sekhampu (2012) found increased incidence of poverty in the area. He used two poverty measures to analyse poverty in the area: the upper and lower bound poverty line. Of the sampled households, 50 percent were found to be poor, using the lower bound poverty line, and 77 percent when using the upper bound poverty line. On average, poor households had an income shortage of 56 percent of their poverty line when using the lower bound poverty line. This study aims to add to the empirical literature on poverty, by providing a comparison of poverty between households headed by females and those headed by males. The study further analyses the probable determinants of poverty in the South African township of Kwakwatsi.

1.3 OBJECTIVES OF THE STUDY

The following objectives have been formulated for the study:

1.3.1 Primary objectives

The primary purpose of this research was to conduct a gender analysis of poverty in the South African township of Kwakwatsi.

1.3.2 Theoretical objectives

In order to achieve the primary objective, the following theoretical objectives were formulated for the study:

- Review the literature on poverty theories
- Review the empirical literature on determinants of poverty
- Conduct a review of the empirical literature on the relationship between gender and poverty
- Review the empirical literature regarding the feminisation of poverty

1.3.3 Empirical objectives

In accordance with the primary objective of the study on a South African township, the following empirical objectives were formulated:

- To determine the poverty rate of the sampled population
- To compare the poverty status of female-headed households and male-headed households.
- To determine the effect of these socio-economic variables on female-headed households and provide a comparison with their male counterparts.
- To determine the relationship between poverty status and socio-economic variables.

1.4 RESEARCH DESIGN AND METHODOLOGY

The study consisted of a literature review and an empirical study. Quantitative research using the survey method was carried out for the empirical portion of the study.

1.4.1 Literature review

The literature review on South Africa was conducted from national and international literature, where secondary data such as relevant textbooks, journal articles, newspaper articles and the internet were consulted.

1.4.2 Empirical study

The empirical portion of this study comprises the following methodology dimensions:

1.4.3 Target population

The target population are households based in Kwakwatsi Township, Ngwathe Local Municipality, Free State province of South Africa.

1.4.4 Sample method

In order to gather information needed for this study, a random sample of households was interviewed between April and May 2013. Households at which the questionnaires were to be administered were pre-selected from a map.

1.4.5 Sample size

A sample of 225 households was selected to meet the analytical needs of this study. A similar sample size was undertaken by Sekhampu and Grobler (2011) and Sekhampu (2012).

1.4.6 Measuring instrument and data collection

A survey questionnaire was used to gather the necessary data for this study. The questionnaire was divided into three sections, which captured all information needed to achieve the objectives of the study. The first two parts of the questionnaire were developed based on literature, while the third section was adopted from Mattes *et al.*

(2002). The first two parts covered different aspects of households' socio-economic and demographic characteristics, such as household size, gender distribution, household structure, marital status, education attainment, employment status and household head's income. The third section contains questions about the level of access to basic necessities of the households. The data collected was analysed using descriptive statistics (frequency distribution, percentages, mean and standard deviation) and regression. The Lived Poverty Index (LPI) was used to analyse the extent and level of access to basic necessities among inhabitants of Kwakwatsi. The poverty line set for the study was calculated from the LPI, using the method developed by Mattes *et al.* (2002).

Poverty in Southern Africa is found to be multidimensional and cannot be measured by income only. This measure captures how frequently a household goes without basic necessities during the last twelve months. According to Mattes (2008:166), to generate the lived poverty index the household head should be asked the following questions: how often has a family gone without the scale of six items: food, water, medical treatment, a cash income, home fuel and electricity. Respondents use an ordinal level response scale with the options: "Never," "Just Once or Twice," "Several Times," "Many Times," or "Always". Higher scores indicate a greater degree of lack of access to basic necessities. Therefore a higher average score to the poverty line calculated indicates that the household is poor.

One of the objectives of this study is to use the survey data to identify structural determinants of poverty related to socio-economic and demographic characteristics of households. To achieve this objective, this study considered the use of both linear and logistic regressions. Results from these two models were compared to find a model that well suited the data. Linear regression provided better results. Hence, this study proceeded with linear regression. The statistical model used in this study is specified as follows:

$$y_i = \alpha + \beta_1 x_1 + \beta_2 x_2 + \cdots . + \beta_k x_k + \varepsilon_i \qquad (1.1)$$

Where α is the intercept, y_i and $x_1 \ldots x_k$ are both observable variables, but the former is the dependent or predictable variable, while the latter are independent or predictor variables. ε_i is unobserved or error term or disturbance term. The elements in β are

slope parameters or unknown population parameters. In the case of this study, the dependent variable is the LPI of each household, while independents variables are the gender of the household head, household size, age of household head, the marital status, household head education attainment, employment status of the household head, number of household members who are employed, household head income and other income of the household.

The data was captured and analysed using the statistical package for social sciences (SPSS) windows 21 and STATA 11.

1.5 ETHICAL CONSIDERATIONS

The research study has complied with the ethical standards of academic research. Questions were composed in a clear and simple language. The questionnaire was accompanied with an affidavit indicating institutional support for the research and a covering letter explaining the importance and purpose of the research to assure confidentiality and encourage response. Participation in the research was voluntary and participants were allowed to withdraw at any stage.

1.6 CHAPTER CLASSIFICATION

This study comprises the following chapters:

Chapter 1: The problem and its setting

This chapter consists of an introduction and background to the study, the problem statement, the research objectives and a brief description of the research methodology. This chapter concludes with a summary of the organisation of the whole the study.

Chapter 2: Literature review

Chapter two reviews the poverty theories, empirical literature on determinants of poverty and the correlation between gender and poverty, globally and in South Africa specifically.

Chapter 3: Research methodology

This chapter describes the research design and methodology used to collect and analyse data. It presents the description of data.

Chapter 4: Results and findings

Chapter four presents the results from the estimated regressions, with a detailed discussion of the findings.

Chapter 5: Conclusions and recommendations

This chapter presents the summary of the study, concluding remarks and policy recommendations.

CHAPTER TWO: LITERATURE REVIEW

2.1 INTRODUCTION

Poverty has been a challenge for many years and continues to exist in many countries of the world, especially in Sub-Saharan Africa. In many countries, poverty reduction programmes remain the main preoccupation of economic policies. To be able to understand problems which are caused by poverty, one needs to understand its definitions, concepts, measurement and the areas in which it appears to be deepened (Bourguignon & Chakravarty, 2003:25). As people define poverty differently, elucidation of how it is defined is vital, because different definitions of poverty involve the use of different indicators for measurement; they may lead to the recognition of different individuals and groups as poor and require different policy implications for poverty alleviation (Laderchi *et al.*, 2003:2).

Poverty is sometimes linked to various variables such gender, income, age, marital status, education attainment and employment status. The link between gender and poverty is a complex and very controversial topic. The thinking that women experience a disproportionate and growing burden of poverty on a large scale is known as “the feminisation of poverty” and has raised much attention in recent years (Chant, 2003:25). The proponents of feminisation insist that households headed by females are seen as the poorest of the poor and that the focus needs to be concentrated on the alleviation of that poverty condition (Buvinic & Gupta, 1997:259). The precise nature of the connection between gender and poverty needs to be deeply understood and this should inform policymaking (Cagatay, 1998:2).

This chapter is devoted to theoretical conceptualisation of poverty and the relationship between gender and poverty. The aim of this chapter is to discuss some approaches to the definition and measurement of poverty and the link between gender and poverty.

2.2 DEFINITION OF POVERTY

Pioneers of poverty research of the late nineteenth century, Booth (1889) and Rowntree (1901), defined poverty as simply the lack of enough money to satisfy basic physical needs. This definition was pursued with several amendments.

Historically, poverty was associated with income, which is currently still the centre of the concept of poverty. From the nineteenth to the middle of the twentieth century the explanation of poverty evolved from basic needs to the notion of subsistence needs (an individual's needs to survive). The idea of subsistence needs expanded the description of poverty, based on the lack of basic needs, by including basic facilities and services (health, sanitation and education). In the late twentieth century, the understanding of poverty known as 'relative deprivation' emerged. The relative deprivation includes income and other means and social conditions (Ludi & Bird, 2007:1).

In the United Nations (UN) (1995) statement, poverty is defined as a condition where basic human needs are severely deprived. Those needs include food, sanitation facilities, shelter health, safe drinking water, education and information. The World Bank defines poverty in the same way as the UN. According to the World Bank (2005:8), poverty is "deprivation of well-being". This well-being concept can be assessed by a person's possession of nutrition, shelter, income, capacity of seeing the doctor, education and some other human rights such as freedom of speech. The UN and World Bank's definitions are mostly subjective, because they involve a self-assessment of own conditions of people who are regarded as poor. Although there is no agreement about what the definition of poverty should be, worldwide consensus is that poverty alleviation has to be an important goal of policy development. Chaudhry (2003:49) explored the problem of poverty and revealed that poverty is unavoidably a political concept and that no single definition could be said to be scientifically accurate. He further mentioned that social scientists and economists who use analytical quantified data discuss poverty in different ways (Chaudhry, 2003:50). Sociologists link the causes of poverty with the roles of culture, power, social structure and other factors which individuals cannot control, while economists consider its measurement (UNESCO, 2012).

Chambers (2006:3) categorised meanings of poverty into five clusters:

- **Income-poverty or its common proxy consumption-poverty**: people are categorised as poor because of defined thresholds below which they are considered to be poor.

- **Lack of material or want**: in addition to income, this includes absence or shortage of wealth and low quality of other assets (such as shelter, furniture, clothing and personal possession of transport) and limited access to services.

- **Capability deprivation**: this was adopted from Sen (1980) to refer to what a person can or cannot do and can or cannot be. It goes much further than material lack or want, by including human capabilities (skills and physical abilities) and self-respect in society.

- **Multi-dimensional deprivation**: material lack or want as only one of several mutually strengthening dimensions.

The above clusters of poverty have been developed by the UNDP on the basis of their perceptions of poverty, education, training, mind-sets, experiences and reflections. Chambers (2006:3) advanced the idea of considering poor persons themselves in defining their poverty. He stresses the need for a fifth cluster based on the analysis of poor people; referring to those who are seen as vulnerable and deprived.

- **The multiplicity of the meanings of poverty** identified by the poor themselves

The identification of causes of poverty is the key point in analysing and fighting against poverty (World Bank, 2005). What is needed is to find out who are the poor and investigate why they are poor. Compiling a profile of the population is vital in the determination of the factors which cause poverty. A poverty profile describes the pattern of poverty, but it is not predominantly preoccupied with explaining the causes of poverty (World Bank, 2005:124). Alcock (1997:36) notes that once the existence of poverty is recognised, it is a sign that there must be cause(s) of such poverty and the identification of those causes should be a basis to policy-makers in developing a policy response. The World Bank (2005:125-130) classified some key causes, thought to be the roots of poverty, as follows:

- **Regional-level characteristics**: these are vulnerability to geographical disasters (such as flooding or typhoons, remoteness) and inhospitable

conditions (inadequate public services, infrastructure and communication), quality of governance, property rights and their enforcement.

- **Community level characteristics**, such as the availability of infrastructure (roads, electricity and water) and services (education and health,), proximity to social relationships and markets.

- **Household and individual characteristics**. Among the most important are:

  - **Demographic**: household size, dependency ratio, age structure, gender of the household head.

  - **Economic**: employment status, property owned, hours worked.

  - **Social**: health and nutritional status, shelter, education.

Poverty has also been defined in two terms, absolute or relative poverty. According to Lipton and Ravallion (1993:1), poverty exists when one or more people fall short of a level of economic welfare considered to be a rational minimum, either in some absolute sense or by the standards of a specific society. The detailed difference between absolute and relative is discussed below.

2.2.1 Absolute poverty

Absolute poverty is a condition characterised by lack of basic human necessities, such as food, shelter, sanitation facilities, safe drinking water, health, education and information. It not only depends simply on income, but on access to social services as well (UNDP, 1995:41). The definition of poverty in absolute terms focussed on the notion of subsistence and is claimed to be both scientific and objective. Townsend (1979:31) challenges this thinking by defining poverty as relative deprivation. Subsistence is the lowest level needed to maintain life and to be under the subsistence level is living in absolute poverty so that one does not have enough to survive (Chaudhry, 2003:55). From this statement the question one can ask is, how do people with absolute poverty survive? The answer from the absolute poverty theorists is that people living in absolute poverty do not live longer if they are not given enough subsistence to stay alive. Some get involved in illegal activities in order

to survive (Chaudhry, 2003:55). The absolute poverty definition is also used in the Millennium Development Goals as a basis for measuring poverty (UN, 2012).

Desai (2006:17) stipulates that definitions of absolute poverty have been *static, calorific, asocial* and *atheoretical*.

- **Calorific**: This involves the process of defining a basket of goods which will, at minimum cost, provide a required calorific standard to an individual or a household. That cost is then augmented to reflect the portion of food in the total budget of a sampled population for which the poverty line is being drawn.

- **Static**: this refers to the fact that the poverty line is constant over time, it changes only for inflation adjustment

- **Asocial**: this definition does not consider the fact that individuals are not uniform, as there are difference in age, gender and health status and special needs.

- **Atheoretical**: this is the biggest criticism, in that the absolute poverty measure is based on a passive variable, consumer's expenditure, in ignorance of the income generation process. The priori determination of an arbitrary level of calories of the absolute poverty level concept does not involve choices.

2.2.2 Relative poverty

Relative poverty is generally perceived to be a household income level below a given proportion of average national income. Townsend (1979:31) developed the relative deprivation theory, which attempts to put the definition and measurement of poverty on an international, scientific level. In this definition, poor people are defined as people whose resources are critically lower than those commanded by the average individual or household; meaning that poor people are, indeed, excluded from normal living patterns, traditions and activities. Thus poor people are those whose living standards are lower than the prevailing living standards of other people in a given society (De Vos & Garner, 1991:268). Relative poverty describes poverty in terms of lack of means in comparison to the means of others (Chaudhry, 2003:56). For

instance, people can be able to meet their basic needs, regardless of being relatively poorer than the most of their fellow citizens; this is the case of many developed countries (McLachlan, 1983: 97). The idea that poverty depends on the level of living standards of the majority implies that poverty varies from country to country.

A relative approach to poverty emphasises that someone's poverty position depends on the condition of others in society (De Vos & Garner, 1991:268). This implies that poverty might be treated as a simple characteristic of stratification and inequality. In his inquiry into the nature and causes of the wealth of nations, Smith (2005:715-716) described the social-inclusion role of a linen shirt in18th century Europe as follows:

"A linen shirt … is, strictly speaking, not a necessity of life. The Greeks and Romans lived, I suppose, very comfortably though they had no linen. But in the present times, through the greater part of Europe, a creditable day-labourer would be ashamed to appear in public without a linen shirt, the want of which would be supposed to denote that disgraceful degree of poverty which, it is presumed, nobody can well fall into without extreme bad conduct".

This quote was mostly used in the context of justifying the idea that poverty is relative instead of being absolute, that apart from basic necessities of food and physical survival, certain socially-specific expenditures are important for social inclusion (Ravallion, 2011). This is how poverty is defined in most European countries. People considered poor, as defined by the European Council, are those whose income and resources are insufficient for them to meet the acceptable life style in the society in which they live (Eurostat, 2010:6). They may encounter various disadvantages related to the limited access to employment, shelter, income, adequate health services, proper education, sport, culture and recreation (Eurostat, 2010:6). The average standards of society influence the feeling of deprivation raised by poverty. Countries, in which every person is presumed to have access to basic means to guarantee survival, mainly use relative standards to understand poverty situations (Laderchi *et al.*, 2003:6). In other words, absolute poverty is used mostly in developing countries, while relative poverty is used in developed countries.

2.2.3 A pyramid of poverty concepts

Having discussed various definitions of poverty, it is important to explain a pyramid of poverty concepts. Income/consumption approach has dominated poverty measurements as will be discussed in Section 2.3.1. Instead of focusing on one dimension, this measure takes into account other dimensions which seem to be ignored. Baulch (1996) has proposed a series of poverty concepts which are schematically shown in Figure 2.1.

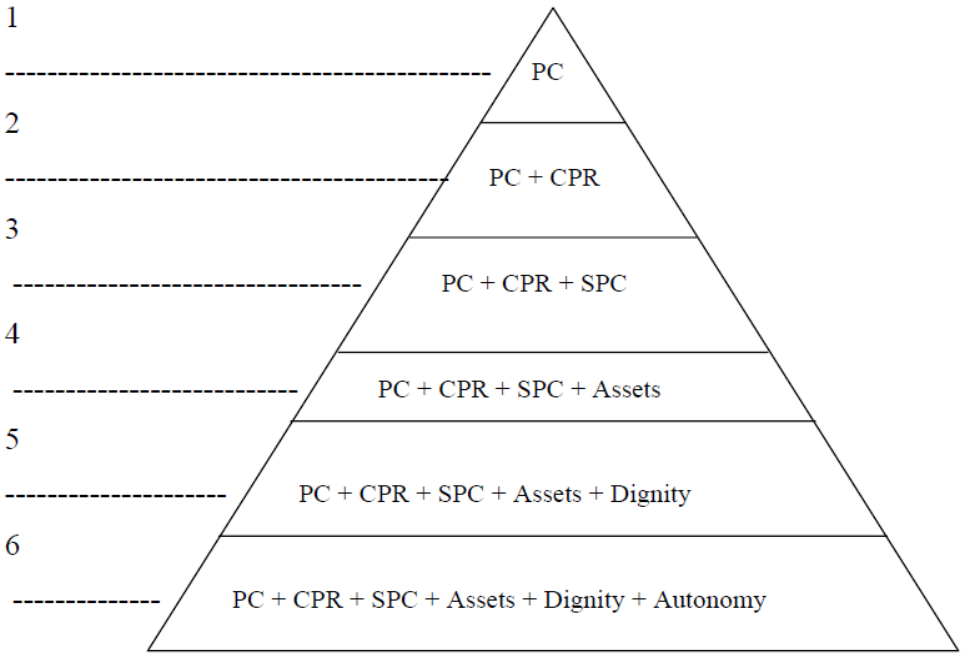


Figure 2.1: A pyramid of poverty concepts

Source: Baulch (1996:2)

In Figure 2.1, PC is private consumption, CPR is common property resources and SPC is state-provided commodities. Baulch (1996) did not view poverty as a static situation where the poor are seen as passive victims of community in need, but a process through which poor people struggle to cope with poverty with whatever assets they may have. De Haan and Maxwell (1998:4) place the World Bank's definition of poverty on the top of the pyramid while the UNDP's definition is at the bottom of the pyramid because of its focus on human development.

The income/consumption approach is shown by level three which is private consumption, common property resources and state-provided commodities. From level four to level 6, Baulch added assets (either physical or intellectual), dignity and autonomy, which include freedom of people to achieve dreams (activities) and capacity to opt for a decent life. It is evident that poverty is a multidimensional phenomenon which can be described in different ways relative to the living standards of a certain society.

2.3 THEORETICAL APPROACHES TO POVERTY

There are a number of approaches to understanding the concept of poverty. This section is based on four conventional approaches to poverty assessment, namely the monetary, capability, social exclusion and participatory approaches.

2.3.1 The monetary approach

The monetary approach was derived from the work of Booth and Rowntree in the late nineteenth and early twentieth centuries, when they were studying poverty in London and York (Laderchi *et al*., 2006:7). The monetary approach is the most frequently used approach in identifying and measuring poverty, because it is said to capture the central component of poverty, namely lack of monetary resources (Carraro, 2006:4). It identifies poverty with a shortfall in consumption (or income) from some poverty line. Income or consumption of different components is valued at market price and this requires identification of the relevant market and the imputation of monetary values for those items that are not valued through the market (Laderchi *et al.*, 2006:10).

The poverty line and basic needs methodologies are the major tools to make the monetary approach successful. The poverty line is the level of income below which people are considered as poor. On the basis of a range of variables, basic needs methodologies create an index which aims to indicate if people have all the minimum goods and services needed to satisfy the basic needs defined by the methodology. The method proposed by the monetary approach perceives income/consumption as the best possible proxy measure of well-being (Soria, 2007:1). The monetary approach makes the hypothesis that utility maximisation is the objective of consumers and so their total consumption can measure their welfare. The

consumption proxy is their total expenditure or income. This means that poverty can be defined as a shortfall below an income which is required to afford the basic basket of goods. It would then be named the poverty line. However, Laderchi *et al.* (2006:10) argued that the validity of this approach then depends, in part, on:

- whether utility is an adequate definition of well-being;
- whether monetary expenditure is a satisfactory measure of utility;
- whether a short-fall in utility encompasses everything about the meaning of poverty;
- The justification for a particular poverty line.

The approach has been criticised. Soria (2002:3) said that an approach which attempts to homogenise global population and understand poverty appears to be naive, because human interactions and social behaviour differ greatly within and between countries. The most intense and discussed example of this approach is the "less than $1 a day" poverty line and its limitations to the understanding of poverty. Saith (2004:26) and Soria (2002:3) cautioned that the idea that this approach uses income-based understanding only seems to be too narrow to match reality, because it ignores other types of welfare and social relations. The best way of correcting all the aforementioned shortfalls of the monetary approach is to develop a realistic way of understanding the concept of well-being. However, the theory of the monetary approach appears to leave little room for this realistic understanding of well-being. Moreover, Soria (2000:3) insists that the causes of poverty are results of long process of socio-economic, political and cultural power relations, implying that the monetary approach may not capture all these power relations. The evolution in time of the processes of understanding poverty might be more insightful than trying to understand poverty at a single point in time through income. Monetary measurements of poverty often produce short-term results instead of long term and sustainable results (Lu, 2012:4). Consequently, the monetary approach addresses poverty based on the effects of poverty rather than on its causes. Despite these weaknesses, the monetary approach should not be ignored, because it posts some methodologies aspects that show clear economic inequalities which help in the understanding of economic poverty (Lu, 2012:3; Soria, 2003). A better measurement

can thus be developed by complementing monetary measurement with other instruments.

To estimate poverty using the monetary approach either income or consumption can be used. Coudouel *et al.* (2002:30) and Haughton and Khandker (2009:30) suggest that a better indicator in assessing poverty using monetary measures is consumption. This is from the understanding that consumption data from household surveys are more detailed than income ones. The following motives adopted from Coudouel *et al.* (2002:30) and Haughton and Khandker (2009:30) explain in detail this choice of using consumption instead of income:

- Consumption provides better estimations of poverty than income, because it is more closely linked to an individual's well-being in the sense of having enough to meet current basic necessities. However, one may argue that income allows individuals access to the consumption of goods; implying that consumption mostly depends on income.

- Consumption may be more easily measured than income. In poor economies, where society primarily depends on agriculture, climate changes and the harvest cycle may cause fluctuations in incomes for rural households during the year. The fluctuation of income might also occur in urban economies with large informal sectors. This fluctuation leads to a potential difficulty for households to precisely remember their income, and this may affect the quality of information on income from the survey. In estimating agrarian income, it is necessary to exclude the inputs. This is an additional difficulty in assessing income in the agricultural sector, because of excluding the inputs paid for agricultural production from the farmer's revenues. If the households consume their own production, or exchange it for other commodities, then there is a large part of the income which is not monetised and it might be difficult to price it. Even though the estimation of consumption has some difficulties, it might be more consistent if the consumption module in the household survey is well designed.

- Consumption provides a better reflection of a household's actual standard of living and ability to meet basic needs. The consumption expenditures do not

only reflect the goods and services that individuals can afford from their current income, but also whether such individuals can have access to credits or savings at times when current income is very low or negative, because of factors or situations that cause a wide fluctuation of income.

2.3.2 The capability approach

The capability approach was introduced by Sen (1980), when he was reviewing traditional welfare economics which conflate well-being with either opulence or utility (Clark, 2002:29-34). Alternatively, this theory focuses on indicators of the freedom to live a valued life. In a poor society the essential consideration is to achieve basic freedom in a positive way. The capability, as described by Sen (1979:40), is the capability to function. It represents the various combination of functioning's (beings and doings) a person can achieve. These *beings* and *doings*, which Sen calls *functionings*, together constitute what makes a life valuable. Capability is thus a set of vectors of *functionings* which reflects the person's freedom to choose one type of life or another (Sen, 1992:40). The capability approach, according to the understanding of UNDP (1997:16), accommodates both absolute and relative poverty concepts since *relative deprivation* in incomes and commodities may induce an *absolute deprivation* in minimum capabilities.

The key feature of the capability approach is that it focuses on what people are effectively able to do and to be, that is, on their capabilities. Functioning refers to what a person manages to be or do, while capabilities refer to the ability of a person to achieve functioning (Qizilbash, 1996:144; Saith, 2001:8; Sen, 1985:10; 1987:36). *Functionings* include being employed, leisure, being educated, receiving better health care, being healthy, participating in the community's activities and being respected. What is needed is that individuals get the freedom to live the lifestyle they would like to live, to be a person they wish to be and to do what they desire to do. Once these freedoms are effectively achieved, people can decide to act on those freedoms in the direction with their own thoughts of the kind of life they want to live (Robeyns, 2003:6).

Sen (1993:47) did not endorse a definitive list of capabilities because his concern was the general framework. Robeyns (2003:61) states that an attempt to develop a

single all-purpose list of capabilities would be incompatible. She has compiled a list of five criteria upon which one can evaluate capabilities. Robeyns claims that valuation procedures that meet her criteria provide epistemic, academic and political legitimacy for empirically evaluating capability. Her five criteria are:

- **Explicit formulation**: the list of all suggested elements should be explicit, so they can be discussed and debated.
- **Methodological justification**: the method used to generate the list should be made explicit so it can be scrutinised.
- **Sensitivity to context**: the concept of the list should take into account its purposes, whether for political, philosophical, socio-economic or legal discussion.
- **Different levels of generality**: if the intention of the list is for empirical application or public policy then it should be drawn up in two separate stages; first an ideal stage and then a practical one that may reflect temporary feasibility constraints on information and resources.
- **Exhaustion and non-reduction**: the list should include all important elements and those elements should not be reducible to others (though they may overlap).

Several commentators have criticised Sen for failing to supplement his framework with a coherent list of important capabilities (Nussbaum, 1988:176; 2003; Qizilbash, 1998:54). The most notable difference is Nussbaum who developed a definite list of central human capabilities which includes life, bodily health, bodily integrity, senses, imagination and thought, emotions, practical reason, affiliation, other species, play and political and material control over one's environment (Nussbaum, 2000:72-75; 2003:41-2; 2005:41-42; 2006:78-79). However, Nussbaum's list has been designed and modified over time, and that it probably will be further modified in the future, in the light of criticism (Nussbaum, 2006:78). Given the intrinsic under-specification of Sen's capability approach, every application of the capability approach will need to set its own list, because there cannot be an inclusive list. The capability approach has enormous potential for addressing feminist concerns and questions.

2.3.3 The social exclusion approach

Social exclusion has its origins in France and was expanded through European Union (EU) policies and research. Deakin *et al*. (1995:4) defined social exclusion as "the process through which individuals or groups are wholly or partially excluded from the society in which they live". The social exclusion concept covers a remarkably wide range of social, economic and political problems (Bhalla & Lapeyre, 1997:415; Hickey & du Toit, 2007:2). A study by Silver (1995:60-61) points out that social exclusion is associated with a range of terms like closure, superfluity, foreignness, alterity, marginality dispossession, irrelevance, disaffiliation deprivation and destitution. Chakravarty and D'Ambrosio (2006:379) identified three types of social exclusion, namely the lack of participation in social institutions, the denial or non-realisation of rights of citizenship and the increase in distance among population groups. The social exclusion concept includes a large series of economic, social and political aspects of life and can be considered as a multidimensional phenomenon.

Nevertheless, there is disagreement over the way social exclusion is defined *vis-à-vis* poverty. For instance, many authors describe social poverty as an alternative concept of social exclusion, or an element of social exclusion or social exclusion responsible for poverty (de Hann, 1998:12). Many poor people suffer from social exclusion and giving attention to this exclusion would enable a greater view of deprivation and disadvantages than is regarded when considering poverty narrowly. Even though many poor people are excluded, it is quite possible that one can be 'excluded' without being poor. Katz *et al*. (2007:3) reason that the social exclusion concept and relative poverty are similar, in the way that both include material conditions of people and their status relative to 'mainstream' society.

However, Gore and Figuiredo (1997: 8) and de Hann (1998:12-13) showed that there are some common features which separate social exclusion definitions from other concepts:

- Social exclusion is described as the opposite of social integration, which reflects the perceived importance of being part of society and being integrated.

- Social exclusion is a multi-dimensional concept. It refers to deprivation in the socio-economic and political fields. It is not only limited to the analysis of resource allocation mechanisms, because it also takes into account power relations, agency, culture and social identity (this was also discussed by Bhalla & Lapeyre, 1997:418-420).

- Social exclusion can refer to a state or situation, but it mostly refers to a process, and the mechanisms through which individuals are excluded. It therefore focuses on the institutions that enable and constrain human interaction.

De Haan (2004:10) added that the fundamental dimension of social exclusion is discrimination and that there is rising proof that it is linked to long-term poverty in developing countries. Discrimination on the basis of gender, race, religion, ethnicity or social status most of the time leads to social exclusion and locks people into long-term poverty traps (World Bank, 2000:117). The large percentage of females who experience chronic poverty is an example of how the social exclusion processes lead to chronic poverty and an example of the gendered nature of such processes. The importance of the social exclusion approach is that it engages a clear understanding of the multidimensionality of deprivation and considers underlying contextual factors that explain chronic poverty and vulnerabilities (Laderchi *et al*., 2003)

2.3.4 The participatory approach

The participatory approach emphasises the necessity of taking into consideration local people's perspectives and giving them a greater say in describing their economic conditions and deciding on the means to be undertaken to alleviate identified inadequacies (Sekhampu, 2010:78). Participatory inquiry and research practice to poverty take into consideration the belief of people living in poverty, by giving them the right to participate in the analysis of their own condition and how to fight it. It also means that the perspectives and ideas of people experiencing poverty themselves are seen as key to achieving a more all-inclusive and in-depth understanding of poverty (Bennett & Roberts, 2004:6). The aim of participatory research practices is to engage communities' members to speak when they might have been silent, consistently call upon researchers to be participatory, in turn

communicating their knowledge on behalf of the community members (Dodson & Schmalzbauer, 2005:952). This approach can make research more effective and improve its impact on policy. Participatory monitoring and evaluation can improve the understanding of the perspectives of those affected by poverty and also the untangling of more complex processes of change (Bennett & Roberts, 2004:viii).

2.4 MEASURING POVERTY

In order to assess the role of economic policies and development programmes in alleviating poverty, it is important to understand how poverty is measured. The measurement of poverty is an important instrument used in monitoring the improvement of targeted goals and objectives for poverty alleviation. The measurement of poverty serves four purposes, namely a cognitive purpose, an analytical purpose, policy-making purpose and monitoring and evaluation purposes (Chaudhry, 2003:98). The cognitive purpose assists in knowing the situation related to poverty, while the analytical purpose assists in understanding the factors determining such a situation (Chaudhry, 2003:98). The policy-making purpose assists in designing the best intervention to adapt to this situation of poverty. Finally, the monitoring and evaluation purposes assess the effectiveness of developed polices (Chaudhry, 2003:98). In the measurement of poverty, two steps have to be followed. The first step involves the identification of the poor, while the second step focuses on the aggregation of personal poverty by creating a poverty measure of the poor based on the information provided by these poor (Sen, 1976:219).The identification of those who are poor involves the following elements:

- **Choice of income unit**: For instance, a household can be identified as non-poor because the income of such household is above the poverty line. This choice of unit assumes that resources within the household are equally distributed. However, this may not be the case. Thus, research focusing on female and child poverty within a household can be conducted in order to verify this assumption.

- **Choice of resources**: this may involve choosing resources to be used in identifying the poor; these resources may either be income or consumption.

- **Adjustment of resources for household size and composition**: this involves two adjustments. First, it considers economies of scale where the expenditures on food and housing for two adults who live together tend to be lower than expenditures needed if these two adults lived separately. The second adjustment considers that adults do not use the same resources as children. Therefore, given a household size and composition, equivalence scales are used.

- **Choice of poverty line**: the poverty line sets a threshold so that households below this line are regarded as poor.

There are numerous measures of poverty, but the following section will present some of the most commonly used measures and will point out advantages and limitations encountered by users.

2.4.1 Foster-Greer-Thorbecke (FGT) measures (Pα)

The FGT poverty measurements are a family of three indices, namely headcount index, poverty gap index and squared poverty gap (Foster *et al*., 1984). The FGT measurements are the most commonly used measures in empirical and theoretical studies worldwide, as well as in South Africa (StatsSA, 2012b).

The general formula of FGT indices is $P_{\alpha}(Y_i, Z) = \frac{1}{N}\sum_{i=1}^{q}\left(\frac{Z-Y_i}{Z}\right)^{\alpha}$ (2.1)

Where;

N: population size,

Z: poverty line,

$Y_{i:}$ per capita income of poor person i, and

α is the poverty aversion.

The FGT poverty measure of the entire population is provided by the poverty measure of a group as a whole weighted average of poverty measures of individuals in a group. When α=0, the equation (2.1) will be the headcount index, if α=1 the equation (2.1) will be poverty gap index and if α=2 the equation (2.1) will be squared

poverty gap (Chaudhray, 2003:113; Haughton & Khandker, 2009:72). The greater the value of α, the higher the weight on the poverty gap of the poorest persons. For all three FGT poverty measurements, the greater the index, the worse the poverty situation is.

2.4.1.1 Headcount index

The oldest and most widely used measure of poverty, proposed by Foster *et al*. (1984), is the headcount index (P_0) or the incidence of poverty, which is the proportion of households below the poverty line as the index of poverty. Statistically, the headcount index is expressed as the following equation:

$$P_0(Y_i, Z) = \frac{1}{N}\sum_{i=1}^{q}\left(\frac{Z-Y_i}{Z}\right)^0 = \frac{1}{N}\sum_{i=1}^{q} 1 = \frac{N_P}{N} \qquad (2.2)$$

Where variables N, Yi and Z are defined in the same way as in equation (2.1)

N_p is the number of households below the poverty line.

Equation (2.2) gives the same idea of headcount ratio which was described by Sen (1981) and the classical poverty economists, as follows:

$$H = \frac{q}{n} \qquad (2.3)$$

Where q is the population size and n is the number of households below the poverty line.

This measure is widely used based on the idea of being easy to calculate and understand, but it is far from being free of criticism. The first major limitation is that it ignores the distribution below the poverty threshold. In other words, it is not sensible to the depth and severity of poverty to measure the extent of income below the poverty line. Secondly, it does not satisfy the principles of monotonicity and transfer axioms (Sen, 1983:165; 1979:294-298; 1976:219). The monotonicity axiom states that whenever the income of a poor household decreases, the poverty measure increases (Sen, 1976:219). In other words, an income reduction of a person below the poverty line increases the poverty index. The transfer axiom states that a progressive transfer of income to a poor individual should decrease the poverty index, as long as after the transfer this individual continues to be poor (Bellù &

Liberati 2005:2-3; Sen, 1976:219). The small difference between these two axioms is that the former requires the decrease of the poverty measure, provided that the individual moves from poor to non-poor, while with the latter the individual should remain poor. The reason why Sen (1976:225) proposed the weak transfer axiom is because a poverty measure should not be insensitive to the level of inequality among poor individuals. Based on his deprivation theory, whenever the inequality of income among poor persons falls, the poverty measure decreases and the relative deprivation decreases as well.

2.4.1.2 Poverty gap index (P1)

Another measurement of poverty is the poverty gap index. The difference between the poverty gap index and the headcount index is that the poverty gap index presents a better indicator of the depth of poverty. This measure captures the degree of the mean income shortfall of an individual relative to the poverty line across the entire population (Chaudhray, 2003:115). Makoka and Kaplan (2005:19) defined this poverty gap index as the level to which the mean income of a poor person differs from the defined poverty line. When that difference is expressed as a proportion of the poverty line, it is the poverty gap. The poverty gap index is obtained by adding up all shortfalls of the poor (assuming that non-poor have a shortfall of zero) and dividing the total by the population. The poverty index is symbolically expressed as follows:

$$P_1(y_i; z) = \frac{1}{n} \sum_{i=1}^{q} \left[\frac{(z-y_i)}{z}\right]^1 \quad (2.4)$$

Where variables are defined in the same way as in equation (2.1)

Given that poverty is analysed at household level rather than individual income, the poverty gap index should be written as:

$$P(y_i; z) = I.H \quad (2.5),$$

Meaning that, $I = \frac{(z-y_q)}{z}$ (2.6)

Where $y_q = \frac{1}{q}\sum_{i=1}^{q} y_i$ is the average income of the poor.

There is a big difference between poverty gap index and income gap index. The former is defined on a whole population, while the latter is defined only on persons who are poor. Chaudrhay (2003:216) reasoned with an example that income gap index itself is not enough. Suppose that there are people that are poor, but also close to the poverty line, and over time they manage to improve their standards of living and become non-poor. The average distance between the poverty line and the poor will increase, because those who were less poor are no longer in poverty and others who are still in poverty are far away from the poverty line. This means that the income gap ratio will increase as well. This can be interpreted as if there has been a deterioration of welfare. While nobody was made worse-off, some people are only just better-off.

The advantage of the poverty gap index is that it gives a clear understanding of depth of poverty through its estimates of how much resources would have been needed to be transferred in order to raise the income of a poor person above the poverty line (Makoka & Kaplan, 2005:20). One key constraint is that the poverty gap index is not sensitive to the severity of poverty among the poor and ignores the inequality between them (Makoka & Kaplan, 2005:20).

2.4.1.3 The squared poverty gap (P2)

The third measurement of poverty is the squared poverty gap. This measure describes the severity of poverty because it considers poverty among the poor. The squared poverty gap considers the square of the distance from the poverty line to poverty gap index, so that the poverty gap can be weighted by itself and to the very poor (World Bank, 2005:73). The squared poverty gap is described as follows:

$$P_2(y_i; z) = \frac{1}{N}\sum_{i=1}^{n}\left[\frac{z-y_i}{z}\right]^2 \qquad (2.7)$$

Where variables are defined in same way as in equation (2.1)

Haughton and Khandker (2009:71) claimed that the squared poverty gap is difficult to interpret. Hence this measurement is not commonly used.

2.4.2 Sen Index

Sen (1976:227, 1979:298) has proposed an index that sought to combine the effects of the number of the poor, the depth of their poverty and the distribution of poverty within the group. Sen Index (P) is a combination of three parameters, namely headcount ratio, income gap index and the Gini coefficient (Sen, 1983:165; 1976:227).

Sen Index is written as follows:

$$P = H[I + (1 - I)G] \quad (2.8)$$

Where G is the Gini coefficient computed on poor persons' income

H and I are defined in the same way as in equations (2.2) and (2.6)

P can be also obtained by replacing I with its equivalent $1 - zy_q$ as seen in equation (number in gap index)

$$P = H\left[1 - y_q(1 - G)/z\right] \quad (2.9)$$

The index lies in the closed interval [0,1], with P = 0 if everyone has income greater than the poverty line income and P = 1 if everyone has zero income(which is generally ruled out). Sen's measure considers the number of poor persons among the whole population through headcount ratio H. Secondly, it considers the depth of poverty trough income gap ratio I. Finally, through the Gini coefficient (G) computed on poor persons' income, it considers relative deprivation. Therefore the Sen Index satisfies the monotonicity, weak transfer and focus axioms (Chaudrhay (2003:211). The focus axiom states that the poverty measure should focus completely on the poor's income (Haughton & Khandker 2009:74). Nevertheless, Deaton (1997:147) claimed that Sen Index cannot be used to decompose poverty into contributions from different subgroups, which frequently give information when monitoring changes in poverty. This index is almost never used outside of the academic literature, as it might lack the intuitive appeal of some of the simpler measures of poverty (Haughton & Khandker 2009:74; World Bank, 2005:75).

2.4.3 Lived Poverty Index (LPI)

Through the Afrobarometer project, Mattes *et al*. (2002:8) applied the Lived Poverty Index (LPI) in South Africa and other countries of southern Africa. The LPI measure was first implemented by the New Democracies Barometer surveys in Central and Eastern Europe, then in Africa by Afrobarometer (Davids 2010b:14). Mattes *et al*. (2002:40) cautioned that some poverty measurements, including LPI, have the weakness of making a conclusion from plausible proxy measure instead of measuring enjoyment of the basic necessities of life. The LPI captures how frequently a household has gone without basic necessities during the last twelve months instead of focusing on things like income, expenditure, assets or access to services. It may therefore not provide an accurate measurement of poverty, but it still provides additional indicators that are useful in poverty measurement.

Poverty in southern Africa is found to be multidimensional and cannot be measured by affordability of basic necessities without adding other indicators. According to Mattes (2008:166), to generate the LPI the household head answers questions about how often has a family gone without the scale of six items: food, water, medical treatment, a cash income, home fuel and electricity. Respondents use an ordinal level response scale with the following options: “Never,” “Just Once or Twice,” “Several Times,” “Many Times,” or “Always” (Mattes *et al*., 2002:6). In addition a series of standards questions about the household head’s educational attainment, employment occupation, and access to services is also asked.

2.4.4 Poverty lines

A poverty line is a fixed level of income or expenditure needed to afford a basket of goods and services that satisfy the individual or household consumption at a minimum level in order to be out of poverty (Carraro, 2006:2). People whose per capita income is lower than the poverty line are in the category of poor. People whose per capita income is greater than the poverty line are in the category of non-poor (Chaudry, 2003:77). In other words, the poverty line helps to identify poor from non-poor.

Poverty lines can serve distinct purposes. Ravallion (1998:ix) and Carraro (2006:4) distinguished two important functions a poverty line can serve.

- To measure and analyse poverty: the poverty line can be used when the government wants to monitor the improvement in the fight against poverty and assess the effect of its policies on poverty alleviation in a country.

- To set the standard of adequacy and guideline for levels of social assistance benefits: once poor people are identified.

Carraro (2006:4) pointed out that general poverty analysis is based on surveys of a sample of households taken as being representative of a country's population, while the second function regards individual cases that are managed through administrative methods. Furthermore, within these two key roles of poverty lines, Carraro (2006:4) explained their use for five different purposes.

- **To measure poverty**: the poverty line itself is a tool used to measure poverty. It also helps to generate some other poverty measurements such as headcount ratio, poverty gap index and squared poverty gap index (Ravallion, 1998:4).

- **To describe poverty**: after identifying the poor, the poverty line helps to define their standards of living and to make comparisons between distinct population groups from different areas, over time.

- **To understand the possible reasons of poverty**: the poverty description and measurement assists in conducting a deep investigation into the causes of poverty.

- **As the standard for the level at which people are not judged to be poor**: once a poverty line is recognised formally by the government as the minimum level of a living standard, it is used to officially identify the people who fall below that level. These people are considered as the ones who struggle to reach the minimum level of living standards.

- **As a guideline to set social support benefits**: the poverty line can be utilised as a guideline for the entire system of social or economic policy; meaning that it can be a standard used by the government to ensure a basic living standard for every member of society.

It is important to note that the first key function is linked to the first three while the second one is related to the fourth and fifth uses of poverty lines. Although poverty lines are important in the development and implementation of socioeconomic policies, the interpretation of these poverty lines may vary with the location (Ravallion, 1992:25). Three principal methods of determining poverty lines include absolute, relative and subjective poverty lines (Rio Group, 2006; Ravallion, 1992).

Absolute poverty lines are anchored on the income necessary for a household to meet basic needs and its real value is constant over time. Ravallion (1992:25) suggests that an absolute poverty line should be fixed in terms of the standard indicator being used and fixed over the entire domain of the poverty comparison. An absolute poverty line is essential if one is trying to judge the effect of anti-poverty policies over time, or to estimate the impact of a project on poverty (Ravallion, 1998:5). With absolute poverty lines, comparisons between individuals who are treated in a similar way with a similar level of welfare provide a consistent outcome (Ravallion, 1998:5). Absolute poverty lines are only adjusted for inflation and do not move with economic growth, average income and changes in the standards of living. This poverty line is set by estimating the cost of a basket of goods considered to ensure that basic needs are met. The food expenditure is the most essential element of minimum good to meet basic needs in developing countries (Ravallion, 1992:26). Poverty lines set on the basis of nutritional needs are known as “food poverty lines” (Oosthuizen, 2008:3). Rio Group (2006:54-55) pointed out that two approaches of setting food poverty lines include normative and semi-normative poverty lines. Normative food poverty lines comprise the cost of a basket of food which meets nutritional and health criteria, but might not represent the consumers’ preferences and habits. By contrast, semi-normative food poverty lines represent the cost of a basket of food that is set considering nutritional criteria and respect consumers’ preferences, habits and prices faced by them on markets. This approach has been used in the USA and Canada (Rio Group, 2006:55).

Relative poverty lines are set on either the median or mean of equalised aggregated income of the population (Bourguignon, 2004:1). The relative poverty line depends on some income distribution characteristics so that the line changes with the average standard of living. This line varies over time and across space. There is a tendency

to update the relative poverty line upward once a country's economic performance improves (Houghton & khandker, 2009:44) and a downward revision during recessionary periods (Carraro, 2006:3). For instance, if it is set at 50 percent of the mean income, the growth of the aggregate national income will imply an increase of the relative poverty line. This is counterintuitive, because an improvement in economic situations should generally imply a higher income and better conditions of living (Carraro, 2006:3). One may say that it is difficult to vanquish relative poverty since it moves when income rises and it is challenging to make a comparison within or across the country since this line can take several values in the same country.

The poverty lines for absolute and relative poverty measurements are not set in the same way. Developing countries have lower lines than the ones for developed countries. Since both relative and absolute poverty lines are subject to criticism, Madden (2000:182) and Ravallion (1992:34), mentioned that it is quite possible to choose what could be called a hybrid or dual poverty line which combines characteristics of both, being absolute for low-income countries and relative for middle income and developed countries.

Beyond absolute and relative poverty lines is an understanding of subjective poverty lines. Subjective poverty lines are set on the basis of subjective judgements of people about what they believe to be in the component of an acceptable social minimum level of living standards in society (Ravallion, 1992:33). As suggested by Kapteyn *et al*. (1988:223), a subjective poverty line is constructed on the basis of survey responses to the following question: What level of income do you, in your circumstances, consider to be absolutely minimal? In other words the minimum income that the participants could not make ends meet with. The major feature of the subjective approach, according to Rio Group (2006:75), is that the threshold between the poor and non-poor is based on how people perceive their own well-being. The subjective approach can be expressed in monetary (poverty line value) or non-monetary (deprivation indicators or not met basic needs) ways.

2.5 POVERTY AND INEQUALITY

Inequality matters for poverty. For a given level of average income, education and land ownership, the rise of inequality of these elements will roughly increase the

intensity of absolute and relative deprivation within the same dimensions. In terms of assets in a country, the higher the level of inequality, the lower the rate of economic growth, on average (McKay, 2002:1). When income is equitably distributed, a certain rate and pattern of growth of household income will reduce the impact of poverty. Inequality differs from poverty but is related to it. Inequality focuses on the difference in living standards over the entire population. By contrast, poverty concentrates only on those whose living standards fall below the poverty line (Haughton & Khandker, 2009:103).

According to Heshmati (2004:1), in practice, monetary measurements are the most commonly used measures of inequality. These measurements capture the inequalities between groups of individuals or households classified according to various criteria (such as: gender or class) and inequality between communities or regions within the country, or international inequality. However, this is just one perspective, and inequality can be connected to inequality in skills, opportunities, health, education, welfare, happiness, assets, life expectancy and social mobility (Heshmati, 2004:1). Therefore, inequality is multidimensional. The concept of inequality should not be conflated with relative poverty, because a country with a general high level of income inequality can have zero relative poverty, especially when such a country has strategies of redistributing the income below the relative poverty line (Marx & Van Den Bosch, 2007:3; Oosthuizen, 2008:8). Income inequality can be measured by the Lorenz curve and Gini coefficient, while human development index and human poverty index can measure human inequality.

2.5.1 Lorenz curve and Gini coefficient of inequality

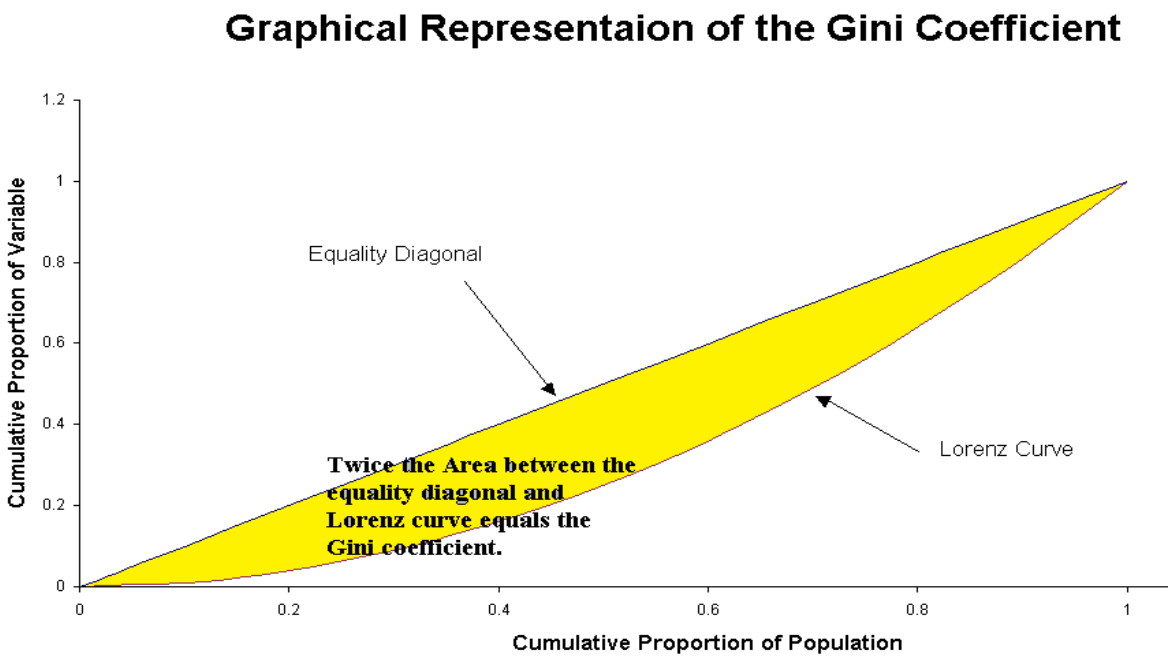


Figure 2.2: Lorenz curve and Gini coefficient

Source: Hale (2008:8)

The Lorenz curve is a graphical representation of the cumulative income distribution which illustrates the level of inequality within a certain community. It shows the percentage of income which belongs to the bottom percentage of households (Bellù & Liberati, 2005:6). The percentage of households is charted on the x-axis and the proportion of income on the y-axis. It was developed by an American economist, Max O. Lorenz, in 1905, for representing inequality in the wealth distribution. The general shape of the Lorenz curve is displayed in the Figure 2.2. It joins the lower left and upper right corners of the diagram; it has a positive slope which increases as the cumulative proportion of the population increases. The further it lies from the 45 degree line the greater the extent of inequality. The 45 degree line is what the Lorenz curve would look like if the distribution was perfectly equal (Bellù & Liberati, 2005:6; HSRC, 2005:5).

The Gini coefficient was developed by the Italian statistician, Corrado Gini, in 1912 (Farris, 2010:851). It is a measure of inequality of income distribution in a country. It is defined as a ratio with values between 0 and 1: the numerator is the area between

the Lorenz curve of the distribution and the uniform distribution line; the denominator is the area under the uniform distribution line. The Gini index is the Gini coefficient expressed as a percentage, and is equal to the Gini coefficient multiplied by 100. In other words, the Gini coefficient is equal to half of the relative mean difference. It should be noted, on the one hand, that if a country has a Gini coefficient which is equal to 0 there is perfect income equality. This means that everyone has the same income. On the other hand, if a country has a Gini coefficient equal to 1, it shows that there is a perfect income inequality, meaning one person has all the income, while everyone else has zero income. Hence, the closer the Gini coefficient is to 0 the better the income distribution (Landman *et al*., 2003:3). The Gini coefficient can also be used to measure wealth inequality. One requirement for this use is that no one has a negative net wealth.

One could mention that the Gini coefficient satisfies four among five important principles required for a good measure of inequality (Haughton & Khandker, 2009:105). As described by Litchfield (1999:2) and Haughton and Khandker (2009:106), these four principles are as follows:

- **Anonymity:** it does not focus on who the high and low earners are.
- **Scale independence:** the country's economy is not an issue. In other words, the Gini coefficient does not consider the size of the economy, the way it is measured, or whether it is a developed or developing country.
- **Population independence:** the Gini coefficient does not take into consideration the size of population of the country.
- **Transfer principle:** if income (less than the difference) is transferred from a rich person to a poor person the resulting distribution is more equal.

The Gini coefficient has some limitations because of its relative nature. There is no common agreement on its proper use and interpretation. It is possible for the Gini coefficient of a developing country to rise due to increasing inequality of income, while the number of people in absolute poverty decreases. This is because the Gini coefficient measures relative, not absolute, wealth (Lindley, 2012).

2.5.2 The human development index and human poverty index

The human development index, as used in the first development report (UNDP, 1990) had three components, namely health, education and income. It uses the following indices:

- Life expectancy index (L)
- Proportion of educated adult population (E)
- The logarithm of the gross national product (GNP) (Sen & Anand, 1994:3)

To compute the HDI the average of these three indices is calculated:

$$HDI = \frac{(L+E+GNP)}{3} \qquad (2.10)$$

The HDI tries to rank countries on a scale of 0 to 1. An HDI lower than 0.5 indicates low development and an HDI of 0.8 or above is deemed to characterise high development (UNDP, 1997). One can also compute HDI for female and males separately and get gender disparities. The human poverty index (HPI) uses similar dimensions as the HDI to measure deprivation in basic human development. The variables used are the percentage of people expected to die earlier than the age of 40 (P1); the percentage of illiterate adults (P2); and overall economic provisioning measured by the percentage of people who do not have access to clean water and health services; and the percentage of children who are under the age of five years and are underweight (P3).

It is calculated as follows: $HPI = \left[\frac{1}{3}(P_1^{\alpha} + P_2^{\alpha} + P_3^{\alpha})\right]^{1/\alpha} \qquad (2.11)$

Where α = 3

Both HDI and HPI use the category of information related to human development features, which go further than what can be provided by income measure. Human development puts an emphasis on how the community progresses as a whole, while human poverty concentrates on the status and progress of the most deprived persons in the community (UNDP, 1997). HDI and HPI can be utilised as planning tools in order to identify regions where poverty is concentrated within a country.

These measures can also help in ranking districts or provinces in terms of human development, in order to identify the areas that are in need of serious interventions.

2.6 GENDER AND POVERTY

Gender is one of the crucial concepts in the analysis and eradication of poverty (UNDP, 2007). Understanding the link between gender and poverty may assist in developing policies that can have the greatest impact on poverty (Catagay, 1998:2). This is based on the view that opportunities, constraints, needs and incentives differ by gender. On a global scale, the thinking that females experience a disproportionate and rising share of poverty, aroused much attention and became known as "feminisation of poverty" (Chant, 2003:5; 2006:165). Bridge (2001:1) suggested at least three perspectives which can explain the concept of feminisation of poverty:

- Women's poverty incidence is higher than men's, meaning that the percentage of poor women is higher than that of poor men;
- Poverty among women is more severe than among men. On average, poor women are seriously poorer than poor men; and
- The rates or levels of poverty among women are increasing with increasing numbers of female headship. This means that an increase in the rate of households headed by females implies an increase in the rates and levels of poverty among women.

A number of studies (Aggarwal, 2012; Baden, 1999; Chant, 2003; Chen *et al.*, 2004; Quisumbing *et al*. 2001) revealed that there is limited clarity about the meaning and empirical verification of feminisation of poverty. These and many others argue that there is a lack of systematic data which disaggregates consumption or expenditure by gender, implying that such broad statements are frequently built on the basis of questionable assumptions (Baden, 1999:10). UNIFEM (2002:60) confirmed that there is no international database which gives a comprehensive breakdown of the incidence and level of women's monetary poverty compared to men. In this section a number of perspectives that seek to explain the feminisation of poverty will be presented.

2.6.1 Female-headed households and feminisation of poverty

Davids and van Driel (2001:162) believe that feminisation of poverty is founded on the basis of female-headed households. The household-headship concept in the studies of gender and poverty is rooted in the idea that most poverty studies tend to focus on the household level and female headship in order to integrate the aspect of gender in this concept of poverty (UN, 1994:32). A household is described as a group of persons (or one person) whose food provision, shelter and other essentials for living are done in common, but practices differ significantly among countries (Bongaarts, 2001:264; StatsSA, 2012a:79). The head of the household is the person who is recognised by the other members as such (StatsSA, 2012a:79; UN, 1980:70). The relationship between household headship and feminisation of poverty originates from the concern that households headed by females constitute a growing proportion of the poor and live in greater extreme poverty than those headed by males (Bridge, 2001:1).

In numerous African countries, as elsewhere in the world, there has been a large increase in the number of female household heads (IFAD, 1999). This increase is due to demographic and social antecedents. The sex disproportion was caused by war deaths and conflicts, which leave a surplus of female residents or refugees and sex-specific migration. Women left behind become heads of households in the places of origin, or migrant women create households in the places of destination (Buvinic & Gupta, 1997:262). There is also marital breakdown (separation and divorce), widowhood and out-of-wedlock births (Kimenyi & Mbaku, 1995:45). The increase of female-headed households is one of the leading social preoccupations, as it is linked to the high level of poverty among these households.

Using poverty indicators such as per capita household income mean per adult equivalence, total or per capita consumption expenditure, and access to services and ownership of land and assets, Buvinic and Gupta (1997:263) scrutinised 61 studies related to the link between poverty and female-headed households. Thirty-eight of them found that female-headed households were overrepresented among the poor. Fifteen found that poverty depends on some poverty indicator other than the gender of the household head. It was concluded that female-headed households are overrepresented among the poor. Mehra *et al*. (2000:7) claim that poverty tends

to be inter-generationally perpetuated, since female-headed households find it difficult to secure the well-being of their families.

Given that female household heads tend to be poorer than their male counterparts, attention has to be directed to these female-headed households in order to alleviate the situation. Bibars (2001:81-3) and Safa (1995:84) suggested palliative interventions including day care, child-feeding, skills-training and access to credit or shelter. The feminisation of poverty was adopted as the key challenge for the 21st century (Chant, 2006:2).

2.6.2 Causes of poverty among females

Some poverty causes are common to both women and men but there are a number of causes that apply specifically to women. According to the Legislative Council Secretariat (2006:2-3), the following are some predominant causes of poverty among women:

Traditional role as a caregiver: culture, tradition and stereotypes have always contributed to the gender division of labour. Women have to be generally in charge of caring for children, the disabled and elderly in the household (Evandrou & Glaser, 2003:583). Women work fewer hours or cease working to carry out household activities which are unpaid for (Evandrou & Glaser, 2003:583). These responsibilities limit the opportunities for women to develop and improve their skills and accumulate assets.

Unequal economic status: women suffer from an inferior economic status because most of them assume the caring role and other unpaid domestic work in the household (Antonopoulos, 2009:1). Raja (2009:3) claims that the participation of women in the labour force is increasing, although at a slower pace. Similarly, Chen *et al*. (2005) confirm that since 1970 there has been an increasing trend of females participating in the labour market in either part-time or full-time work, despite disparities between the salaries of women and men (gender pay gap) and working conditions. According to the ILO (2009:5), on average women earned 15 percent less than men for each hour worked. Women's jobs continue to be mostly in the informal sector and part-time work and are described in *Cs*: caring, cleaning , catering and cash registers, which pay less (Chen *et al*., 2005:2-4; Okojie, 2003:3;

Rai, 2002:111-112; World Bank, 2005a:4). To women who work part-time, motherhood is frequently a problem trigger of poverty because they get paid only when they work. Women generally accept underpaying jobs with flexible working hours, as this allows them to fulfil their traditional task of taking care of the homes (Bellamy & Rake, 2005b). Most of these part-time jobs are frequently insecure, with low status, low occupational benefits and inadequate protection. The employment might not pay enough for the women to live above the poverty line (Anon, 2007:9).

Household-based poverty studies assume that resources are equally distributed, no matter who receives and controls them. This applies particularly to money earned from employment activities. This assumption may bury the true level of poverty women are facing (Bellamy & Rake, 2005a). In addition, most women in poor families tend to sacrifice their own food and clothing in favour of their children or partners in order to protect them (UN women, 2011). Thus, women within poor families experience the most severe poverty, in comparison to other members of the household (Bellamy & Rake, 2005a). Rogan (2011:47) added that women are also disadvantaged in access to land, property and credit and are exposed to cultural stigmas.

Social exclusion: poverty and social exclusion always go hand in hand. Women living in poverty usually cannot afford to participate in the social and political activities of the community. Sometimes poverty exerts a negative effect on their self-confidence, which later strengthens the trend of social exclusion. Consequently, social exclusion does not simply influence the well-being of women living in poverty, but also dims their vision of finding their way out of poverty (May, 1997:1).

2.6.3 Factors associated with poverty and female headship

Female heading households, among other females, present the greatest poverty risks. Female household heads may be more independent and have more control over resources than other women who are not household heads. However, females head might be the main and only provider, not only for the needs of their dependents, but also for their own needs. In addition, they face labour market disadvantages and time constraints because of tasks relating to the upkeep of the household and this makes it difficult for them to earn sufficient income (Fuwa, 2000:

128). Moghadam (1998:232) confirmed that households headed by females have a tendency to be poorer than their male counterparts, due to the economic gaps and greater constraints on the mobility and time of female heads.

Harrison (2000:8) identified some variables which can determine the poverty status of female household heads:

- **The reasons for female headship**: The reasons causing a woman to be the head of the household can determine the poverty status of such household. The chances of poverty among widowed households are much higher than among divorces. *De jure* female-headed household have a higher probability to be poorer than *de facto* female-headed households (Lampietti & Stalker, 2000:22).

- **The structure of the household:** the structure of the household, such as the dependency ratio, affects the level of poverty in female-headed households. The dependency ratio shows the proportion of young and old people who depend on income earners within the household. Poverty is thus likely to be high in households in which the dependency ratio is high (Barros *et al*., 1993:10; Barros *et al*., 1997; Rajaram, 2009:4-5).

- **The broader economy and the nature of constraints and opportunities within the households:** income-generating opportunities for females tend to be rare because of the discrimination against them on the labour and other markets (Delius & Schirmer 2001:17). Female-headed households may thus be particularly vulnerable to poverty.

A study by Chant (2009) in Costa Rica found that the age of the female heads is correlated with their relative deprivation. Buvinic and Gupta (1997:259) recommended that female heading households are worthy of particular interest because they are disadvantaged in three ways: they experience the burden of poverty, have become victims of gender discrimination and lack of support as heads of households. However, female headship should not be the only criterion scrutinised because it is not always correlated with poverty (Buvinic & Gupta, 1997:259). It is important to note that targeted programmes based on household structure have

been effective in fighting the scourge of poverty, especially among female-headed households (O'Laughlin, 1996:2).

2.6.4 Approaches to assessing gender differences in poverty

Conventional approaches to poverty assessment can be important in assessing differences in poverty due to gender. When measuring poverty many studies use a simple comparison of income or consumption between female-headed households and their male counterparts, while some aspects concerning female welfare are ignored (Chant, 2003:12). A comparison between males and females reveals that females are subject to discrimination in the labour market, accessing credit and a range of other areas. Poverty research is claimed to be grounded on physical aspects of deprivation rather than the most intangible issues (Kabeer, 1994:161). However, the capabilities approach, participatory poverty assessments and social exclusion can be applied to evaluate gendered poverty.

2.6.4.1 Participatory approach to gendered poverty assessments

Participatory poverty assessments have contributed immensely to the analysis of gendered poverty by particularly highlighting a number of important factors such as women's greater burden of 'time poverty', inequality in decision-making and vulnerability to domestic violence (Kabeer, 2003:99). Time poverty can be understood as the idea that certain people do not get sufficient time for rest after considering the time spent working, in the labour market either in formal or informal activities (Bardasi & Wodon 2006:77; Blackden & Wodon, 2006:7). Time poverty is also observed among individuals who are extremely pressed for time and not able to allocate sufficient time for important activities. These individuals are forced to make difficult trade-offs. There are facts confirming that women are likely to have a greater burden of time poverty. In South Africa, for example, the contribution of women to the national economy in non-market production is almost double that of men (Abdourahman, 2010:19). As result, women have less time for leisure and taking care of themselves than men at the household level. Fifteen to 65-year-old males spend only 84 minutes per day on unpaid work, while females spend 215 minutes (Abdourahman, 2010:19).

Participatory assessments have been seen as crucial to the analysis of gendered poverty because they reveal intra-household detail, and consider aspects beyond income, such as differential in access and control over resources (Moser *et al.*, 1996:2). In order to understand household's dynamics and gender issues from the household, the nature of competing interests and the workings of poverty processes, Harrison (2000:9) noted that participatory methodologies can fill these conditions sensitively and qualitatively. The use of a participatory approach to poverty assessments in a study by May (2001:27) revealed that there is a difference in how males and females perceive poverty at the household level. Men equate poverty with a lack of assets, while women associate poverty with a lack of ability to provide for the household in terms of consumption (May, 2001:27). Johnsson-Latham (2002:4) noticed that males link poverty with a lack of self-esteem and respect, while there were no women who appeared to pay attention to requesting respect. Catagay (1998:9) confirmed that participatory approaches to poverty assessment have facilitated the recognition of the way women are poorer in multiple dimensions of poverty and how they experience poverty in different ways than men. Unfortunately, there might be some reasons for participatory approaches to be gender biased, given that women often find it difficult to express their opinions in public, or the local patriarchal principles may be held in the same way by men and women determining views of both groups about well-being in gender-based ways.

2.6.4.2 Capability approach and gender inequality

Sen (1980), as the pioneer of the capability approach, postulated that the assessment using this approach has to focus on what people are and can do, instead of their consumption or income. To Sen, income is the means of well-being, where judgements and assessments should emphasise things which matter intrinsically, which are a person's capability. Sen (1980) stressed that the focus should be on the real freedoms that people possess to lead a valuable life. From these characteristics, it is clear that the capability approach has great potential to address women's interests and problems. Thus, the capability approach can be relevant in gender inequality conceptualisation and assessment.

Sen (1980) noted that the issue of gender inequality might give a better understanding by comparing what he calls *functionings* and *capabilities*, instead of

comparing means (way to achieve *functionongs* and *doings*) such as resources. Nevertheless, Sen's capability approach does not present an inclusive list that can be applied in gender inequalities studies. The capability approach should not simply be used to detect the gender inequality in *doings, beings* and *capabilities*, but also in identifying inequality in which resources lead to gender inequality in *capabilities* and *functionings*. Furthermore, as pointed out by Kabeer (2003:95), the capability approach to gendered poverty assessment facilitates the monitoring of the differences in the fundamental achievement of gender equality across time and space. It helps to draw attention to gender inequality differences among regions and helps to reveal features of gender inequality which resist the level of economic growth. This is very useful in terms of identifying which policies can be devised to diminish gender inequality. Robeyns (2003:71) tried to develop a list of capabilities which can be applied to Western societies:

- **Life and physical health**: being able to be physically healthy and to enjoy life to a normal length;
- **Mental well-being**: being able to be healthy mentally;
- **Bodily integrity and safety**: being able to be protected from any kind of violence;
- **Social relations**: being able to participate in social networks and to receive and give social support.
- **Political empowerment**: being able to be part of and have a fair share of power in political decision-making.
- **Education and knowledge**: being able to be educated and to use and produce knowledge.
- **Domestic work and non-market care**: being able to raise children and to take good care of others.
- **Paid work and other projects**: being able to work in the labour market or to carry out projects, including artistic ones.

- **Shelter and environment**: being able to be sheltered and to live in a secure and pleasing environment.
- **Mobility**: being able to be mobile.
- **Leisure activities**: being able to engage in leisure activities.
- **Time-autonomy**: being able to exercise autonomy in allocating one's time.
- **Respect**: being able to be respected and treated with dignity.
- **Religion**: being able to choose to live or not to live according to a religion.

2.6.4.3 Social exclusion and gendered poverty

Poverty and social exclusion have different impacts on males and females' lives; hence, any attempt of intervention which does not show this difference has only strengthened structural inequalities between males and females (May, 1997:41). Social exclusion can be used in racism and discrimination analysis and this reveals how social exclusion on a basis of identity is not simply related to attitudes and prejudice, but to larger political and economic processes. Hickey and du Toit (2007:19) confirm that the high percentage of women who bear chronic poverty represents the clearest and most significant illustration of how processes of social exclusion (e.g. access to citizenship, political representation and labour markets) cause chronic poverty. This gives an integrated framework in order to analyse social disadvantage, including gender, as a form of exclusion.

The situations of most poor women can be explained in terms of social exclusion through discrimination. According to the World Bank (2000:117) discrimination on the basis of gender, race, social status, ethnicity, or religion leads to social exclusion and locks people into long-term poverty traps. In some societies, widows and abandoned and divorced women find it difficult to maintain livelihood for their children and themselves because of social exclusion, isolation and harassment (Catagay, 1998:3). The empirical analysis confirmed that ignorance of women's interests is closely related to their being excluded from education, employment opportunities and land ownership and these exclusions are, therefore, most instrumentally important (Sen, 2000:42). This implies that women are disadvantaged in the area of education

and training, tend to generate lower average earnings then males and are exposed to gender discrimination in the workplace. To add to this, social and labour policies rarely provide more than minimal support to parents.

2.6.5 Measuring gender equality

Recently, gender inequality measurement in societies has become an immensely important topic in the academic literature, especially in feminist research. There is complementarities and causality between gender and development (Nathan *et al*., 2009; Stotsky, 2006:6; World Bank, 2001:iii). One reason is that gender equality is a better thing in itself. Governments, NGOs and citizens are concerned about how gender discrimination can be stamped out, in order to improve the relative conditions of women. Benchmarks and indicators are set in order to compare how far the achievement of equal status of women has progressed across countries and to assess whether or not there has been an improvement in this status over time. The other reason comes from the fact that there is a correlation between economic growth and gender equality (Stotsky, 2006:1). One can be interested in knowing if gender equality can promote or preclude economic growth. Seguino (2000) studied relative female to male wages and found that low gender equality goes together with a high rate of growth. Nathan *et al*. (2009:4) found that lack of opportunities for women in least developed and developing countries restrain economic growth. Economic growth should lead to an improvement in the situation of the disadvantaged groups, including females. This means that the improvement of the conditions of women and the decrease of gender inequality might contribute to higher economic growth and lead to greater macroeconomic stability.

2.6.5.1 Gender-related Development Index and Gender Empowerment Measure

The UNDP's Human Development Report of 1995 established two measures which reveal gender differences in basic human capabilities. These are the Gender-related Development Index (GDI) and the Gender Empowerment Measure (GEM). The GDI measures gender-based achievements by similar dimensions as Human Development Index (HDI) but it is created in a way that takes into account the gap between women and men on each of the three dimensions (Jelili, 2010:2; Kabeer

2003:85). These are income at purchasing power parity, education (measured in terms of weighted average of adult literacy rate and enrolment ratio) and health in terms of life expectancy at birth. GDI is simply the HDI adjusted downward to capture gender inequality (Jelili, 2010:2). The GDI value shows how far women still have to go towards gender equality.

The GEM is designed to measure whether men and women have an equal power in the economic and political sphere. It includes the share of women and men in parliamentary seats, in managerial and administrative positions, in professional and in technical positions, and the power of men and women over economic resources estimated on their earned income (power purchasing parity) (Schüler, 2006:163). Baden (1999:6) argued that increasing women's political representation could provide an opportunity for the poverty alleviation of women. UNDP (1995) estimates of the GDI for over 130 countries, including developing countries, concluded that there was no society where women enjoy the same opportunities as men. From then, GDI and GEM have been calculated on an annual basis.

One of the limitations of both GDI and GEM is that rather than measuring gender equality as such, they measure some combination of absolute levels of achievement and a punishment for inequality (Bardhan & Klasen, 1999; Dijkstra & Hanmer, 2000). Kabeer (2003:85) postulates that there is no correlation between the GDI or GEM and measures of basic needs and capabilities. Consequently, in assessing the relationship between economic performance and gender equality, GDI and GEM cannot be used. Other limitations are concerned with the selection of variables and indicators, as well as the way the indices are constructed. The methodology and basic principles of computing GEM have been changed, but many researchers (Bardhan & Klasen, 1999; Dijkstra 2002; Dijkstra & Hanmer, 2000) recommended alternative indices which have been inspired by GDI and GEM (UNDP 1999; UNDP 2000). In order to avoid the methodological limitations of GDI and GEM, Dijkstra (2002:317-324) created a Standardized Index of Gender Equality (SIGE), which consists of five indicators, namely health, education, labour market participation, share in higher labour market occupations/positions and share in parliament. The first three indicators identify the relative achievement of females to males, while the last two show the female share. For each country and indicator the resulting score is

standardised by expressing the score as the number of deviations from the mean of scores of all countries. The index is a simple arithmetic average of the standardised scores.

The Economic Commission for Africa (ECA) (2004:5) insists that the choice of indicators in the GDI and GEM is not always appropriate for developing countries since they ignore qualitative issues such as women's rights. Moreover, the GDI and GEM are still closely tied to a country's Gross Domestic Product (GDP) and the international database used by the UNDP is not always adequate to capture African realities (ECA, 2004:5). It therefore makes sense, when the data are available, to widen the analysis to sectors and political levels that are perceived as important, but not included in the GDI and GEM (Schüler, 2006:167). ECA (2004:1-4), developed the African Gender and Development Index (AGDI) in 2004, which is made up of two components: the Gender Status Index (GSI) and the African Women's Progress Scoreboard (AWPS). The GSI incorporates elements of basic capabilities, economic power and political power, using several indicators to measure them as listed by:

- **The social power block "capabilities", with two components***:*
  - Identifying the number of illiterate females and those enrolled in and dropped out of the education system.
  - Health measured by variables on child health, life expectancy at birth, new HIV infection and time spent out of work.
- **The economic power bloc opportunities, with three components***:* Income measured by variables on wages in agriculture, in the civil service and in the formal sector, and on income from the informal sector, small business from subsistence agricultural and remittances and intra-household transfers:
  - Time allocation on market economic activities, on non-market economic activities and on employment.
  - Access to resources measured by access to means of production and to management positions.
- **The political power bloc "agency", with two components***:*

- To look at the representation in key decision-making positions in the public sector.

- The level of representation in key decision-making positions in civil society (ECA, 2004).

The AWPS measures the performance of a government policy based on women's advancement and empowerment in the following four areas: women's rights, competence and capabilities, economic opportunities and political participation. It captures the progress of an individual government in implementing relevant conventions, such as "…the convention on the elimination of all forms of discrimination against women and in the implementation of policies in line with international charters or policy documents on issues such as violence against women, health or education" (ECA, 2004:2). The AGDI, which combines the aforementioned GDI and GEM indexes, has been tested in twelve countries and its results have shown great value in judging the performance of a particular country (ECA, 2004:6). GDI and GEM indexes have thus inspired various measures of gender equality (Dijkstra & Hanmer, 2000; Dholakia, 2005; UNDP, 2004; Social Watch, 2005; Wieringa, 1999).

UNDP's indices and other indices inspired by the UNDP reflect the multidimensionality nature of gender, especially regarding opportunities and capabilities. The World Bank (2001:iii) claimed that poverty intensifies gender disparities and thus gender inequality also hampers development.

2.7 REVIEW OF SOUTH AFRICAN EMPIRICAL LITERATURE ON POVERTY

2.7.1 Determinants of poverty in South Africa

South Africa is regarded as an upper-middle-income country, but many South African households are living in poverty, or at the very least are vulnerable to becoming poor (Poswa, 2008:3). Being one of the worst countries for unequal income distribution (Van Der Berg, 2010:3), because of the vast gap between rich and poor, South Africa is classified as upper-middle-income because of the average GDP per capita. However, in terms of social indicators such as life expectancy,

quality of education and infant mortality, South Africa is closer to countries of lower-middle-income or even low income countries (Van Der Berg, 2010:3). A small number of people earn a very high income, which sharply increases the average income, but has less effect on average social indicators (Van Der Berg, 2010:3).

Due to its relating to racial discrimination from the apartheid system, South Africa is struggling to overcome the race problem and class and gender-based inequality. South Africa's history of poverty has been associated with the effects of the now defunct apartheid system. One of features of this system was a procedure of active dispossession, whereby assets, such as livestock and land, were confiscated from the majority black people (May & Norton, 1997:95). Opportunities to build up these assets, such as education, infrastructure and markets, were denied to them (May & Norton, 1997:95).

Many previous empirical studies on the topic found the same results as the research done by May *et al*. (1998) in Poverty and Inequality Report (PIR), which used a logistic regression based on the Project for Statistics on Living Standards and Development Data (PSLSD) to determine the main characteristics of the poor, in particular. The purpose of the model used was to determine the factors that explain the probability of being poor. The following characteristics were discussed:

- Households headed by females had a higher probability of being poor compared to households headed by males (see also Aliber 2003; Bhorat & van der Westhuizen, 2008; Klasen 2000:56; Posel & Rogan, 2009).

- In terms of household size, larger households were associated with an increased probability of being in the poor category (see also Baiyegunhi & Fraser; 2010:2; Klasen 2000:56; Sekampu, 2013:151; Woolard *et al*., 2005:890). The probability of being poor was significantly higher in households with young and/or school-attending children.

- There is a strong regional dimension to poverty. Although other factors were controlled, households in the Eastern Cape, Free State and Northern Province were found to be mostly impacted by poverty. Households in urban areas are revealed to be significantly poorer than the metropolitan standard, whereas households in rural areas have a higher probability of being poor (see also

Botha, 2010:142; Klasen, 2000:56). Apart from provincial and rural/urban comparisons, households situated in the old “independent Bantustan” areas are found to experience the highest probabilities of being poor.

- The importance of race in the distribution of the poor can never be understated. The black race groups’ poverty rate is significantly higher than that of their white and Indian citizens (see also Klasen, 2000:56).

- The importance of education to households being poor shows differing results. Primary education has little impact on a household’s possibility of escaping poverty. This implies that an additional member with a less than completed secondary education cannot help a household to escape poverty. Only those with secondary and post-secondary education engender positive returns to household income (see also Baiyegunhi & Fraser, 2010:2; Botha, 2010:142; Woolard *et al*., 2005:890).

- The employment status of household members is found to significantly decrease the probability of being in the poor category, while the increased number of unemployed members significantly increases the probability of the household being poor. The number of old-age pensioners is found to be significant and have a negative sign, which means that every household member receiving the state’s old age pension has the potential to contribute to the household’s monetary resources, thus lowering the probability of being in the poor category (see also Baiyegunhi & Fraser, 2010:2; Sekhampu, 2013:151; Woolard *et al*., 2005:890).

2.7.2 Gender and poverty in South Africa

Women's realities in South Africa are also influenced by problems caused by the apartheid system. These are race, class and gender-based which block access to resources and opportunities (Kehler, 2001:41). There are limitations to the ability of poor black women to access resources to ensure increased employment opportunities. For example, poverty is found to be prevalent in rural areas where a lot of black women are left behind while their partners move to the big cities in search of employment (Kehler, 2001:41).

Many studies (Bhorat & van der Westhuizen 2008; Budlender 1997; Casale, 2004; Chen *et al*., 2005; Dungumaro, 2008; May *et al.*, 1998; Posel & Rogan, 2009; Posel and Rogan 2011; Ray, 2000; Rogan 2011; Woolard, 2002) have been done on a descriptive and empirical analysis of poverty in South Africa. As elsewhere, in South Africa there is a major difference in the poverty rate when comparing gender on both individual and household level. This expected pattern was confirmed by South Africa's Income and Expenditure Survey of October 1995, with a simple calculation of total income from different sources (i.e. income from wages, salaries and self-employment), Budlender (1997:3) showed that households headed by women earned less than a third of the amount earned by those households headed by men. Using annual income data of 2011, StatsSA (2012a:41) revealed that, on average, a female-headed household earned just more than half the annual income of their male counterpart.

When using the food poverty line, LCS 2008/2009 results showed that females had a higher poverty headcount ratio (27.3%) than males (25.2%). A gender comparison of poverty using the LCS 2008/2009 data, based on food and non-food poverty lines, shows that a larger percentage of female-headed households (45%) was found to be living below the "lower-bound" poverty line while the percentage for male-headed households was lower (25%).

When talking about unemployment and gender in South Africa, one notices that there is a strong gender dimension, with more women than men being unemployed (StatsSA, 2009:x). In other words, unemployment rates among women are higher than those among men. Nationally, based on the results of Census 2011, the official unemployment rate among men was 25,6 percent, while among women it was 34,6 percent (StatsSA, 2012a:52). For StatsSA (2008:18) the larger unemployment figure among women is possibly because of pregnancy and other family responsibilities. Although statistics show that there has been a dramatic increase in labour force participation of women in South Africa since the mid-1990s (Casale, 2004:i), female employment has largely been concentrated in the informal sector, where income is low, employment is less secure and benefits are non-existent. In addition, a persistent gender wage differential still exists in the formal South African labour market (Casale, 2004:2; Rogan, 2011:65).

In the political arena, South Africa has seen large increases in the number of parliamentary seats occupied by women (45%) and it has been one of countries with the highest proportions of female members of parliament. Yet women remain under-represented in senior management positions in the private sector, with only 13 percent of women on the boards of listed companies (OECD, 2010). In addition, a study conducted in 2011 by Stats SA (2012:28) shows that a greater proportion of those with no education were female (9.9%) compared with 7.2 percent of men. According to Rogan (2011:75), some causes of female-headed households involve, socio-cultural pressures, declines in marriage rates, migration to towns and urban centres, and impact of apartheid-era controls on settlement patterns. A study by Budlender (2005) discovered that the level of income received by female-headed households is only about half that of male-headed households, while Bhorat and van der Westhuizen (2008), Chen *et al*. (2005), and Dungumaro (2008) added that female-headed households are over-represented among the poor.

A higher risk of poverty associated with female headship was noted by a study entitled the PIR (1998:32). The report stated that there is greater vulnerability to poverty by female-headed households due to their increased concentration in rural areas, family size, the number of family members who are working and labour market disadvantages (May *et al*., 1998, Ray, 2000, Woolard, 2002, and Rogan 2012:7). The recent studies by Bhorat and van der Westhuizen (2008), Posel and Rogan (2009) as well as Posel and Rogan (2011) confirmed that not only are female-headed households more likely to be poorer than those headed by males in South Africa, but that the gap in poverty rates between these two types of households has widened even further in the post-apartheid era.

2.8 SUMMARY AND CONCLUSION

The understanding of poverty varies from one researcher to another. Poverty can be defined in simple or complex terms. Simply, poverty is defined as a lack of income. In the complex sense, poverty is described as a multidimensional concept which includes the lack of food, sanitation facilities, shelter, health, safe drinking water, education and information. Poverty has also been defined in two terms, absolute or relative poverty. Poverty exists when one or more people fall short of a level of economic welfare considered to be a rational minimum, either in some absolute

sense or by the standards of a specific society. The pyramid of poverty concept also helps to describe poverty in adding the lack of assets, dignity and autonomy to the simple definition of poverty. None of the poverty definitions is agreed to be scientifically accurate, but every definition is correct in its way.

There are four broad conventional approaches to the understanding and assessment of poverty: monetary, capability, social exclusion and participatory approaches. The monetary approach identifies poverty with a shortfall in consumption (or income) from some poverty line. Income or consumption of different components is valued at market price, which requires identification of the relevant market and the imputation of monetary values for those items that are not valued through the market. The capability approach focuses on indicators of the freedom to live a valued life. Some researchers argue that poverty is related to the fact that certain groups of people are persistently excluded or disadvantaged from social, economic and political life. Discrimination on the basis of gender, race, religion, ethnicity or social status usually leads to social exclusion and locks people into long-term poverty traps. Poverty assessment methods do not ignore the beliefs of those poor who are said to be poor. The participatory approach emphasises the necessity of taking into consideration local people's perspectives and giving them a greater say in describing their economic conditions and deciding on the means to be undertaken to alleviate identified inadequacies.

There is ample literature in how best to measure poverty. Some of the most important contributions are the FGT measures, Sen Index, poverty line and LPI. The FGT poverty measurement is a family of three indices, namely headcount index, poverty gap index, and squared poverty gap. Headcount index measures the proportion of households below the poverty line. This measure is widely used because it is easy to compute and understand, but it does not capture the depth and severity of poverty and does not satisfy the principles of monotonicity and weak transfer axioms. Contrary to the headcount index, poverty gap index measures the depth of poverty. However, the poverty gap does not capture the severity of poverty. The severity of poverty is given by squared poverty gap. The squared poverty gap is criticised for being difficult to interpret and is not widely used. Sen has proposed an index that sought to combine the effects of the number of the poor, the depth of their

poverty and the distribution of poverty within the group. The Sen Index is a combination of three parameters, namely headcount index, income gap index and the Gini coefficient. However, the Sen Index cannot be used to decompose poverty into contributions from different subgroups; hence it is almost never used outside of academic literature. This study used the Lived Poverty Index (LPI) to measure the incidence of poverty through these items: food, water, medical treatment, cash income, home fuel and electricity. Some other features, such as the household head's educational attainment, employment occupation and access to services help to generate the LPI.

Inequality matters for poverty in the way that for a given level of average income, education and land ownership the rise of inequality of these elements roughly increases the intensity of absolute and relative deprivation within the same dimensions. There are many ways of measuring inequality and two of the commonly used measures are the Lorenz curve and Gini coefficient measure. Human Development Index and Human Poverty Index use the category of information related to human development features, which go further than what can be provided by the measure of income.

Conventional poverty assessment can be used to evaluate gendered poverty in the way that female and male experience poverty differently. Apart from income or expenditure comparison between female-headed households and those headed by males, participatory poverty assessments, capabilities approach and social exclusion can be applied to evaluate gendered poverty as well. Participatory assessments have been seen as crucial to the analysis of gendered poverty, in the way that it reaches intra-household details, and considers aspects beyond income such as differential in access and control over resources. The capability approach also helps to detect the gender inequality in *doings, beings* and *capabilities* and identify inequality in which resources lead to gender inequality in *capabilities* and *functionings*. The situations of most poor women can be explained in terms of social exclusion throughout discrimination. It has been noted that poverty and social exclusion affect men and women differently and interventions that do not reflect this difference have, in many cases, reinforced structural inequalities for women.

Economic growth leads to an improvement in the situation of the disadvantaged groups, including gender. This means that the improvement of women's conditions and the decrease of gender inequality might contribute to higher economic growth and lead to a greater macroeconomic stability. In order words, poverty intensifies gender disparities and thus gender inequality hampers development. Two equality measurements, namely the Gender-related Development Index (GDI) and the Gender Empowerment Measure (GEM), were discussed. GDI measures the achievement of using similar dimensions as Human Development Index (HDI) but it is created in a way that takes into account the gap between women and men on each of the three dimensions, while the GEM is designed to measure whether or not men and women have equal power in economic and political spheres. These UNDP measurements raised much discussion among scholars and some pointed out points of correction and others suggested alternative measures.

One of the objectives of this chapter was to take a look at findings of other research on the analysis of poverty and gender. It was found that employment status, education attainment, household size, location and household headship significantly increases or decreases poverty in South Africa. It was found that poverty levels for female-headed households are significantly higher than for male-headed ones. The greater likelihood of female heads being unemployed or economically inactive, having high dependency ratio and a large household, are some of the reasons for the higher poverty risk female heading households face.

CHAPTER 3: RESEARCH METHODOLOGY

3.1 INTRODUCTION

Since the time of philosophers such as Aristotle, who gave a long and vague argument that men and women have different numbers of teeth without verifying the assumption, the world learnt to carry out experiments and perform observations that look at the various facets of the human gender (Pellisier, 2007:2). Arguments cannot verify whether a statement is accurate or not, evidence is needed so that the statement can be confirmed. Research is an inquiry that uses suitable scientific methodology to discover new knowledge, and to establish, revise or interpret facts, theories, behaviours, applications or events (Pellisier, 2007:6).

In order to understand how research problems are examined, it is vital to discuss the research design and methodology. The objective of this chapter is to discuss the research design and methodology of the study, as well as the description of data. As outlined by Coldwell and Herbst (2004:9-13), Ghauri and Grønhaug (2005:55-57), Gilbert and Churchill (1996:114-115) and Zikmund (2000:50-52), there are three main types of research design namely exploratory, descriptive and causal.

Exploratory research is normally done when the researcher has little understanding about the research problems (Ghauri & Grønhaug, 2005:28). Exploration is mostly helpful when researchers don't have a clear opinion of problems which they will meet while doing the research. Exploratory research emphasises discovering ideas and insights (Gilbert & Churchill, 1996:114). Another type of research is descriptive research. This is concerned with the frequency of an event or the correlation between two variables (Gilbert & Churchill, 1996:115). The purpose of descriptive research is to describe a social incident of interest, such as demographic features of the population under investigation, to determine the percentage of the people that behave in certain ways and to make predictions based on the results (Gilbert & Churchill, 1996:13138). Descriptive research also provides a meaningful presentation of data (Coldwell & Herbst, 2004:9; Sekaran, 2006). Causal research is used in instances where there is a need to indicate the extent of the variation caused by one variable on another (Coldwell & Herbst, 2004:11). Causal research is

concerned with determining cause-and-effect relationships (Gilbert & Churchill, 1996:115).

The three fundamental research designs can be seen as phases in a continuous process. Exploratory studies are frequently viewed as the first phase when a researcher begins an investigation and does not have enough knowledge concerning the problem. The easiest, cheapest and quickest method to clarify the problem is to consult the work of other researchers through a literature review (Gilbert & Churchill, 1996:119).

In this study, a literature review was undertaken in the preceding chapter. A guide for descriptives (which are provided in the latter section of this chapter) and causal study (which is presented in chapter four) has thus been provided. Descriptive and causal research has less value if there is a poor understanding of the relationship between the variables. First, the descriptive method is applied in this study to provide general views on the characteristics of households in Kwakwatsi Township. Second, it is used to describe poverty among the households on the basis of LPI. Causal method is also used in the present study to explain the relationship between poverty and some demographic and socio-economic variables. When talking about research methodology, it is not only about research methods but also the logic behind methods. The next sections will explore the reason why some methods or techniques are selected among others to be used in the current research. The reason behind the type of data collected and the method and the technique adopted to analyse data will be explained in this chapter.

3.2 SAMPLING PROCESS

The sampling process engages any method by the use of a small number of elements or parts of the entire population to draw conclusions regarding the whole population. An effective sampling process is divided into six stages, as outlined by Gilbert and Churchill (1996:477):

- Defining the target population,
- Identification of the sampling frame,

- Selection of the sampling procedure,
- Determining the sample size,
- Selection of sample elements,
- Data collection from the designed elements.

3.2.1 The target population

The first step of the sampling process is preoccupied with the identification of the target population (the complete group of specific population elements appropriate to the study) (Zikmund, 2000:342). In order to identify the accurate source of data, it is vital to carefully define the target population. In general, the target population is defined in terms of sampling unit and element, as well as the extent and time of conducting the survey (Hair *et al*., 2002:328; Taylor-Powell, 1998:2). The target population for this study is households that are based in South Africa, Free State province, Ngwathe Local Municipality, Kwakwatsi Township. The sample unit and element are considered to be the same and are the residents. The extent is the geographical boundaries of Kwakwatsi Township.

3.2.2 The sampling frame

The sampling frame is the list of elements from which the sample should be drawn (Gilbert & Churchill, 1996:478; Salant & Dillman, 1994:58; Zikmund, 2000:344). Zikmund (2000:344) claimed that compiling a list in which every member of the population is included; is not feasible. If the list of sampling units is not readily available, materials such as maps or aerial photographs might be used as a sampling frame (Gilbert & Churchill, 1996:479; Zikmund, 2000:344). In the present study, households to be interviewed were identified individually from a map before sending field workers to complete the questionnaires. During the survey, where households' members were not available for an interview, or where it was not possible to trace the selected house, a next pre-selected household was utilised.

3.2.3 Sampling procedure

The sampling procedure is the method utilised to select the sample units. There are numerous alternative ways which may be used to take a sample. The main alternative sampling procedures may be classified into probability techniques and non-probability techniques (Coldwell & Herbst, 2004:79; Gilbert & Churchill, 1996:479; Zikmund, 2000:65; 2000:350). In probability sampling each element in the population has a known chance (non-zero) of selection. Probability sampling includes simple random sampling, systemic sampling, stratified sampling and cluster sampling. The simple random sample is used in this study, because it is the best acknowledged probability sampling, through which every element of the population has an equal chance to be selected (Coldwell & Herbst, 2004:80; Gilbert & Churchill, 1996:487; Zikmund, 2000:65, 350).

3.2.4 Sample size and sample element

The size of the sample is given by determining how large a sample should be and how many elements should be incorporated in the sample (Hair *et al*., 2006:33). Kinnear and Taylor (1991:396) state that it is not easy to decide whether the sample is too small or too large. Zikmund (2000:64) notes that the larger the sample, the higher the chances of the research being precise. However, if proper probability sampling is implemented, a small proportion of the entire population can also give a reliable measure of the whole population (Zikmund, 2000:64). Some important factors that are considered in determining the sample size include the number of variables and the nature of the analysis, sample size used in similar studies, completion rate and resources constraints (Malhotra & Birks, 1999:385. In the present study 225 randomly selected household were visited during the survey. A similar sample size was analysed by Sekhampu and Globler (2011) and Sekhampu (2012).

3.2.5 Data collection

At this stage, the researcher collects data from participants. A survey was undertaken for the collection of household data for the study. A survey is a technique of research where information is collected from a sample of the population by means of questionnaires (Zikmund, 2000:60). When the survey method is used,

respondents may participate by filling out a questionnaire or by interacting face-to-face with an interviewer (Gilbert & Churchill, 1996:287; Zikmund, 2000:65). During the survey in the present study, interviewers read the questions aloud and wrote down the answers given by interviewees. The design of the questionnaire used for obtaining the necessary information is discussed in the next section.

3.3 QUESTIONNAIRE DESIGN

The questionnaire was structured into three sections, allowing for enough information to achieve the objectives of the study. The two first parts of the questionnaire were developed after a literature review was completed and the third was developed by Mattes *et al.* (2002). The first two parts covered different aspects of households' socio-economic and demographic characteristics, such as household size, gender distribution, household structure, education attainment, employment status and income. In general, close-ended questions were used in the questionnaire in order to simplify the data analysis and interpretation process. Questions applicable to this study were selected and arranged in a way that yielded meaningful results. To avoid data collection errors, two phases were undertaken during the process of collecting data. These two processes were pretesting and the main study.

3.3.1 Pretesting the questionnaires

The first and second sections of the questionnaire were pretested by conducting interviews using a small sample to determine whether the data collection plan for the main study is an appropriate procedure and to minimise errors due to improper design elements. The researcher was able to make an observation on the participants' reactions and notice the problems inherent in the interview. The third section of questionnaire was not part of pretesting study because it has been used in South Africa since 2002 by Afrobarometer project (Davids, 2010a; 2010b; Dulani *et al*. 2013; Mattes *et al.*, 2002; Mattes, 2008). The LPI measures people's capacity to get the basic necessities of life. More explicitly, respondents were asked "over the past year, how often, if ever, have you or your family gone without:

1) Enough food to eat?

2) Enough clean water for home?

3) Medicines or medical treatment?

4) Electricity in your home?

5) Enough fuel to cook your food?

6) A cash income?”

The response options employed by Mattes *et al.* (2002) range from 0 (never) to 4 (always), with the higher values indicating a greater degree of lack of access to these basic necessities. For the present study the LPI response options ranged from 1 (= never) to 5 (= always) and 6 (= do not know). After the pilot study, correction of the format and contents of the questionnaire was carried out and the final questionnaire was coded and printed.

3.3.2 Main study

The survey research method used to collect the data were face-to-face interviews with participants in their own households. In May 2013, two field workers visited 225 households selected randomly across Kwakwatsi Township, between April and May 2013. The fieldworkers were well trained in conducting interviews. They were also aware that the participants/interviewees may not be conversant with English. The fieldworkers had to be prepared to translate the questions into the language spoken by the interviewees. The fieldworkers selected and trained were fluent in the possible languages (mainly Sesotho) spoken in Kwakwatsi Township.

3.4 STATISTICAL ANALYSIS

The analysis of the present study was conducted at two levels using a range of methods of statistical analysis. The first level of analysis examines the extent of the poverty and has three steps. The LPI is used to estimate the proportion of people who are poor in Kwakwatsi Township. The next step of the first level involves comparing the level of poverty in households headed by females with those headed by males. The last step is the calculation and examination of the mean LPI scores in relation to the various socio- economic demographic variables. To achieve this, the sample was divided into two sub-samples: one for households headed by females and the other for households headed by males. The second level of analysis is

regression analysis of determinants of poverty and is discussed in the section of model specification (section 3.4.2). LPI is constructed from the six question items about access to basic necessities with the use of Principal Component Analysis (PCA). Participants were asked: “over the past year, how often, if ever, have you or your family gone without: enough food to eat, enough clean water for home, medicines or medical treatment, electricity in your home, enough fuel to cook your food, a cash income?” For the present study the LPI response options ranged from 1 (= never) to 5 (= always) and 6 (= do not know).

3.4.1 Principal Component Analysis (PCA)

Principal component analysis (PCA) is a procedure for reducing the dimensionality of a data set consisting of a certain redundancy in variables, while retaining as much as possible of the variation that may be present in the data set (Jolliffe, 2002:1). PCA is a procedure of reducing variables into a small number of components accounting for maximum variance in a set of observed variables (Hatcher, 1994:68-69). This means that PCA groups related variables into themes known as components.

This study followed others which used PCA (Davids 2010a; 2010b; Dulani *et al.,* 2013; Mattes *et al.*, 2002; Mattes, 2008) and found that all six questions were really loaded into one component named LPI. In the context of this study, PCA was used to check if all six items could be loaded into one component of LPI. This was done with the use of Kaiser’s criterion and scree test. Kaiser’s criterion states that only factors with an eigenvalue of 1.00 or greater are retained for analysis (Pallant, 2013:191). Cronbach’s Alpha test was used to test the reliability of the questionnaire, while Bartlett’s test for sphericity and Kaiser–Meyer–Olkin (KMO) were performed to measure the sampling adequacy and to determine the meaningfulness of performing principal component analysis. A principal component analysis should be needed only if the variables involved are sufficiently correlated. George and Mallery (2003:231) and Pallant (2013:193) stipulated that a Cronbach’s Alpha value of greater than 0.6 means that the component is reliable. The sample is adequate when the KMO is greater or equal to 0.6, while the performance of principal component would be appropriate if Bartlett’s Test of Sphericity is significant ($p<0.05$) (Pallant, 2013:199).

3.4.2 Model specification

One of the aims of this study is to identify the main factors which determine the probability of a household that falls below or above the poverty line. The poverty estimates were based on the LPI which measures the access to basic necessities in the household. In this study, a household is regarded as poor if its average LPI is above the calculated poverty line, because the higher value of the average score shows a higher level of lack of access to basic necessities. That is, a higher score of LPI reflects a higher level of poverty. The dependent variable (y_i) for the logistic regression is taken as a binary variable, with 1 representing the household with a higher average index above the poverty line and 0 otherwise. This implies that:

$y_i = 1$, if the household is poor

$y_i = 0$, otherwise

The binary models essentially describe the probability that $\mathrm{y_i} = 1$ directly, although they are often from an underlying latent variable model (Verbeek, 2004).

$$\mathrm{P\{y_i = 1/x_i\}} = \mathrm{G(x_i, \beta)} \qquad (3.1)$$

This equation says that the probability of having $\mathrm{y_i} = 1$ depends on the vector $\mathrm{x_i}$ containing individual characteristics (Verbeek, 2004).

However, since the LPI of each household is available, one can also use linear regression to test the effect of explanatory variables on the LPI. This study estimated both logistic and linear regressions to check if there is any difference on results. Generally, the statistical model for linear relationships could be specified as follows:

$$y_i = \alpha + \beta_1 x_1 + \beta_2 x_2 + \cdots . + \beta_k x_k + \varepsilon_i \qquad (3.2)$$

Where α is the intercept, y_i and $x_1 \ldots x_k$ are both observable variables, but the former is the dependent or predictable variable; while the latter are independent or predictor variables. ε_i is an unobserved or error term or disturbance term. The elements in β are slope parameters or unknown population parameters.

In selecting the model for this study, a number of tools for model adequacy were employed. Appropriate tests were performed to check the existence of

multicollinearity and goodness-of-fit (F test). Multicollinerity implies the existence of inter-correlation between some or all exogenous variables (Gujarati, 2003:342). The collinear variables include the similar information about the endogenous variable. Therefore they are redundant if different measures find the same situation. The software STATA 11, used to run the regression in this study, has settings that allow the user to drop one of the collinear variables.

Explanatory variables are socioeconomic, demographic aspects of the household and involve both continuous variables and dummy variables. The model used in this study to estimate the determinants of lived poverty is as follows:

$$Pov = \beta_0 + \beta_1 G_Head + \beta_2 HH_Size + \beta_3 Age_Head + \beta_4 Marital_head + \beta_5 Edu_head + \beta_6 NP_Employed + \beta_7 Head_Y + \beta_8 Other_HH_Y + \varepsilon_t \quad (3.3)$$

Table 3.1 shows the socio-economic and demographic characteristics which are assumed to influence household poverty.

Table 3.1: Description of explanatory variables in the regression model

Variables	Description
G-Head	Male (0) or female (1)
HH_Size	Total number of family members in the household
Age_Head	Age of household head (in years)
Marital_head	Head of Household Marital Status (1 =Married, 0 =Not married)
Edu_head	Formal education of the household head (number of schooling years)
NP_employed	Total number of people who are employed in the household
Head_Y	Household head income (in rand per month)
Other_HH_Y	Total gross monthly household income (in rand per month)

Pov stands for poverty status in the logistic model and lived poverty index in linear model.

β_0 is the intercept term,

$\beta_{1...8}$ are the slopes coefficients of explanatory variables

ε is the error term

Explanatory variables included in this study were chosen after a review of similar studies. As was discussed in the previous chapter, a positive relationship exists between poverty and household size. The results of many studies (Baiyegunhi & Fraser; 2010:2; Klasen, 2000:56; Sekampu, 2013:151; Woolard *et al*., 2005:890) showed that a large household size increases the probability of being poor. Regarding the gender of the household head, studies (Aliber, 2003; Bhorat & van der Westhuizen, 2008; Klasen, 2000:56; Posel & Rogan, 2009) found that female-headed households have a higher probability of being poor compared to those headed by males. The age of the head of the household is expected to be negatively associated with the probability of being poor (see Sekhampu, 2013:151).

An increase in educational attainment of the household head reduces the probability of being poor. Lack of education can be associated with a higher probability of being poor (Baiyegunhi & Fraser, 2010:2; Botha, 2010:142; Woolard *et al*., 2005:890). It is also expected that an additional employed member decreases the probability of poverty in the household, while unemployed members increase the probability of poverty (see Baiyegunhi & Fraser, 2010:2; Sekhampu, 2013:151; Woolard *et al*., 2005:890). Finally, an increase in a household' income is expected to reduce the probability of it being poor.

The data was captured and analysed using statistical package for social sciences (SPSS) window 21and STATA11.

3.5 DATA DESCRIPTION

This section provides a general description of data used in the study. The quantitative information gathered is summarised and described by using figures and tables. This section starts with a general description of the geographical area of the study; it follows with a description of the participants, demographic characteristics, literacy of the population and economic features of the sampled population.

3.5.1 Geographical location of Kwakwatsi

Kwakwatsi is a former black residential township located approximately 180 km south of Johannesburg and 280 km north of Bloemfontein in the Free State province of South Africa. The area is part of the Ngwathe Local Municipality, with its head

office in Parys (Ngwathe Municipality, 2009). The area could be classified as a semi-urban township, with little economic activity. The nearest industrial town of Sasolburg is 70 km away. The estimated population size of Kwakwatsi is 15 095 people. A study by Sekhampu (2012) found an increased incidence of poverty in the area. He used two poverty measures to analyse poverty in the area: the upper and lower bound poverty line. Of the sampled households, 50 percent were found to be poor, using the lower bound poverty line, and 77 percent when using the upper bound poverty line. On average, poor households had an income shortage of 56 of their poverty line when using the lower bound. Given that Kwakwatsi is a low income township, and has other factors which may affect the poverty status of its population, it is important to conduct a study in this area using various measures of poverty.

3.5.2 Participants to the survey

Data was collected from 225 households of Kwakwatsi Township. Of the sampled population, 61.3 percent of the households' participants were heads of the family and 33.8 percent of participants were spouses. Children were main participants in 4.9 percent of the cases, where older siblings were tasked to take care of other members of the households, while the breadwinner stayed at the place of work.

3.5.3 Demographic characteristics

The subsection below provides a profile of households from different angles. It describes variables such as household size, distribution of the members of the household, gender distribution of participants, population distribution by age and gender, population distribution by marital status.

3.5.3.1 Household size

The average household size for Kwakwatsi is calculated at 4.39 people using household data for households headed by females and those headed males. A description based on the gender of the head of the household shows that the size of the male-headed households is slightly higher (4.57 people) than those headed by females (almost 4). When compared to the 2011 household size, the average for the Free State (3.3) and South Africa (3.6) (StatSA, 2012:56), the average household size of Kwakwatsi seems to be higher. However, this may not be higher if one

considers the potential population growth that may have taken place between 2011 and 2013.

3.5.3.2 Distribution of the members of the household

The distribution of households' members is shown in Figure 3.1. Fathers (17.2%) record a lower percentage in relation to mothers (21.4%). This higher figure for mothers could be an indicator of high single parenting among the households of Kwakwasi. A similar case was observed in the number of children, where the number of sons (16.0%) is lower than that of daughters (24.9%). Grandmothers record 1.3 percent and grandfathers record 1.2 percent. The category of others (17.4%) was used to account for relatives, grandchildren and other members sharing a common household. The similar situation was described by Sekhampu (2010:122), who found a lower proportion of fathers than mothers and a lower percentage of sons in relation to daughter in Kwakwatsi Township.

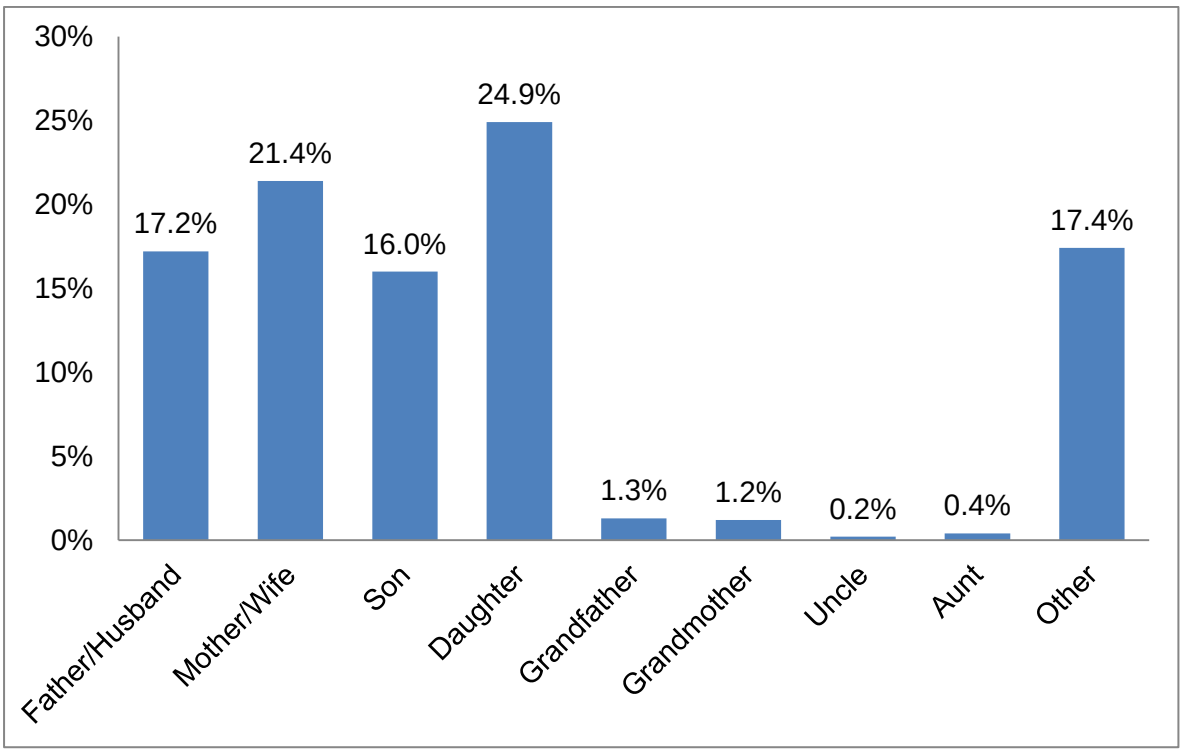


Figure 3.1: Distribution of the members of the household

Source: Survey data (2013)

3.5.3.3 Gender distribution of the population

The gender distribution of the sampled population is shown in Figure 3.2. This figure shows that approximately 39.8 percent of Kwakwatsi residents are males, while 60.2 percent are females. Statistics South Africa (2012:3), 2011 census population estimates show a national gender distribution of 48.7 percent and 51.4 percent for males and females respectively. This suggests that Kwakwasti gender distribution differs from the national average.

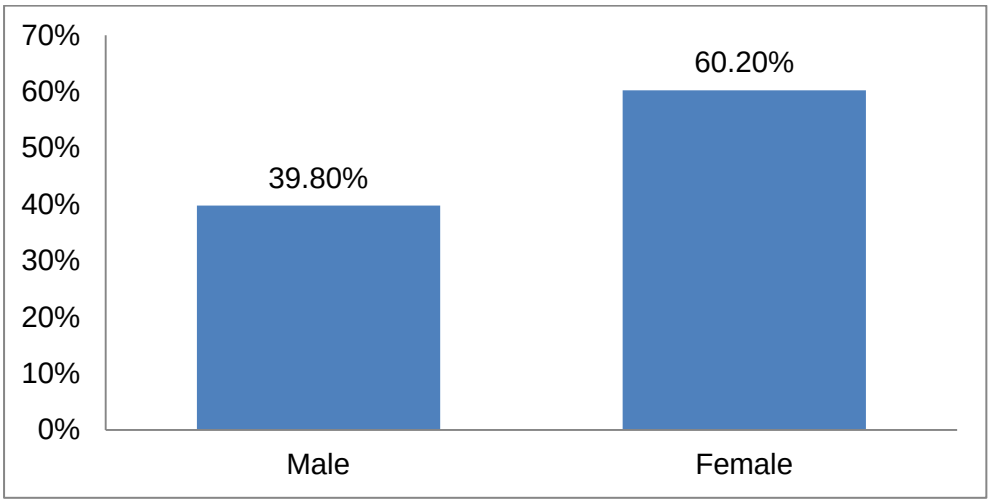


Figure 3.2: Gender distribution of population

Source: Survey data (2013)

3.5.3.4 Population distribution by age and gender

Table 3.2 shows the distribution of the population of Kwakwatsi by age and gender. The percentage of people in each category is shown vertically. Nearly a quarter (23.96%) of the population is under the age of 15 years; with 17.59 percent of females. More than a half (58.65%) of the sampled population is young (under 35 years). People between the ages of 15 and 64 record 71.52 percent and the percentage of those aged 65 years and older is 4.44 percent. A comparison with Ngwathe Local Municipality shows that 30.1 percent of the population is below the age of 15 and 62.4 percent of the population is between the ages of 15 and 64 (StatsSA, 2012b:13). The percentage of those aged 65 years and older is 7.5 percent (StatsSA, 2011a:13).

Table 3.2: Population distribution by age and gender

Age groups	Female	Male	Total	% Female	% Male	% Total
<10	93	31	124	9.40	3.13	12.54
10-14	81	32	113	8.19	3.24	11.43
15-19	62	41	103	6.27	4.15	10.41
20-24	50	35	85	5.06	3.54	8.59
25-29	61	34	95	6.17	3.44	9.61
30-34	40	20	60	4.04	2.02	6.07
35-39	51	30	81	5.16	3.03	8.19
40-44	39	21	60	3.94	2.12	6.07
45-49	46	48	94	4.65	4.85	9.50
50-54	13	31	44	1.31	3.13	4.45
55-59	12	20	32	1.21	2.02	3.24
60-64	33	21	54	3.34	2.12	5.46
65-69	4	10	14	0.40	1.01	1.42
70-74	6	7	13	0.61	0.71	1.31
75-79	1	3	4	0.10	0.30	0.40
80+	3	10	13	0.30	1.01	1.31
Total	**595**	**394**	**989**	**60.16**	**39.84**	**100**

Source: Survey data (2013)

3.5.3.5 Gender and age distribution of household heads

Table 3.3 shows the distribution of household heads by age and gender. Approximately 69.3 percent of households are headed by males, while 30.7 percent are headed by female. In the whole sample, the youngest household head is 29 years old and is a female. A large number (44%) of household heads in Kwakwatsi are between 41 and 50 years. Females between 41 and 50 years account for 15.5 percent of the total number of households, while males make up 28.44 percent of the total sample. Only 2.9 percent of households are headed by people aged between 71 and 80 years. The records for Ngwathe Local Municipality show that females are heading about 41.8 percent of households (StatsSA, 2012b:30).

Table 3.3: Household heads distribution by age and gender

Age by category	Female	Male	Total	% Female	%Male	%Total
21-30	1	1	2	0.44%	0.44%	0.89%
31-40	21	32	53	9.33%	14.22%	23.56%
41-50	35	64	99	15.56%	28.44%	44.00%
51-60	7	38	45	3.11%	16.89%	20.00%
61-70	3	11	14	1.33%	4.89%	6.22%
71-80	2	10	12	0.89%	4.44%	5.33%
Total	**69**	**156**	**225**	**30.7%**	**69.3%**	**100.0%**

Source: Survey data (2013)

3.5.3.6 Population distribution by marital status and gender of the household head

The marital status of the population is shown in Figure 3.3. Almost a third (33.37%) of the population were never married because they are children and 24.17 percent are adults who are not married. The proportion of married adults in the population is 23.76 percent. The percentages of those who live together and widows/widowers are 11.43 percent and 5.56 percent, respectively. The percentage of those divorced (1.31%) and separated (0.4%) is low.

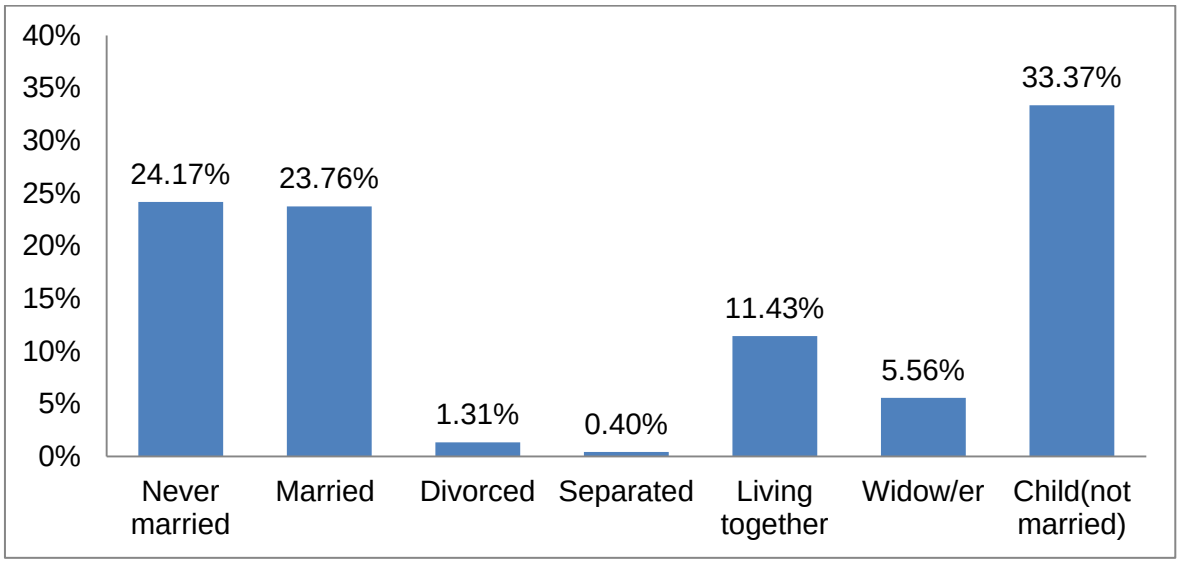


Figure 3.3: Population distribution by marital status and gender of the household head

Source: Survey data (2013)

Among female households heads (Figure 3.4) 11.59 percent are married and 13.04 percent live together with their partners without a legal marriage. This 24.63 (11.59 + 13.04) percent are *de facto* female heads, because their partners live at their workplace out of Kwakwatsi. The rest are widows/widowers (46.39%), never married (13.04%), divorced (11.59%) and separated (4.35%). Female heads are known as *de jure* female heads and they record 75.36 percent.

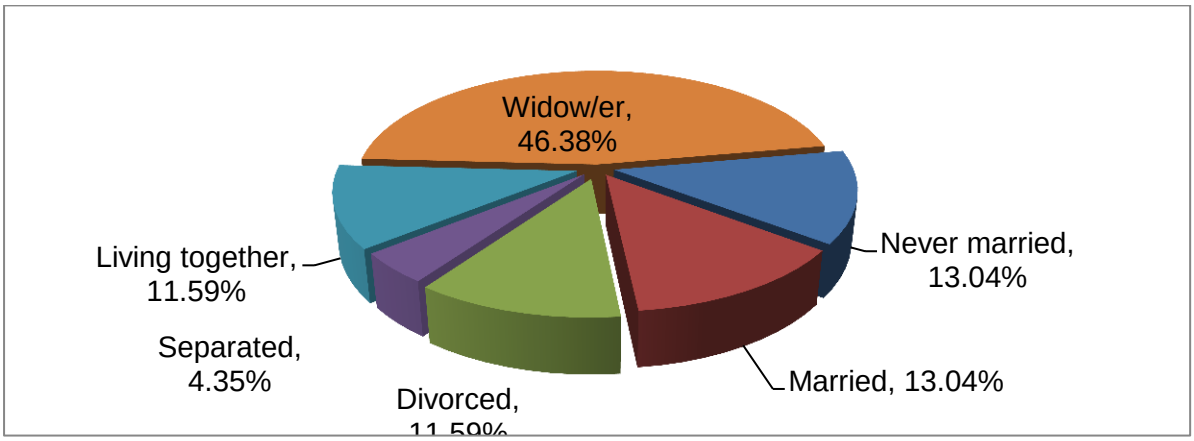


Figure 3.4: Marital status of female household heads

Source: Survey data (2013)

Among male household heads (Figure 3.5), 60.90 percent are married and 30.13 live with their partners. This means that 91.03 percent of male heads have partners. About 6.41 percent of male heads were widows, divorced male heads are 1.92 percent and only 0.64 percent were separated.

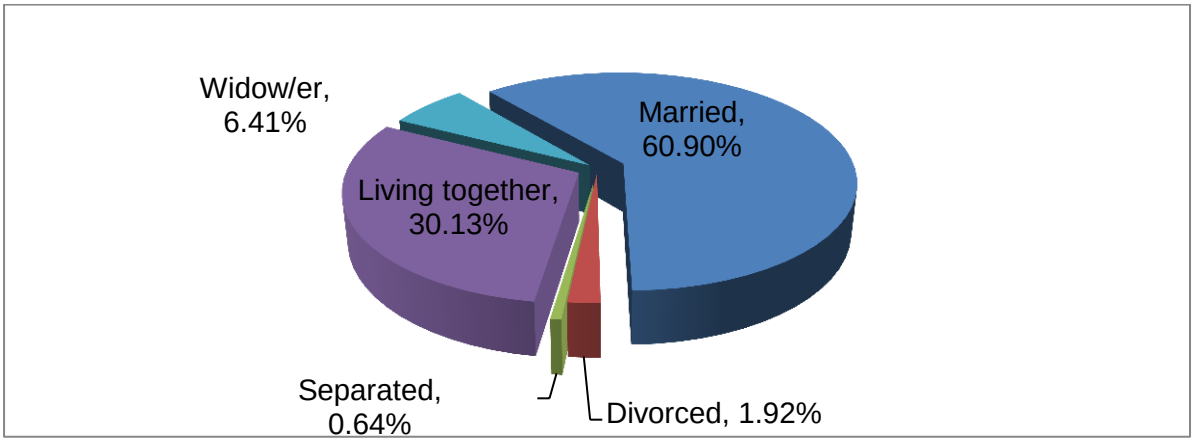


Figure 3.5: Marital status of male household heads

Source: Survey data (2013)

3.5.4 Average length of stay in Kwakwatsi

Table 3.74 shows the migration statistics of Kwakwatsi. More than a half (54.2%) of the population have been in Kwakwatsi for a period of 16 to 20 years and 18.7 percent said that they have been there for a period of between 20 and 25 years. Sekhampu (2010:126) estimated that most of the people who had migrated to the township in the last 10 years were staying on farms surrounding Kwakwatsi. He also mentioned that the township was extended with new residential sites by the local municipality in 2006 (Sekhampu, 2010:126).

Table 3.4: Average length of stay in Kwakwatsi

Average stay in years	Frequencies	Percentage
1-5	1	0.40%
6-10	7	3.10%
11-15	5	2.20%
16-20	122	54.20%
21-25	42	18.70%
26-30	29	12.90%
31-35	15	6.70%
36-40	4	1.80%
Total	**225**	**100**

Source: Survey data (2013)

3.5.5 Literacy of the population

Better educated people have a greater probability of being employed than the less educated (van der Berg, 2008:3). They are economically more productive and have higher bargaining power. They therefore earn higher incomes. Almost 33.1 percent of the sampled population are school-going and the remaining 66.9 percent are a combination of the population who are no longer at school and those without schooling.

3.5.5.1 Population in school

Figure 3.6 shows the enrolment of the school-going in the sample population. It shows that 32.4 percent of the school-going population are still in the first three years of primary education and almost 60 percent are in primary schooling education. The

enrolment for grade 12 is 10.09 percent and tertiary education with a first diploma is only 0.31 percent. In 2010, 36 percent of the school-going were in the first three years of schooling and 69 percent were still in primary school (Sekhampu, 2010:127). A greater number of learners are in grade 12 (10.09%), compared to the year 2010 (6%).

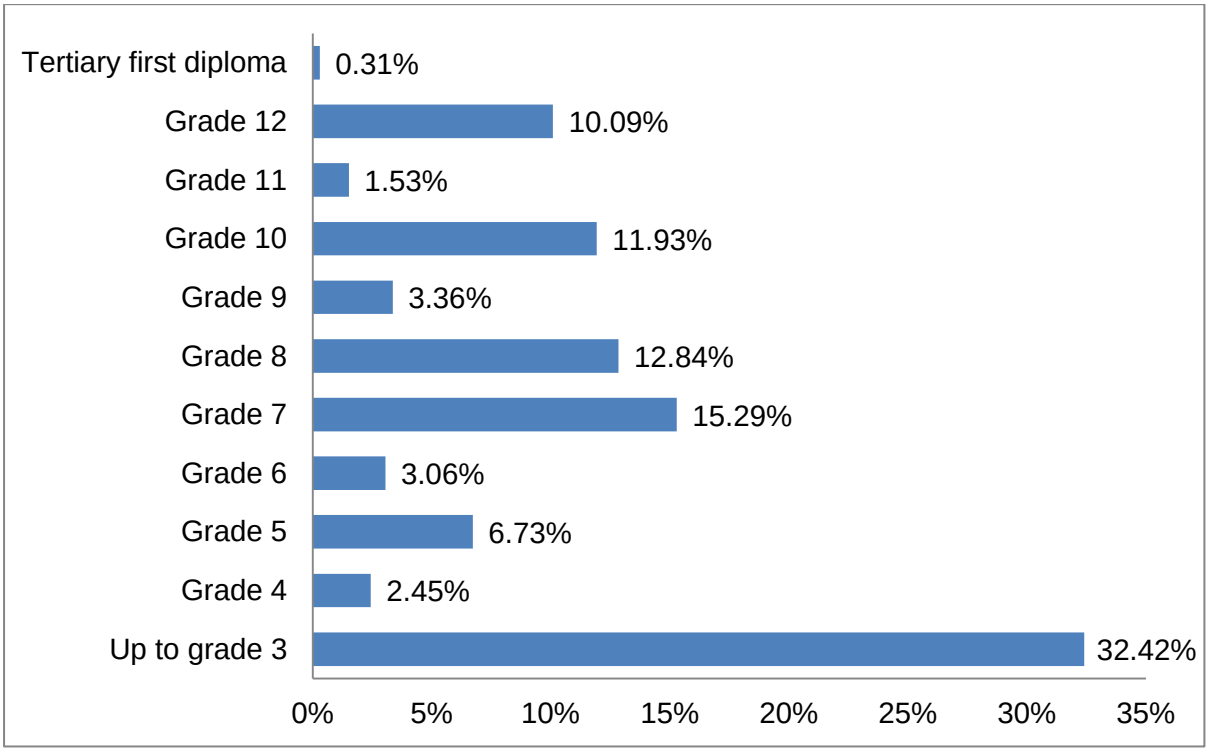


Figure 3.6: Population in school

Source: Survey data (2013)

3.5.5.2 Qualifications of population out of school

Figure 3.7 shows the educational levels of the out of school population of Kwakwatsi. Of the sampled population, 34.14 percent of the population who are not at school have grade 12, while 35.2 percent of the out of school population have not attained grade 7. Only 0.91 percent has tertiary qualifications. Kwakwatsi shows a low rate of no schooling (3.32%), compared to 8.3 percent for Ngwathe Local Municipality (StatsSA, 2012b:18).

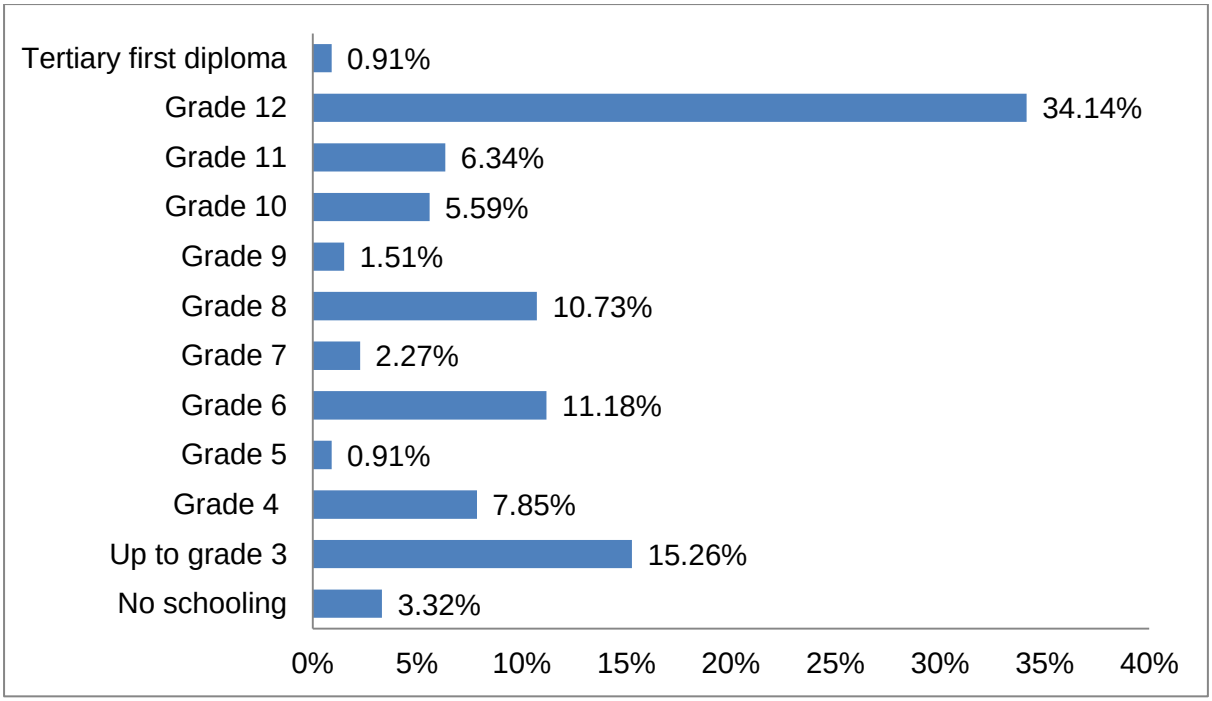


Figure 3.7: Qualifications of population out of school

Source: Survey data (2013)

3.5.5.3 Educational attainment of household heads

Educational attainment of household heads of Kwakwatsi is shown in Table 3.5. More than a half (56.9%) of the household heads did not finish grade 7 and 82.2 percent did not complete grade 12. A small number had a tertiary first diploma (0.89%) and 1.33 percent did not attend any formal education.

Using sub-samples, Table 3.5 shows that 64.7 percent among male household heads has finished primary education, relative to 53.6 percent among females. In addition, 85.5 percent of female heads did not complete grade 12, compared to 80.8 percent of the males. Only 0.6 percent among male heads have a tertiary first diploma, compared to 2.6 percent among the females. The percentages of those without formal education among female and male heads are 4.3 percent and 3.8 percent respectively. StatsSA (2011b:19) reported that the percentages of adult black South Africa aged 25 years and above without formal schooling are 14,8 percent among women and 10,8 percent among men. More African women were recorded to have a slightly higher qualification (8.9%) than African men (8.3%).

Table 3.5: Educational attainment of households heads by gender using sub-samples

Grades	Female			Male		
	N	Percent	Cumulative percent	N	Percent	Cumulative percent
No schooling	3	4.3	100.0	6	3.8	3.8
Up to grade 3	10	14.5	14.5	39	25.0	28.8
Grade 4	6	8.7	23.2	30	19.2	48.0
Grade 5	0	0	23.2	1	0.6	48.7
Grade6	16	23.2	46.4	26	16.7	61.5
Grade 7	5	7.2	53.6	5	3.2	64.7
Grade 8	12	17.4	71.0	14	9.0	73.7
Grade 9	2	2.9	73.9	0	0	73.7
Grade 10	3	4.3	78.3	5	3.2	76.9
Grade 11	5	7.2	85.5	6	3.8	80.8
Grade 12	5	7.2	92.8	23	14.7	95.5
Tertiary first diploma	2	2.9	95.7	1	0.6	96.2
Total		**100**		**156**	**100**	

Source: Survey data (2013)

3.5.6 Economic features of sampled population

The next section will show employment status and income distribution for the sampled population.

3.5.6.1 Unemployment and employment

In this study, the term unemployed is used according to its official definition. Unemployed persons are those who are not working, but who looked for work and were available to work in the reference period (StatsSA, 2012a:48). In Kwakwatsi Township, 54.8 percent of the population are in the labour force while the other 45.2 percent are not economically active. The average number of people in the labour force is calculated at 2.41 per household, but only 2.03 of them are employed. Even though the average of unemployed people per household is small, the big percentage of employed people is concentrated in informal activity.

In Figure 3.8, the unemployment rate for the sampled population is calculated at 15.7 percent from the survey data. The low unemployment rate is due to a public works programme in the township, which gives the unemployed an informal job. The participants are paid a monthly stipend of R500 and mainly clean streets, cemeteries and general public infrastructure. About 12.2 percent of the labour force in Kwakwatsi is employed in the formal sector and 72.1 percent in the informal sector. The official unemployment rate for Ngwathe Local Municipality was 35.2 percent in 2011 and the percentage of people in the labour force employed was calculated at 64.8 percent (StatsSA, 2012b:18). StatsSA (2012a:48) estimated the national unemployment rate in 2011 at 23.4 percent, using the official definition.

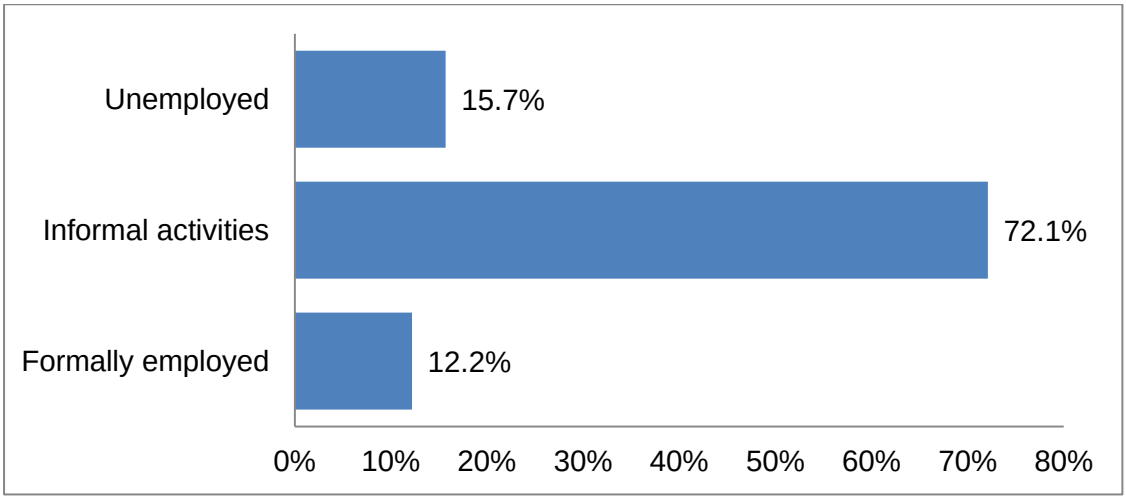


Figure 3.8: Labour force total population

Source: Survey data (2013)

3.5.6.2 Skills of the unemployed

The distribution of skills of the unemployed is shown in Table 3.6. The highest percentage of the unemployed people has skills in retail trading, which accounts for 46.4 percent. Unemployed people with building/construction skills record 21.4 percent, 7.1 percent catering/cooking, 3.6 percent hair-dressing and 2.4 percent can do office work. In 2010 the highest percentage was recorded from those who have building/construction skills, followed by those who have skills in retail trading (Sekhampu, 2010:135).

Table 3.6: Distribution of skills of the unemployed

Skills	Frequency	Percent
Retail trader (selling)	39	46.4
Catering/cooking	6	7.1
Sewing	2	2.4
Baking	2	2.4
Hair-dressing	3	3.6
Knitting	1	1.2
Welding	1	1.2
Building/construction	18	21.4
Gardening/farming	2	2.4
Computer	1	1.2
Office	2	2.4
Other	7	8.3
Total	**84**	**100.0**

Source: Survey data (2013)

3.5.6.3 Duration of unemployment in years

The duration of unemployment is shown in Figure 3.9. One-fifth (19.77%) has been without employment for two years. The second highest is 17.44 percent, for people who spent more than nine years unemployed. Of the unemployed, 15.12 percent have been without work for a period of five years. This appears to be a decrease since, in 2010 those who were without employment for more than 11 years were 34 percent of the unemployed population, while those without employment for fewer than seven years increased (Sekhampu, 2010:131).

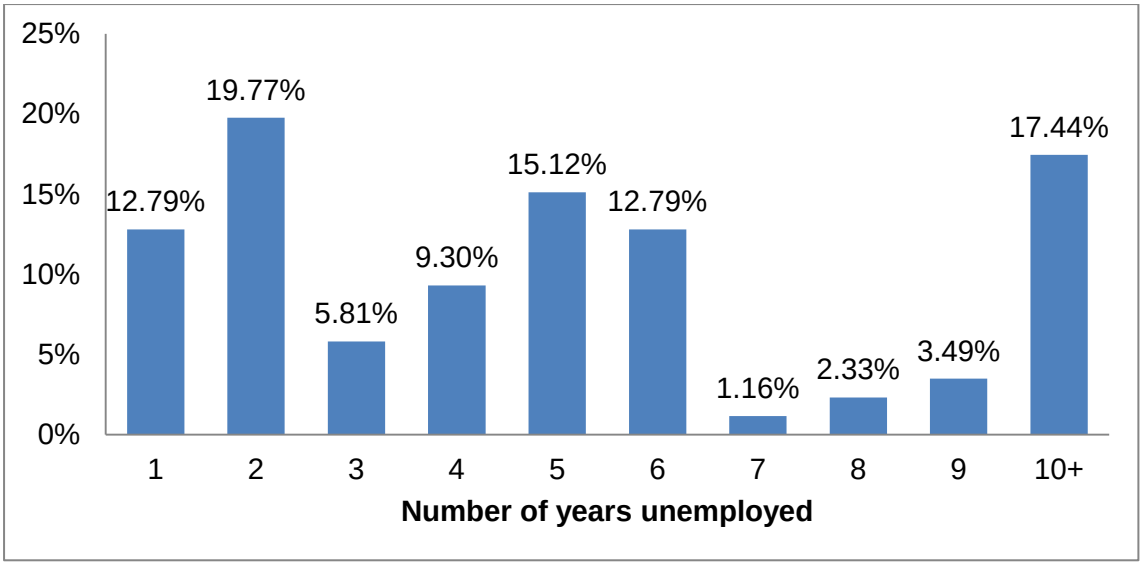


Figure 3.9: Duration of unemployment in years

Source: Survey data (2013)

3.5.6.4 What are the unemployed doing presently?

As shown in Figure 3.10, 93.5 percent of the unemployed people are actively looking for jobs, 3.9 percent are helping at home with household duties and 2.6 percent are idle. The idle percentage could be regarded as discouraged workers who have lost hope of finding employment opportunities and some may resort to illegal means to ensure their survival. This is similar to the figure of Boitumelo Township, where a high percentage of unemployed is busy looking for jobs, while a small percentage is idle (Mbele, 2012:61).

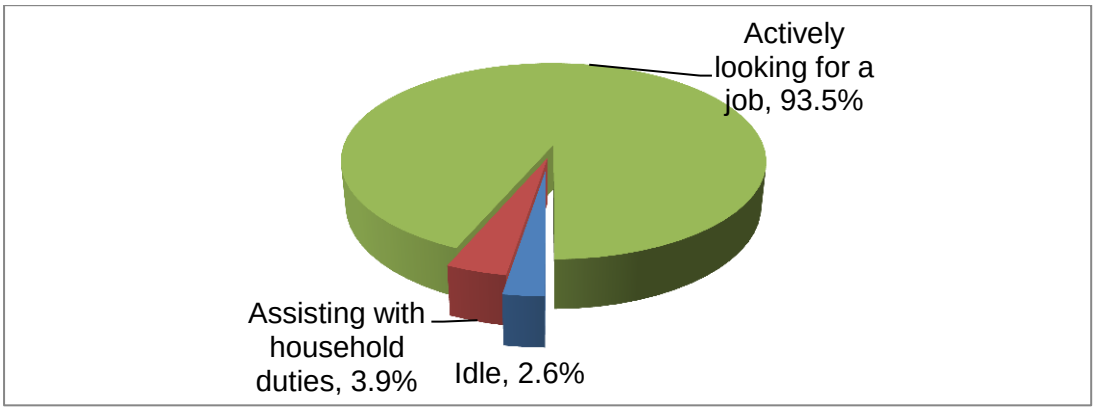


Figure 3.10: What are the unemployed doing presently?

Source: Survey data (2013)

3.5.6.5 Employment status of household heads

Table 3.7 shows the employment status of household heads in Kwakwatsi Township. The table shows that 27.11 percent are not employed and 72.89 percent are employed. For the employed household heads, only 22.22 percent are formally employed and the other 50.67 percent are in informal activities.

Table 3.7: Employment status of household head

Employment status of household head	Female	Male	Total	%Female	%Male	%Total
Unemployed	18	43	61	8.00%	19.11%	27.11%
Formally employed	13	37	50	5.78%	16.44%	22.22%
Informal activities	38	76	114	16.89%	33.78%	50.67%
Total	**69**	**156**	**225**	**30.67%**	**69.33%**	**100.00%**

Source: Survey data (2013)

Looking at the employment status of female and male household heads separately, Table 3.8 shows that 26.1 percent among all sampled female heads are unemployed while 27.6 percent of male heads are unemployed. Only 48.72 percent among male heads are informally employed, while female heads record 55.07 percent. However, since 2001 the South African Labour Force Survey (LFS) has consistently recorded a higher unemployment rate among women compared to men. In 2006 the LFS an official unemployment rate of 30.7 percent for women and 21.2 percent for men was reported (Moletsane *et al*., 2008:18).

Table 3.8: Employment status of household head using subsample

Employment status	Female		Male	
	N	Percent	N	Percent
Unemployed	18	26.09	43	27.56
Formally employed	13	18.84	37	23.72
Informal activities	38	55.07	76	48.72
Total	**69**	**100**	**156**	**100**

Source: Survey data (2013)

3.5.6.6 Income distribution of population

The income distribution of the sampled population shows that the average income of the household head is R2061.33 per month. A further description of household income by gender of the household head indicates that the average income salary for female heads (R1551.01) is lower than that of their male counterparts (R2287.05). When adding other income earned by other members of the household, the female-headed household income (R3084.35) is still lower in relation to those headed by males (R4420.13). Only 4.35 percent of female heads earn more than R4000 per month, compared to 12.82 percent of males and 79.7 percent of female heads earn an income which is less or equal to R2000 in relation to 59.61 percent recorded for male household heads. StatsSA (2010:65) reported that females are much more likely than males to earn a low income. Sekhampu (2010:137) recorded that unemployed females were willing to take jobs with a lower minimum wage than males. Figure 3.11 shows the sources of households' incomes for the population of Kwakwatsi as a whole.

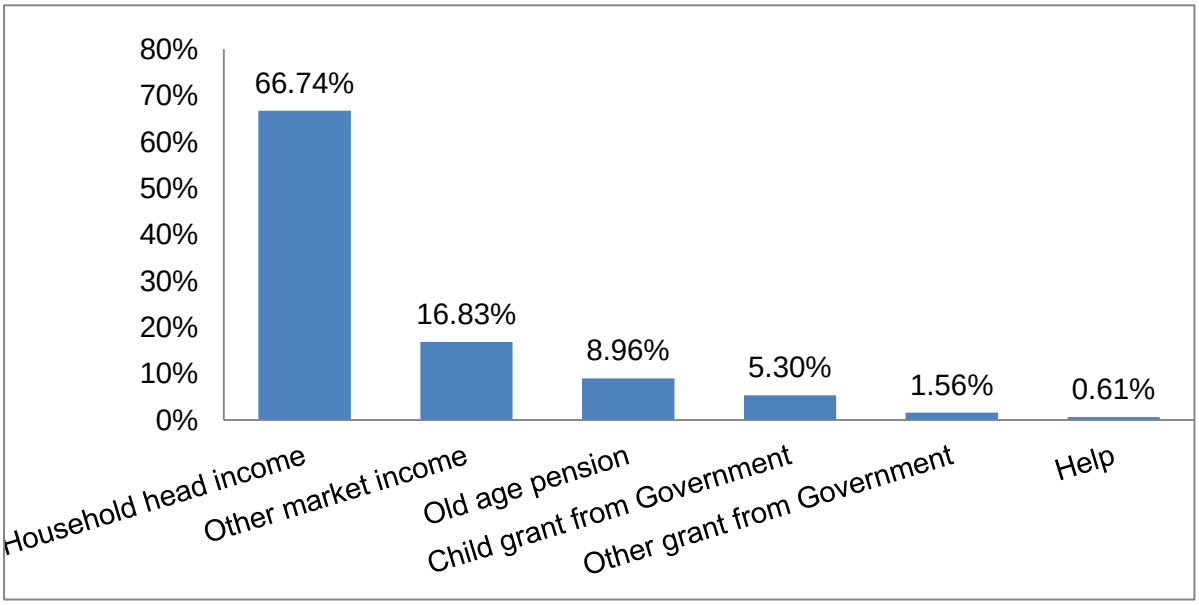


Figure 3.11: Sources of incomes for households

Source: Survey data (2013)

Salaries (66.74%) and other market income of the households (16.83%) contribute 83.57 percent to the average total household income. Old age pension are the third highest contributor, with about 8.96 percent, child support grants record about 5.30 percent of average total incomes, while other grants from government contribute about 1.56 percent and help (family/relatives/ friends/help in kind) 0.61 percent. Mbele (2012:66) found salaries are the highest source of economic contribution (95%) in Boitumelo township and that child grants contribute more than the old age pensions, while in Kwakwatsi pensions are the second highest contributor (Sekhampu, 2010:142).

3.6 SUMMARY AND CONCLUSION

To understand the way the research problem is examined, it is vital to discuss the methodology followed. A random sample of 225 households from Kwakwatsi Township, Ngwathe Local Municipality, Free State province in South Africa was randomly selected. Data were collected during April and May 2013, using a questionnaire which covered different aspects of households' demographic and socio-economic characteristics. The average household size for Kwakwatsi is calculated to be 4.39 persons per household. There is a low frequency of fathers

compared to mothers and more females than males. The number of households headed by females is less than the number of those headed by males. In general, more than a half of the population in Kwakwatsi are young people (under the age of 35 years). A small number is over 64 years. The sample showed that the majority of the school-going population is still in the first three years of school. A very low percentage of those studying are at tertiary first level (0.31%).

The unemployment rate for the sampled population seemed to be low, but a large number of employed people are in informal activities, mainly provided by the public works programme currently running in the area. Salaries and other market income of the household are the main contributors to the average household income. Old age pensions are the third highest contributor and child support grants takes fourth place. Other government grants and help (family/relatives/help in kind) contribute a low percentage to the average household income. The average income of the household is calculated at R2061.33 per month, in general, but the average income of female heading households (R1551.01) is lower than that of males (R2287.05). Apart from household head income, it was found that the average household income in female-headed households (R3084.34783) is lower than the one of those headed by males (R4420.128).

Overall, this chapter outlined the research design and methodology of the study. Data description of participants provided a snapshot of the different characteristic of the sampled population. This included a full description of socio-economic and demographics aspects of female-headed households in relation to male-headed households. Descriptive statistics and linear and logistic regressions were identified as the models to be used in analysing the data. The next chapter will apply these models to investigate the relationship between poverty status and the identified characteristics of the households.

CHAPTER 4: ANALYSIS OF POVERTY IN KWAKWATSI

4.1 INTRODUCTION

Poverty is a major developmental problem in socio-economic and political spheres. South Africa offers an important case for research on poverty reduction, as it is struggling to overcome the race, class and gender-based problems inherited from the apartheid system. Gender-based inequality has trigged the interest in analysing the incidence of poverty from a gender point of view. This is motivated by the need to recognise that poverty affects male and female-headed households differently. It is thus possible to investigate the gender aspects of poverty status by identifying how the gender of the household head influences the access to basic necessities of individuals living in those households and how the features of poverty differ for individuals in male and female-headed households. This can help in explaining whether or not certain specific groups (female-headed households, in this case) are more likely to experience poverty.

This chapter presents the results and discusses findings of the study. It focuses on identifying the poor from the non-poor and comparing the level of access to the basic necessities of life, as measured by the lived poverty index (LPI), among female and male-headed households. This chapter further identifies the effect of socio-economic and demographic variables (such as gender of household head, household size, age of the household head, marital status, household head education attainment, number of household members who are employed, the household head income and other income of the household) on the level of poverty within a household. The chapter is concluded with a summary of the main findings of the study. Before exploring the nature of poverty, it is important to discuss the integrity of the questionnaire and the data.

4.2 DATA INTEGRITY

The LPI was developed by Mattes *et al*. (2002), with the aim of measuring poverty in a multidimensional manner. Poverty in South Africa, as discussed in Chapter 2, Section 2.4.3, appears to be a multidimensional phenomenon that should be captured by a variety of indicators. Any measurements or indicators used to measure poverty within South Africa should be able to capture how population access basic

necessities. The LPI is a poverty measure that assesses the actual lived conditions of people. It measures people's capacity to access the basic necessities of life. Participants were asked :"over the past year, how often, if ever, have you or your family gone without: enough food to eat, enough clean water for home use, medicines or medical treatment, electricity in your home, enough fuel to cook your food, a cash income?" The response options employed by Dulani *et al*. (2013:7) range from 0 (never: no lived poverty) to 4 (always: which reflects a regular absence of all basic necessities) and the high value indicates the great level of lack of access to those mentioned basic necessities. In this study the LPI answer options were ranged from 1 (= never) to 5 (= always) and 6 (= do not know). It should be noted that no-one has answered "do not know".

A Principal Component Analysis (PCA) was conducted to reduce the dimensionality of the six items assumed to be correlated. It was possible to retain a single un-rotated factor with an Eigenvalue of 2.8 that explains 48.12 percent of the common variance to all six of the items. Bartlett's test for sphericity and Kaiser–Meyer–Olkin (KMO) were performed to measure the sampling adequacy and to determine the meaningfulness of performing principal component analysis. The KMO test was used to verify the sampling adequacy for the analysis. The KMO of 0.757 was obtained and is considered good, as it is between 0.7 and 0.8 (Kaiser, 1974). Bartlett's test of sphericity, chi-square equal to 474.941, $p=0.000<0.001$, indicated that correlation between items were sufficiently large for PCA. The LPI is reliable (Cronbach's alpha = 0.72), as it is above 0.6 (Pallant, 2013:193).

The way each item is correlated with an underlying factor is shown in Table 4.1. There is a weak correlation (0.323) between the LPI and access to medicine. It could be unnecessary to take medicines in another different component and get two components, since its loading value is greater than 0.3, which can be taken as an important value (Field, 2009:644). Pallant (2013:199) suggests that factors to retain should go with the context of the study, rather than respecting hard and fast statistical rules.

Table 4.1: Component matrix

Reasons why people are poor	Component 1
Enough clean water for home use	0.863
Electricity in their home	0.855
Enough fuel to cook food	0.817
A cash income	0.590
Enough food to eat	0.539
Medicines or medical treatment	0.323

Source: Survey data (2013)

Pallant (2013:199) reasoned that using the Kaiser criterion, which states that only components that have an eigenvalue of 1 and more should be considered, can result in retaining too many components, hence the suggestion that this analysis should be supplemented with outcomes of a scree plot. In Figure 4.1, the scree plot is quite clear and shows inflexion that justifies retaining one component. The point of inflexion is where the shape changes or elbows dramatically. In Figure 4.1, using the example given by Field (2009:640), if one draws a straight line that summarises the vertical part of the slope and another that summarises the horizontal part, then the point of inflexion is the data point at which these two lines meet. The factors to be retained are those which are to the left (or above) the point of inflexion. Note that the factor at the point of inflexion itself should not be included. According to Stevens (cited by Field, 2009:640), a scree plot with a sample of more than 200 participants provides a fairly reliable criterion for factor selection. This implies that the scree plot is appropriate for the current study of 225 participants. In the Figure 4.1, the point of inflexion occurs at the second data point and therefore the scree plot confirms the use of one component.

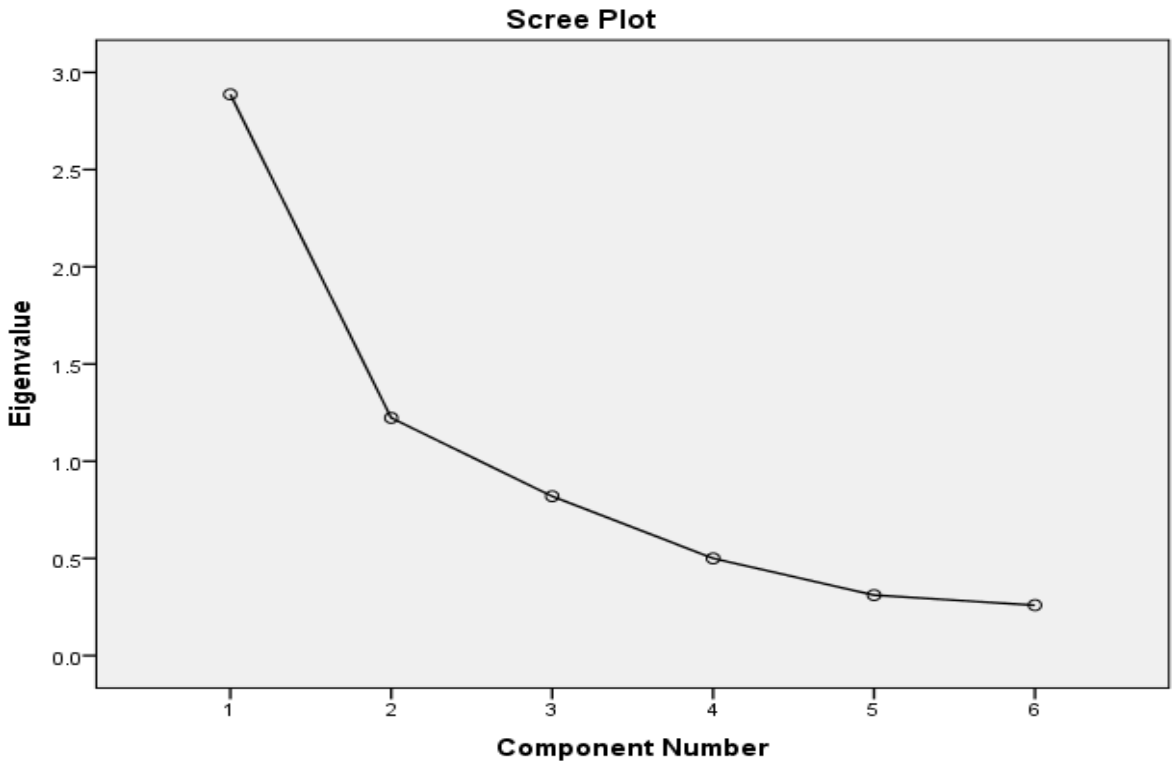


Figure 4.1: Scree plot

Source: Survey data (2013)

4.3 THE NATURE OF POVERTY IN KWAKWATSI TOWNSHIP

The LPI was employed to calculate poverty lines to estimate the proportion of poor and non-poor people in Kwakwatsi Township. The cut-off was calculated according to the average LPI score for each participant, as obtained on each of six questions. Using the participants mean score across the six questions, a grand mean of LPI was calculated for the entire sample (Davids, 2010a; 2010b; Dulani *et al*., 2013; Mattes *et al*., 2002; Mattes, 2008). The obtained grand mean was 1.98 and it was used to separate the sample into poor and non-poor. Households which obtained a mean score below 1.98 were considered to be non-poor, while those whose mean score is greater than 1.98 were regarded as poor. The higher the average score, the more likely that the household would be poor, hence the higher scores reflect a higher level of lack of access to basic necessities.

About 48 percent of households in Kwakwatsi Township were identified as poor, while 52 percent were regarded as non-poor. Among these 48 percent, 31.56

percent are households headed by males while 16.44 percent are households headed by females. The poverty line calculated in this study provides results in the same range as other poverty lines. For example, a study by Sekhampu (2012) conducted in Kwakwatsi Township using a monetary per capita poverty line of R322 found that 50 percent of the sample were poor. StatsSA (2012a) found that about 42 percent of the population of the Free State province was poor, while on a national level only 38.9 percent of the population was classified as poor. Free State province was found to have a higher poverty rate than the national rate, while the results for this study indicate a higher incidence of poverty in Kwakwatsi.

One of the aims of the present study was to compare the incidence of poverty between female-headed households and those headed by males. The best way to do this comparison was to disaggregate the sample into two sub-samples: female-headed households and male-headed households. It was noted that the incidence of poverty is high among female-headed households compared to those headed by males: 53.62 percent of households headed by females were identified as poor compared to 45.51 percent of male-headed households. This is in line with the findings of Bridge (2001), who concluded that the incidence of poverty is higher for females than males. This suggests that there is a feminisation of poverty in Kwakwatsi Township. The concept of the feminisation of poverty premises is that female's poverty incidence is higher and more severe than male's, and that the rates and level of poverty among females are increasing with the incidence of female headship (Bridge, 2001:1).

This result, indicating that female-headed households in Kwakwatsi are poorer, is in line with similar studies (Bhorat & Van der Westhuizen, 2008; Posel & Rogan, 2009; 2011; Rogan, 2011; 2012; StatsSA, 2012a), which were based in various parts of South Africa. This implies that poverty is more common among female-headed households than those headed by males.

4.4 THE EXTENT OF POVERTY IN KWAKWATSI

Table 4.2 shows the level of access to basic necessities of the sampled population within the twelve months preceding the survey. In general, access to medicines and medical treatment appear to be the biggest challenge to the whole township of

Kwakwatsi. This is shown by the sum of 70.2 percent of the population who experienced a shortage of medicines or medical treatment more than twice or several times in the year preceding the interview. Even though 11.1 percent have never experienced lack of medicines and medical treatment, there is a large percentage of severe cases experiencing frequent shortages of medical treatment; 14.2 percent for “many times” and 4.4 percent for “always”. This is the highest in all basic necessities gauged in this study. Access to medical treatment seems to differ, depending on the survey area, as a study by Dulani *et al*. (2013:14) reported that 60 percent of South Africans have never experienced a shortage of medicines or medical treatment over the past year.

One of the advantages of using the LPI as a measure of poverty is that it provides information not only at household level but also at the level of development of the area within which the population under study live. Thus the level of deprivation in medicines and medical treatment appears to be high in Kwakwatsi Township. The relationship between health and poverty in Kwakwatsi can be associated with a number of factors, such as poor environmental conditions, with the whole township sharing only one clinic, low education levels, lack of resources necessary to maintain a good health status, financial barriers in accessing health services and medical aid and insurance. Looking back to the previous chapter, it is clear that the level of education of the population in Kwakwatsi is still low; 65 percent of people who are no longer studying did not finish grade 12. Furthermore, 72.1 percent of the employed population in Kwakwatsi are in informal activities that pay a low wage. The majority of the population in this township cannot afford medical aid or insurance to cover the costs of medicines or medical treatment beyond those provided for free at the government clinic serving the area.

Electricity is another problem to the community, since only 4.4 percent of the sampled population have never experienced any shortage of electricity over the past year. About 88.9 percent have experienced the lack of electricity once/twice or several times, while 6.2 percent experienced it many times during the past year. The general view was that electricity is expensive. The problem of access to electricity was also exacerbated by erratic power cuts attributed to grid problems of the local municipality. A number of service delivery protests were evident in the area during

the survey process. Regarding clean water, 68.9 percent of the participants reported that they have experienced a lack of clean water once or twice, while 20 percent experienced a shortage several times in the last year. About 5.8 percent have experienced frequent shortage of clean water for home use over the year before the survey (4.9%: many times and 0.9%: always).

Regarding fuel for cooking, 70.7 percent reported that they have experienced a shortage just once or twice in the last year. A report by Dulani *et al*. (20013: 15) revealed that approximately 30 percent of South Africans experienced a shortage of fuel for cooking at least once. As for cash income, it is a minor problem, because over the year prior the survey, the majority of the participants (77.8%) have never experienced a shortage of cash income. However, Dulani *et al.* (2013:16) reported that about 44 percent of South Africans have experienced shortage of cash income during the past year, while 20 percent have experienced it many times or always. It appears that this cash income is used primarily to secure food, because 88.0 percent of the population have never gone without food over the past twelve months. At the national level, it was noticeable that a large number of South Africans have never gone without the basic necessities, while the sampled population showed a higher number only for access to food and cash income. In general, a high percentage has experienced a shortage of enough clean water for home use, electricity, and fuel for cooking, just once or twice. However, access to medicines or medical treatment seems to be most serious deprivation suffered by the population of the township.

Table 4.2: Level of access to basic necessities of the sampled population

Over the past year, how often, if ever, have you or your family gone without:	Never	Once or twice	Several times	Many times	Always
Enough food to eat	88.0%	6.2%	3.6%	1.3%	0.9%
Enough clean water for home use	5.3%	68.9%	20.0%	4.9%	0.9%
Medicines or medical treatment	11.1%	24.4%	45.8%	14.2%	4.4%
Electricity in your home	4.4%	66.2%	22.7%	6.2%	0.4%
Fuel for cooking	8.0%	70.7%	16.0%	4.9%	0.4%
A cash income	77.8%	9.8%	4.9%	4.4%	3.1%

Source: Survey data (2013)

It was also important to compare the poor and non-poor. Table 4.3 shows the results of a comparison between the poor and non-poor. The table shows that a greater proportion of the participants categorised as poor are always going without basic necessities, compared with those categorised as non-poor. The non-poor are likely to never experience a lack of basic necessities. For example, 6.48 percent of poor households have always gone without cash income, while in the category of non-poor no-one has gone without a cash income over the past year. In terms of access to medicines or medical treatment, non-poor people are in a better situation compared to the poor. Poor households record 9.26 percent of always going without medicines or medical treatment, while nothing is recorded among the non-poor. These results are consistent with those of Davids (2010b:14), who found that a greater percentage of the participants classified as poor are always going without basic necessities compared with those classified as non-poor. Davids (2010b:14) found that 5 percent of the poor participants reported that they have always experienced shortage of food to eat, while less than 1 percent was recorded for the non-poor.

Overall, Table 4.3 shows that poor households present the high percentage in the last two categories, which seem to be critical in lack of access to basic needs (many times and always). For example, at least 12.04 percent of poor participants reported that, over the past year, they have gone without enough clean water for home use many times and always; while no one is recorded among the non-poor.

Table 4.3: Level of access to basic necessities among non-poor and poor

Over the past year, how often, if ever, have you or your family gone without:	Never		Once or twice		Several times		Many times		Always	
	Poor (%)	Non-poor (%)	Poor (%)	Non-poor (%)	Poor (%)	Non-poor (%)	Poor (%)	Non-poor (%)	Poor (%)	Non-poor (%)
Enough food to eat	77.78	97.44	10.19	2.56	7.41	0.00	2.78	0.00	1.85	0.00
Enough clean home use water for	0.00	10.26	48.15	88.03	39.81	1.71	10.19	0.00	1.85	0.00
Medicines or medical treatment	9.26	12.82	8.33	39.32	44.44	47.01	28.70	0.85	9.26	0.00
Electricity in your home	0.00	8.55	45.37	85.47	40.74	5.98	12.96	0.00	0.93	0.00
Fuel for cooking	0.93	14.53	55.56	84.62	32.41	0.85	10.19	0.00	0.93	0.00
A cash income	60.19	94.02	13.89	5.98	10.19	0.00	9.26	0.00	6.48	0.00

Source: Survey data (2013)

Having compared access to basic necessities between poor and non-poor, it is necessary to verify if the gender of the household head has an effect on access to these basic necessities. The next subsections will explore the way households headed by females access basic necessities, compared to those headed by males. Results are disaggregated by gender of the household (male and female-headed households) and how they responded to each question.

4.4.1 Food security

Table 4.4 shows how male and female-headed households reported their access to enough food to eat. It shows that male-headed households are likely to get enough food compared to those headed by females. About 89.74 percent of male-headed households have never gone without enough food to eat during the last twelve months, compared to 84.06 percent of those headed by females. If one does a coarse interpretation (combination of several times, many times and always) of these results, approximately 8.7 percent of households headed by females experienced hunger compared to 4.5 percent of male-headed households. However, hunger does

not seem to be a severe problem among female-headed households, because there is no female-headed household which has always experienced a shortage of food. These findings appear to be in line with the results of Jacobs (2010:11), who found that male-headed households are more likely than female-headed households to never experience adult hunger. Jacobs (2010:12) found that in the Free State province, 87.72 percent of male-headed households have never experienced hunger over the past year, compared to 83.28 percent of female-headed households. In addition, StatsSA (2010:60) found that African females were consistently and distinctively more likely to experience vulnerability to hunger than their male counterparts. Moreover, a significant difference in food security among male and female-headed households was determined by Modirwa and Oladele (2012:33-34) where they found that male-headed households were more food secured than female- headed households in Eden District Municipality of the Western Cape, South Africa.

Table 4.4: Access to enough food to eat among male and female-headed households

Over the past year, how often, if ever, have you or your family gone without enough food to eat?	MHH	FHH
Never	89.74%	84.06%
Once or twice	5.77%	7.25%
Several times	1.28%	8.70%
Many times	1.92%	0.00%
Always	1.28%	0.00%

Source: Survey data (2013)

4.4.2 Cash income

The reason behind the better position in securing enough food in male-headed households might be the better disposition of cash income. Approximately, 82.05 percent of the male-headed households reported that they have never gone without cash income in the past year, while 68.12 percent was recorded for female-headed households (Table 4.5). The average income per month of a female household head

(R1551.01) appeared to be lower than that of a male household head (R2287.05). Apart from income of the household head, it was found that the total household income in female-headed households (R3084.347) is lower than that of male-headed households (R4420.128). StatsSA (2012a:41) revealed that in 2011, on average, a female earned more than half the annual income of males. StatsSA (2010:65) further reported that female-headed households are much more likely to have low incomes than those headed by males. Budlender (1997:3) noted that households headed by women earned less than a third of the amount earned by households headed by men.

The interpretation of the combination of the last three response options (several times, many times and always) suggests that 8.98 percent of male-headed households experienced a shortage of cash income, compared to 20.29 percent of female-headed households. Conversely, 3.21 percent of male-headed households always experienced a cash income shortage, compared to those headed by females (2.90%), but the difference between these households is too small (0.31%).

Table 4.5: Access to cash income among male and female-headed households

Over the past year, how often, if ever, have you or your family gone without a cash income?	**MHH**	**FHH**
Never	82.05%	68.12%
Once or twice	8.97%	11.59%
Several times	1.28%	13.04%
Many times	4.49%	4.35%
Always	3.21%	2.90%

Source: Survey data (2013)

4.4.3 Electricity

Electricity is one of the most important factors in social and economic development. It takes a share of disposable income amongst other expenses of the household. Lloyd & Cowan (2005:1) pointed out that many low-income South African households which have electricity use it mostly for low-power consuming items, such as communications and lighting. Female-headed households appear to be less likely to secure electricity for their homes compared to those headed by males. However,

overall affordability of electricity in both households is still at a low level. Table 4.6 shows the shares of male and female-headed households reporting access to electricity in their homes. It shows that 5.13 percent of male-headed households have never gone without electricity in their homes, compared to 2.9 percent of female-headed households. Approximately, 71 percent of female-headed households have gone without electricity at least once or compared to 64 percent of male-headed households. More households headed by females seem to be in a serious position of lacking electricity. In dire cases, 1.45 percent of female-headed households went without electricity in their homes (this can be considered that they did not have it at all), while there was no report of not having electricity among the male-headed households. StatsSA (2010:74) found that female-headed households were consistently less likely to be connected to the mains source of electricity than those headed by males for the period of eight years (from 2002 to 2009).

Table 4.6: Access to electricity in their home among male and female-headed households

Over the past year, how often, if ever, have you or your family gone without electricity in your home?	MHH	FHH
Never	5.13%	2.90%
Once or twice	64.10%	71.01%
Several times	22.44%	23.19%
Many times	8.33%	1.45%
Always	0.00%	1.45%

Source: Survey data (2013)

4.4.4 Fuel for cooking

In South Africa, electricity is not extensively widely used in cooking, because other sources of energy such as paraffin, wood and coal are still widely used for cooking, especially in rural areas (Lloyd & Cowan, 2005:4). Table 4.7 shows the shares of male and female-headed households reporting their access to fuel for cooking. Approximately, 8.97 percent of male-headed households have never gone without fuel for cooking, while female-headed household records 5.8 percent. Even though the number of households headed by males which have never gone without fuel for

cooking is higher than those headed by females, when the first two categories are combined (never and gone once or twice without fuel for cooking) female-headed households (87%) appear to have better access to fuel for cooking than those headed by males (75%). There are more male-headed households which experienced a lack of fuel for cooking several times (19.23%), many times (5.13%) and always (0.64%), compared to those headed by females, which account for 8.70 percent, 4.35 percent and zero percent, respectively. In South Africa Bhorat *et al*. (2009:9) found that 73 percent (year 2007) and about 70 percent (year 2008) of male-headed households used electricity for cooking, compared to 60 percent and 68 percent of households headed by female, respectively. This means that a greater percentage of female-headed households use alternative sources of energy to cook compared to those headed by males. The alternative sources of energy to electricity cited above are associated with numerous health, environmental and social problems and a larger number of female-headed households use them compared to those headed by males.

Table 4.7: Access to fuel for cooking among male and female-headed households

Over the past year, how often, if ever, have you or your family gone without enough fuel to cook your food?	MHH	FHH
Never	8.97%	5.80%
Once or twice	66.03%	81.16%
Several times	19.23%	8.70%
Many times	5.13%	4.35%
Always	0.64%	0.00%

Source: Survey data (2013)

4.4.5 Medicines or medical treatment

In terms of a health plan, since 1994 the South African government has developed primary health care centres with universal access and Kwakwatsi Township has one primary healthcare facility on the outskirts of the area. Regardless of the high numbers of primary health care centres that have been constructed, Bradshaw and Steyn (2001:9) insisted that they lack adequate staff and facilities to provide proper care to outpatients. Most clinics in townships are faced with very large numbers of

additional patients, as large hospitals tend to be long distances from areas of residence. These limitations of primary health care access, identified by Bradshaw and Steyn (2001:9), might still affect some South African communities. The hospital serving the township of Kwakwatsi is in the town of Kroonstad, some 80km away from the township. Table 4.8 shows the shares of male and female-headed households reporting access to medicines and medical treatment.

Table 4.8: Access to medicines and medical treatment among male and female-headed households

Over the past year, how often, if ever, have you or your family gone without medicine and medical treatment?	MHH	FHH
Never	9.62%	14.49%
Once or twice	28.85%	14.49%
Several times	44.23%	49.28%
Many times	13.46%	15.94%
Always	3.85%	5.80%

Source: Survey data (2013)

The table shows that the percentage (14.49 %) of female-headed households who have never gone without medicines or medical treatment is greater than that of male-headed households (9.62%). Female-headed households were the ones who were identified as having a higher percentage (5.8%) in the critical condition of always experiencing a lack of medicines or medical treatment than that of those headed by males (3.85%). In addition to this, over the twelve month period prior to the survey, 19.94 percent of female-headed households reported that they have gone many times without medicines or medical treatment, compared to 13.46 percent of those headed by a male. Yet the combination of the first two categories (never and once or twice) shows that male-headed households had better access to medicines and medical treatment in the last twelve months, with 38.47 percent compared to 28.98 percent of those headed by females. According to StatsSA (2010:63), males are generally more likely to have membership of medical aid plans than females which of course increase their access to medicines and medical treatment.

4.4.6 Clean water

Water, the essence of life on earth is a major natural resource. Being deprived of clean water, as pointed out by Lawrence *et al*. (2002:6), might be derived from being "income poor", not because of a lack of clean water in the area. Lawrence *et al*. (2002:6) argued that in some regions where water supply is adequate and reliable, people's income may be too low to afford the cost of using clean water, which would compel them to use inadequate and unreliable sources of water supply.

Table 4.9: Access to enough clean water among male and female-headed households

Over the past year, how often, if ever, have you or your family gone without enough water for home use?	MHH	FHH
Never	5.13%	5.80%
Once or twice	67.95%	71.01%
Several times	19.87%	20.29%
Many times	6.41%	1.45%
Always	0.64%	1.45%

Source: Survey data (2013)

The fact that male-headed households are more cash income secure than those headed by females does not mean that they are not more water poor than female-headed households since preferences and priorities between these two households may differ. About 5.81 percent of female-headed households have never experienced lack of enough clean water for home use, while those headed by males record 5.17 percent. About, 71.01 percent of female-headed households have experienced a shortage of clean water once or twice over the year prior to the survey, compared to 67.95 percent of male-headed households. Yet a comparison of the two last categories of answers (many times and always) shows that male-headed households (7.05%) are more likely to go without clean water than female-headed households (2.9%). However, more female-headed households (1.45%) compared to those headed by males (0.64%) have always gone without enough clean water for home use over the year prior to the survey. This finding is similar to that of StatsSA

(2010:73), which reported that female-headed households are significantly more likely to have access to water than those headed by males.

4.5 DESCRIPTIVE ANALYSIS OF FACTORS DETERMINING POVERTY

This section gives a descriptive analysis of some factors which are commonly associated with poverty. Research of poverty among households according to the gender of the household head has been motivated by the idea that the household head is predominantly responsible for the sustainable economic well-being of the household, and that females, in relation to males, are underprivileged in accessing society's economic resources and opportunities (Buvinic & Gupta, 1997:259; Delius & Schirmer 2001:17; Fuwa, 2000: 128; Moghadam 1998:232). These disadvantages and others mentioned in Section 2.2.6 of Chapter 2, show that poverty might not be gender neutral. Access to basic necessities might be affected by demographic and socio-economic factors such as gender of the household head, household size, age of the household head, the marital status, household head's education attainment, employment status of the household head, number of household members who are employed, household head income and other income of the household. Under this section each variable is discussed, with a specific focus on comparing the average mean and percentages of poor among female headed households compared with male-headed households.

First, it is important to start with a definition of the dependent variable of the model. The poverty line was calculated according to the average LPI score for each participant as obtained on each of six questions. A household was considered poor if its average index was greater than 1.98. Table 4.10 presents the mean LPI scores for every socio-economic and demographic variable used in this study. The mean scores run from 1 (never went without basic necessities) to 5 (always went without basic necessities). The higher scores indicate greater degree of lack of access to basic necessities. In this context, the average index of female-headed households (2.05) participants appears to be more than that of male-headed households (2.03). Davids (2010a:134) found that the average index among female-headed households was higher (1.93) than that of male-headed households (1.84). Overall, the mean LPI scores is a picture of what is going to be discussed in the next section. For example, households with few members are more likely to experience lack of basic

necessities than those with many members. Households with one member are less likely to get basic necessities (2.43) than households with two to four members (2.04) and those with five to seven members (2.01). The exception comes only from households with eight members or more where the average income increased (2.07). This may suggests that some of these members within households with eight members may generate some additional income.

Table 4.10: Mean scores of the LPI by socio-economic and demographic variables

Variables	Avg. Index	N	Std dev.		Variables	Avg. Index	N	Std dev.
G_head					**NP_employed**			
Male	2.03	156	0.54		<1	1.96	22	0.36
Female	2.05	69	0.43		1-2	139	2.00	0.51
HH-size					3-4	61	2.12	0.54
1	5	2.43	0.60		5+	3	2.22	0.67
2-4	118	2.04	0.55					
5-7	93	2.01	0.44		**Head_Y**			
8+	9	2.07	0.40		0-1000	100	2.10	0.57
Age					1001-2000	48	1.99	0.53
20-30	2	1.83	0.24		2001-3000	30	2.03	0.33
31-40	53	2.00	0.49		3001-4000	24	1.99	0.38
41-50	99	2.12	0.55		4001-5000	3	2.39	1.17
51-60	45	2.04	0.49		5001-7000	6	1.86	0.27
61-70	14	1.77	0.24		7001-8000	6	1.86	0.25
71-80	12	1.78	0.38		8001+	8	1.81	0.33
Education								
No schooling	9	1.94	0.31		**Other_HH Y**			
Up to 3	49	1.98	0.49		0-1000	84	2.10	0.54
G4-G7	89	2.09	0.57		1001-2000	54	2.18	0.56
G8-G11	47	2.10	0.48		2001-3000	34	1.86	0.32
G12	28	1.90	0.43		3001-4000	29	1.90	0.47
Tertiary diploma	3	1.72	0.10		4001-5000	15	1.88	0.40
Marital status					5001-7000	5	1.97	0.32
Not married	66	2.04	0.42		7001-8000	2	1.42	0.59
Married	159	2.03	0.54		8001+	2	2.00	0.17

Source: Survey data (2013)

Further analysis indicated that household heads aged over 60 are more likely to access basic necessities than those who are younger. Household heads that do not have secondary education are more likely to experience lack of basic necessities than those with secondary (1.90) and tertiary education (1.72). Davids (2010a:133) found that participants with primary (2.29) education are more likely to experience lack of basic necessities than those with secondary (1.79) and tertiary education (1.40). Unmarried participants (2.05) appear to be more impoverished than married ones (2.04). Participants with a low income are more likely to experience lack of basic necessities. For example, those who earn from R0 to R1000 per month have a higher average index (2.10) than those who earns from R1001 to R2000 (1.90). It should be noted that some average indices are higher because of the higher standard deviation, indicating that the data points are spread out over a large range of values away from the average.

4.5.1 Gender of the household head

The analysis of poverty and gender showed than female-headed households were more deprived of basic necessities such as enough food, clean water, medicines, electricity, fuel to cook and cash income than male-headed households. Table 4.11 presents the distribution of poverty by the gender of the household head. It indicates a higher proportion of female-headed households (53.26%) living in poverty in relation to those headed by male (45.51%). In South Africa, Bhorat and van der Westhuizen, (2008:7) confirmed that individuals living in female-headed households remained more vulnerable to poverty as they consistently experience higher levels of poverty than male-headed households regardless of the poverty line used. They found that 60.57 percent of female-headed households are poor compared with 38.34 percent of those headed by males.

Table 4.11: Distribution of poverty by the gender of the household head

G_head	Non-poor		Poor	
	N	%	N	%
Male	85	45.51	71	54.49
Female	32	53.26	37	46.38

Source: Survey data (2013)

4.5.2 Household size

The number of household members is an important demographic feature of any household. IFAD (1999:95-96) argues that household-headed by female have a smaller average household size. This agrees with this study, where female-headed households had a smaller household size (4.57) than those headed by males (4). However, when it comes to poverty, female-headed households classified as poor have a slightly higher household size (4.3 people) than that of poor male-headed households (4.2 people). Poverty is generally linked to a larger household size because an increase in household size is likely to add an extra burden to the household.

In contrast, overall results for the whole population and male-headed households in the present study showed no consistent relationship between household size and poverty. Table 4.12 shows that the high percentage of the poor is concentrated in households with few members (1 and 2-4) compared to those with a high number of members (5-7). For example, 80 percent of households with one member are poor compared to 50 percent of those with two to four members and 44.1 percent of the ones with five to seven members. However, households with eight members and more were found to have a higher but slighter proportion (44.5%) of the poor compared households with five to seven members (44.1%). In their study, Kamuzora and Mkanta (2000:9) found that bigger families were less poor than smaller ones. Widyanti *et al*. (2009:3) showed that the direction of causation between poverty and household size can go in opposite directions. A change in the economic condition of a household can encourage the household to restructure its composition. For instance, an improvement in a household's economic and financial condition can induce the household to have more children or support extended family members, while a decline in economic status may compel the household to decrease its size by asking some household members to move out.

Table 4.12: Distribution of poverty by household size

HH_size	Non-poor		Poor	
	N	%	N	%
1	1	20%	4	80%
2-4	59	50%	59	50%
5-7	52	55.9%	41	44.1%
8+	5	55.6%	4	44.45

Source: Survey data (2013)

While the proportion of the poor keeps declining as the number of household members increases in female-headed households, the relationship is inverse in those headed by males (Table 4.13). The only exception is the households with two to four members within which only 47.6 percent of poor in relation to household with one member (50%). Male-headed households with few members are the ones found to have been more deprived than those with a large number. It appears to be difficult to generalise distribution of poverty by household size, because the effect of household size on poverty status depends on the overall level of productivity of household members. To account for this, a variable for the number of people who are employed per household and its relation to poverty is investigated in the latter part of the chapter.

Table 4.13: Distribution of poverty by household size: gender comparison

HH_size	MHH				FHH			
	Non-poor		Poor		Non-poor		Poor	
	N	%	N	%	N	%	N	%
1	0	0.0%	3	100.0%	1	50.0%	1	50.0%
2-4	37	48.7%	39	51.3%	22	52.4%	20	47.6%
5-7	43	62.3%	26	37.7%	9	37.5%	15	62.5%
8+	5	62.5%	3	37.5%	0	0.0%	1	100.0%

Source: survey data (2013)

4.5.3 Age of the household head

Table 4.14 presents the distribution of poverty by age of the household head. It shows that the incidence of poverty generally increased with the age until 50 years and from 51 years poverty starts to decline. The majority of the poor are

concentrated in households whose heads are in the age group of 41 to 50 years. The incidence of poverty was relatively high in households headed by people aged from 41 to 50, in the sense that the poverty share of this group (51%) exceeded their population share (44%) and it is unfortunate that this group has more than a half of poor households. The relative low poverty proportion among households headed by individuals aged 60 and older reflected the gathering of the state old-age grants. Only 28.6 percent of participants aged from 61 to 70 years are impoverished, compared 42.2 percent of those aged 51 to 60 years. Overall, the incidence of poverty increased with the age of the household head to a point and started to decrease thereafter with an increase in age.

Table 4.14: Distribution of poverty by age of the household head

Age	Non-poor		Poor	
	N	%	N	%
20-30	1	50.0%	1	50.0%
31-40	27	50.9%	26	49.1%
41-50	44	44.4%	55	55.6%
51-60	26	57.8%	19	42.2%
61-70	10	71.4%	4	28.6%
71-80	9	75.0%	3	25.0%

Source: Survey data (2013)

Table 4.15 presents the distribution of poverty by age of the household head with respect to gender. It shows that that most deprived households headed by either males or females are concentrated in the age group of 41 to 50 years. The trend in households headed by males is the same as in Table 4.10, where the incidence of poverty generally increases with the age of the head of the household until 50 years and from 51 years poverty starts to decline. From the age of 51 the proportion of poor in both male and female-headed households started to decrease. In the first four categories of age (20-30, 31-40, 41-50 and 51-60), where a high proportion of the population (84%) is concentrated, female-headed households have higher percentages of poor than male; while in the last two categories, which contain old people (61-70 and 71-80), female-headed households are better than those headed by males.

Table 4.15: Distribution of poverty by age of the household head: gender comparison

Age	Male				Female			
	Non-poor		Poor		Non-poor		Poor	
	N	%	N	%	N	%	N	%
20-30	1	100.0%	0	0.0%	0	0.0%	1	100.0%
31-40	17	53.1%	15	46.9%	10	47.6%	11	52.4%
41-50	30	46.9%	34	53.1%	14	40.0%	21	60.0%
51-60	23	60.5%	15	39.5%	3	42.9%	4	57.1%
61-70	7	63.6%	4	36.4%	3	100.0%	0	0.0%
71-80	7	70.0%	3	30.0%	2	100.0%	0	0.0%

Source: Survey data (2013)

4.5.4 Education attainment of the household head

Development economists postulate a negative relationship between schooling and economic poverty. Table 4.16 summarises the distribution of poverty across different educational attainments of household heads. Poor households headed by persons with no formal education (44.4%) and those who completed grade 3 (40.8%) are better off in terms of poverty, compared to those whose heads have grade 4 to 7 (53.93%) and grade 8 to 11 (53.19%). Household heads without secondary education make up 86.2 percent and 50 percent of them are poor, compared to 39.3 percent among people with a secondary education and 0 percent of those who have a tertiary first diploma. The point to add is that households whose head did not attend or finish secondary education counts for approximately 90 percent among all poor. These results appear to be consistent with previous findings (Baiyegunhi & Fraser, 2010; Botha, 2010; Woolard *et al*., 2005) that education has a negative relationship with poverty.

Table 4.16: Distribution of poverty by educational attainment of the household head

Education	Non-poor		Poor	
	N	%	N	%
No schooling	5	55.6%	4	44.4%
Up to 3	29	59.2%	20	40.8%
G4-G7	41	46.07%	48	53.93%
G8-G11	22	46.81%	25	53.19%
G12	17	60.7%	11	39.3%
Tertiary	3	100%	0	0%

Source: Survey data (2013)

Table 4.17 presents the distribution of poverty across different educational attainments, with respect to the gender of the household head. It shows that female household heads without formal education and those who have up to grade 3 are poorer that their male counterparts. For example, among female heads without formal education, 66.7 percent are poorer compared to 33.3 percent of males. However, the direction of poverty changes from grade 4 where female heads with grade 4 to 7 and those with grade 12 are better off in terms of poverty, compared to their male counterparts. Even though only 7.2 percent of female heads have matric exemption (grade 12), compared to 14.7 percent of their male counterparts, 43.3 percent among those male heads are poorer in relation to 20 percent of their female counterparts. This finding is similar to that of a study by Pheko (2011:18), who found that education is less likely to increase the probability of being poor in female-headed households than in male-headed households.

Table 4.17: Distribution of poverty by educational attainment of the household heads: gender comparison

Education	Male				Female			
	Non-poor		Poor		Non-poor		Poor	
	N	%	N	%	N	%	N	%
No schooling	4	66.7%	2	33.3%	1	33.3%	2	66.7%
Up to 3	24	61.5%	15	38.5%	5	50.0%	5	50.0%
G4-G7	31	50.0%	31	50.0%	10	37.0%	17	63.0%
G8-G11	12	48.0%	13	52.0%	10	45.5%	12	54.5%
G12	13	56.5%	10	43.5%	4	80.0%	1	20.0%
tertiary	1	100.0%	0	0.0%	2	100.0%	0	0.0%

Source: Survey data (2013)

4.5.5 Marital status

Table 4.18 shows the distribution of poverty by marital status of household heads. It indicates that more than half (51.5%) among unmarried household heads is poor compared to 46.5% of married heads. Using the vulnerability index in the Amathole District Municipality of the Eastern Cape Province in South Africa, Baiyegunhi and Fraser (2010:22) found that unmarried household heads are more vulnerable to poverty than households headed by married couples.

Table 4.18: Distribution of poverty by marital status

Marital status	Non-poor		Poor	
	N	%	N	%
Not married	32	48.5%	34	51.5%
Married	85	53.5%	74	46.5%

Source: Survey data (2013)

Table 4.19 summarises the distribution of poverty with marital status respect to the gender of the household head. It shows that 64.3 percent of unmarried male household heads are poor, while among 75.36 percent of female heads who are not married, only 48.1 percent are poor. Within male household heads, 64.3 percent in unmarried household heads are poor in relation to 43.7 percent of married household heads. In contrast, among female heads, 70.6 percent of married *de facto* female household heads are poor compared to 48.1 percent of unmarried household

heads (*de jure* female household heads). Using 2008 DHS data on South Africa, Rogan (2012:8) found a higher level of poverty among *de facto* female-headed households (83.3%) compared to *de jure* female-headed households (69.4%). The plausible explanation behind this finding of a high rate of poverty among *de facto* female-headed households is a legacy of the migrant labour system, in which men migrated to urban areas in search of jobs and left their wives/partners in rural areas, with the result that they depended on infrequent or, at times, non-existent remittances (Delius & Schirmer, 2001:16).

Table 4.19: Distribution of poverty by marital status: gender comparison

Marital status	Male				Female			
	Non-poor		Poor		Non-poor		Poor	
	N	%	N	%	N	%	N	%
Not married	5	35.7%	9	64.3%	27	51.9%	25	48.1%
Married	80	56.3%	62	43.7%	5	29.4%	12	70.6%

Source: Survey data (2013)

4.5.6 Employment status of the household head

The unemployment rate among household heads in Kwakwatsi is 27.11 percent. Only 22.2 percent of the household heads in Kwakwasi are employed in the formal sector, while 50.67 percent are in the informal sector. A higher rate of unemployment among household heads in Kwakwatsi Township may be associated with their low educational level. This might result in lower bargaining power of the less-educated who are employed, and lower salaries compared to higher-educated individuals. Some of those employed in informal sector (15%) are paid a monthly stipend of R500 and mainly clean streets, cemeteries and general public infrastructure. Table 4.20 presents the distribution of poverty by employment status of household head. It shows that 52.40 percent of employed household heads are impoverished compared to 36.10 percent of unemployed heads. It is important to note that 96.77 percent of these unemployed people get social grants and 71 percent of them receive at least two different social grants per month. One can say that some unemployed people get more income than those who are employed. Kingdon and Knight (2003:395) found the existence of what they called “luxury unemployment” or “voluntary

unemployment", whereby higher household income (from grants and other supports) diminishes the incentive to become employed, especially in the informal sector.

Table 4.20: Distribution of poverty by employment status of household head

Employment status	Non-poor		Poor	
	N	%	N	%
Unemployed	39	63.90%	22	36.10%
Employed	78	47.60%	86	52.40%

Source: Survey data (2013)

Table 4.21 shows the distribution of poverty by employment status, with respect to the gender of the household head. It indicates that 25.6 percent of unemployed male households heads are deprived compared to 45.5 percent of employed heads. However, only the employment status of female heads is consistent with the theory which stipulates that households where the head is employed have a lower probability of being poor, compared to those with unemployed households heads (Bourreau-Dubois *et al*., 2003:4). For example, 61.1 percent of female-headed households whose heads are unemployed are deprived, compared to 51 percent of those whose household heads are employed.

Table 4.21: Distribution of poverty by employment status of the household head: gender comparison

Employment status	Male				Female			
	Non-poor		Poor		Non-poor		Poor	
	N	%	N	%	N	%	N	%
Unemployed	32	74.4%	11	25.6%	7	38.9%	11	61.1%
Employed	53	54.5%	60	45.5%	25	49.0%	26	51.0%

Source: Survey data (2013)

4.5.7 Number of employed people in the household

The addition of a working member to a household is likely to increase a household's financial and economic ability. An additional working individual to the household brings additional income to the household. Simultaneously, an additional working individual adds to the consumption needs of the household. As far as the gain in

earning capacity exceeds the increase in consumption needs, the household benefits from an additional member. In contrast, if the consumption of an additional working person exceeds the contribution to the household, the increase in the number of employed people in the household leads to poverty in the household. This is the case shown in Table 4.22, where the bigger the number of employed people in the household, the higher the level of poverty. For example, only 40.9 percent of households with one individual working are deprived compared to 57.38 percent of households with 3 to 4 persons employed. This suggests that the net contribution of employment income from 1 individual seems to be greater than the contribution of 4 persons. In Table, 4.22, the exception applies to households with 5 individuals employed where there are less poor households, but their sample is very small (only 3 households have 5 working individuals).

Table 4.22: Distribution of poverty by the number of people employed in the household

NP-employed	Non-poor		Poor	
	N	%	N	%
<1	13	59.1%	9	40.9%
1-2	76	54.68%	63	45.32%
3-4	26	42.62%	35	57.38%
5+	2	66.7%	1	33.3%

Source: Survey data (2013)

The addition of a working adult to a household increases the level of poverty in male-headed households, while it reduces poverty in female-headed households (Table 4.23). For male-headed households, only those with 5 people employed are not poor compared to others. In contrast, 60 percent of female-headed households with 3 to 4 employed persons are poor compared to 45.2 percent of female-headed households with 1 to 2 employed individuals. However, households with 5 working persons are better than those with 1 employed person. StatsSA (2010:5) found that individuals in female-headed households are also less likely to be economically active and employed than individuals living in households with male household heads. Table 4.23 shows that there are no female-headed households which have more than 4

individuals working, while in male-headed households the number of people who work reaches 5 persons.

Table 4.23: Distribution of poverty with number of people employed in the household with respect to the gender of the household head

NP_employed	MHH				FHH			
	Non-poor		Poor		Non-poor		Poor	
	N	%	N	%	N	%	N	%
<1	10	100.0%	0	0.0%	3	25.0%	9	75.0%
1-2	53	54.6%	44	45.4%	23	54.8%	19	45.2%
3-4	20	43.5%	26	56.5%	6	40.0%	9	60.0%
5+	2	66.7%	1	33.3%				

Source: Survey data (2013)

4.5.8 Income of the household head

Table 4.24 presents the distribution of poverty by income of the household head. Looking at that detailed group of income in Table 4.24, one cannot doubt the relationship between income and poverty. For example, there appears to be a higher proportion of poor (66.7%) people in households with income from R4001 to R5000 per month than the proportion (45.8%) of those who earn from R1001 to R2000. However, approximately 79.1 percent of household heads earns less or equal to R3000 monthly. This counts for 82.41 percent of the poor. This means that a large share of the poor is in low income earners.

Table 4.24: Distribution of poverty by income of the household head

Head_Y	Non-poor		Poor	
	N	%	N	%
0-1000	48	48.0%	52	52.0%
1001-2000	26	54.2%	22	45.8%
2001-3000	15	50.0%	15	50.0%
3001-4000	13	54.2%	11	45.8%
4001-5000	1	33.3%	2	66.7%
5001-6000	4	100%	0	0%
6001-7000	0	0%	2	100%
7001-8000	3	50.0%	3	50%
8001+	7	87.5%	1	12.5%

Source: Survey data (2013)

Regarding gender, poverty and income, it is important to note that only 4.35 percent of female heads earn more than R4000 per month, compared to 12.82 percent of males. Nearly four-fifths (79.7%) of female heads earn an income which is less or equal to R2000 in comparison to 59.61 percent among male heads. Table 4.25 summarises the distribution of poverty by income in relation to the gender of the household head. It shows that female household heads who earn R0 to R1000 per month have a higher percentage in poverty (63.6%), compared to 46.3 percent of males who earn the same amount. This is the income category for almost half (48%) of all female-headed households and counts for 56.76 percent of poor households.

Table 4.25: Distribution of poverty by income of the household head: gender comparison

Head_Y	Male				Female			
	Non-poor		Poor		Non-poor		Poor	
	N	%	N	%	N	%	N	%
0-1000	36	53.7%	31	46.3%	12	36.4%	21	63.6%
1001-2000	13	50.0%	13	50.0%	13	59.1%	9	40.9%
2001-3000	13	50.0%	13	50.0%	2	50.0%	2	50.0%
3001-4000	10	58.8%	7	41.2%	3	42.9%	4	57.1%
4001-5000	1	50.0%	1	50.0%	0	0.0%	1	100.0%
5001-6000	4	100%	0	0%	_	_	_	_
6001-7000	0	0%	2	100%	_	_		
7001-8000	3	50%	3	50%	_	_	_	_
8001+	5	83.3%	1	16.7%	2	100%	0	0%

Source: Survey data (2013)

4.5.9 Other household income

Households rely on a diversity of income sources such as salaries and wages from household members, remittances and social grants. Apart from the income of the household heads, 76.44 percent of the household in Kwakwatsi have other market income and 71.11 percent have government social grants. Table 4.26 presents the distribution of poverty by other income of the household. The relationship is not straightforward. Normally, the rule of thumb suggests that the poverty level should decrease as income increases. The first two categories of income, which count for the lowest income (R0-100 and R1001-2000), have the highest proportions of poor among them (56% and 57.4%, respectively). Furthermore, 44.8% of households in the income category of R3001-R4000 are poor. Overall, there appears to be no clear pattern of income among poor and non-poor households, because the majority of people seem to be in low categories of income.

Table 4.26: Distribution of poverty by other income of the household

Other_HHY	Non-poor		Poor	
	N	%	N	%
0-1000	37	44.0%	47	56.0%
1001-2000	23	42.6%	31	57.4%
2001-3000	25	73.5%	9	26.5%
3001-4000	16	55.2%	13	44.8%
4001-5000	10	66.7%	5	33.3%
5001-6000	2	100%	0	0%
6001-7000	1	33.3%	2	66.7%
7001-8000	2	100.0%	0	0.0%
8001+	1	50.0%	1	50.0%

Source: Survey data (2013)

Table 4.27 summarises the distribution of poverty by other income of the household in relation to the gender of the household head. It shows that 78.26 percent of households headed by females have other household income of less than or equal to R2000 per month, compared to 53.84 percent of those headed by males. Among these 78.26 percent of female-headed households, 81 percent are deprived, compared to 66 percent of those headed by males in the same category. This means that there is a larger number of female-headed households in the lowest categories of income than the number of male-headed households in the same category.

Table 4.27: Distribution of poverty by other income of the household in relation to the gender of the household head

Other_HHY	MHH				FHH			
	Non-poor		Poor		Non-poor		Poor	
	N	%	N	%	N	%	N	%
0-1000	20	43.5%	26	56.5%	17	44.7%	21	55.3%
1001-2000	16	42.1%	22	57.9%	7	43.8%	9	56.3%
2001-3000	21	77.8%	6	22.2%	4	57.1%	3	42.9%
3001-4000	15	55.6%	12	44.4%	1	50.0%	1	50.0%
4001-5000	9	69.2%	4	30.8%	1	50.0%	1	50.0%
5001-6000	2	100%	0	0%	1	50.0%	1	50.0%
6001-7000	0	0%	1	100%	1	50.0%	1	50.0%
7001-8000	1	100.0%	0	0.0%	1	100.0%	0	0.0%
8001+	1	100.0%	0	0.0%	0	0.0%	1	100.0%

Source: Survey data (2013)

In summary, the above preliminary investigation (descriptive analysis) suggests that there is a relationship between poverty status and some socio-economic and demographic variables. However, it is difficult to confirm significance of this relationship based on the descriptive analysis. The next section presents multivariate analysis of the above relationships, using the model discussed in Section 3.4.2 of Chapter 3.

4.6 DETERMINANTS OF POVERTY

Poverty variation is influenced by both macroeconomic and microeconomic variables. To analyse the correlates of poverty with microeconomic variables it is important to use regression analysis in order to see the impact on poverty of a specific household characteristics, while holding other factors constant. As explained in Section 3.4.2 of Chapter 3, both logistic and linear regressions were estimated.

Table 2.28 presents the logistic regression, while Table 2.29 shows linear regression on the determinants of poverty. The model was estimated using the LPI as a dependent variable and explanatory variables: gender of the household head, household size, age of household head, marital status, household head's education attainment, employment status of the household head, number of household

members who are employed, household head's income and other income of the household. For the logistic regression, an average of the index (1.98) was used to aggregate the sample into poor and non-poor. Before continuing with the interpretation of the linear regression it is important to verify if there is any difference found in its variables significance with those of logistic regression. Both tables show that only three variables (NP_employed, Head_Y, and Other_HH_Y) are significant. Only one variable (NP_employed) is significant at the 1 percent level of significance and the other two (Head_Y and Other_HH_Y) are significant at the 5 percent level of the significance in logistic regression, while all three variables are significant at the 1 percent level of significance in the linear model. The constant in the linear model is significant at the 1 percent level of significant, while it is not significant in the logistic model. As indicated in Table 4.28, the increase in number of people who are working in the household increases the probability of that household falling into poverty, while an increase in the household head's income decreases the probability of poverty. Apart from logistic regression, linear regression can provide additional insights into the interpretation of the determinants of poverty. This section proceeds with a discussion of the linear regression results.

Table 4.28: Logistic regression on the determinants of poverty

Poverty status	**Coef.**	**Std. Err.**	**Z**	**P>|z|**
G_head	.2228146	.4227215	0.53	0.598
HH_size	.0473796	.1065053	0.44	0.656
Age_head	-.0239771	.0190975	-1.26	0.209
Marital_head	.0296372	.4300067	0.07	0.945
Educ_head	-.0373787	.046317	-0.81	0.420
NP_employed	.4335511	.1476627	2.94	0.003*
Head_Y	-.000184	.0000748	-2.47	0.014**
Other_HHY	-.0002841	.0001206	-2.36	0.018**
_Cons	1.045547	1.213671	0.86	0.389
LR chi2(8) = 21.88; Prob > chi2=0.0051; Pseudo R^2 =0.0702				

* Significant at 1% level of significance, **Significant at 5% level of significance

Source: Survey Data (2013)

Table 4.29: Linear regression on the determinants of poverty

LPI	Coef.	Std. Err.	T	P>|t|
G_head	.0130368	.0978041	0.13	0.894
HH_size	.0171236	.02404	0.71	0.477
Age_head	-.0026495	.0043128	-0.61	0.540
Marital_head	.0354015	.0995724	0.36	0.723
Educ_head	-.0066053	.0105504	-0.63	0.532
NP_employed	.1202426	.0325854	3.69	0.000*
Head_Y	-.0000534	.0000161	-3.32	0.001*
Other_HHY	-.0000993	.0000262	-3.79	0.000*
_Cons	2.155013	.2779322	7.75	0.000*
F(8,216) =4.03; Prob > F 0.0002; R-squared =0.1300; Adj R-squared =0.0978				

* Significant at 1% level of significance

Source: Survey data (2013)

The R^2 indicates which proportion of the sample variation in the dependent variable is explained by the model. R^2 of the linear model is only 0.13. This means that only approximately 13 percent of the changes in poverty status of the household can be attributed to explanatory variables used in this study. It appears that there are many other observable and unobservable factors explaining the poverty level of the household besides the ones included in the study. There is no absolute benchmark to show that an R^2 is low or high. A value of 0.2 might be high in some applications but low in others, the same as a value of 0.95 might be low in certain contexts (Verbeek, 2004:21). The significant F-test (F (8, 216) =4.03, Prob > F 0.0002) indicates that all explanatory variables jointly have a statistically significant effect on poverty.

The income of the household head and other household income are important determinants of poverty in the area. Household head income is significant at the 1 percent level of significance (Head_Y, p=0.000), with a negative sign (-0.0000534). This means that the increase of income of the household head by R1 per month decreases the household LPI by 0.0000534, holding other factors constant. In other words, if the household head's income increases by R1000, the average lived poverty index of the household will decrease by 0.0534, holding other factors

constant. For example, a household with an average index of 2.03 is categorised as poor. If the income of the household head is increased by R1000 the new average index will be 1.96, which allows the household to shift from poor to non-poor. The variable of other household income is the combination of other market income of the household, old age pension, child grant from the government, other grants from government, and help from family/relatives/help in kind. The coefficient of other household income is found to be negative and significant at the 1 percent level of significance (Other_HHY, p=0.000). The coefficient of this variable implies that if other household income increases by R1000 the average poverty index of the household will decrease by 0.0993, holding other factors constant. For example, a household with an average index of 2.07 is categorised as poor but if the other household income is increased by R1000 the new average index will be 1.97, which allows this household to shift from poor to non-poor. This finding is in line with previous studies. For example, a study by Armstrong *et al*. (2008:2) found that the expansion of social grants since 1999 has significantly reduced extreme poverty in South Africa.

The results show that the number of people employed in a household is statistically significant (NP_employed; p=0.000) and explains the poverty status of a household. With the positive sign (0.1202426) it confirms the results from descriptive analysis that an increase in the number of people employed in a household increases the level of poverty, *ceteris paribus*. The explanation provided is that when a working adult joins a household, it is an additional earning capacity to the household but also adds to the consumption needs. When the gain in earning capacity exceeds the increase in consumption needs, the household get profits from the addition to its members but if the consumption of that employed person exceeds the contribution brought to the household, the number of employed people in the household leads to poverty. These results are consistent with those found by Widyanti *et al*. (2009:17) in Indonesia where the proportion of working household members had a positively significant effect on poverty.

Gender of the head (1: female and 0: male) of the household head has a positive sign, which means that female-headed households are more exposed to poverty than male. Despite the sign, the coefficient is not significant. From what was seen in

a descriptive analysis, there is a small difference (average of 0.02) between an average index (2.05) of female-headed households and the index of those headed by males (2.03). Thus, this non-significance effect might be attributed to the small difference and small number of female-headed households in the sample (only 30% of the sample). This finding is similar to other studies, such as Sekhampu (2013:150) and Ranathunga (2010:15), who found that the gender of the household head was not significant in explaining the poverty status of the household.

Household size is found not to be significant in this study, even though it has a positive sign. This can normally be interpreted by saying that the large number of household members increases the level of poverty in the household. This is consistent with a study (Verner, 2004:49) where the analysis did not reveal any significant difference between family size and poverty. FAO & UNDP (2002:21) found that household size does not affect the probability of households' poverty. However, many studies found that household size correlates with poverty (Baiyegunhi & Fraser; 2010:2; Klasen, 2000:56; Sekhampu, 2013:151; Woolard *et al*., 2005:890).

The coefficient of the age of the household head is not significant, but negative. This negative relationship was seen in the section of data analysis especially where the percentage of poor households whose heads aged 51 years and more started to decrease. The relationship was not consistent, however, because from the beginning the incidence of poverty was increasing with the age of the head of the household until 40 years, but households with heads aged from 51 and above were seen to be much better than others in terms of poverty. The result is consistent with that of McCulloch and Baulch (1999:13) and Ranathunga (2010:15), but does not coincide with the findings of Sekhampu (2013:151), who reported that there is a significant but positive relationship between poverty status and the age of the household head. The coefficient of the household head's education attainment was negative, but not statistically significant. This suggests that the poverty status might not be fully explained by years of schooling. When people without matric certificate were grouped together, the result showed that poverty decreases in comparison to those with a matric exemption and decreases again in relation to those with a tertiary first diploma. However, those people without a matric exemption comprise 86.2 percent

of the sample. The result is consistent with that of Sekhampu (2013:150). He found that the education level of the head of the household was negatively related to the poverty status, but not significant.

The coefficient of marital status was found to be positively related to poverty, but not significant. The result is consistent with that of Sekhampu (2013:150), who found that there is no statistically significant impact of marital status on poverty. Bourreau-Dubois *et al*. (2003:4) also find that moving in and out of poverty coincides more often with economic related events than with demographic events.

4.7 CONCLUSION

Poverty has numerous dimensions that affect people's lives. South Africa, like the rest of Sub-Saharan African, is faced with high levels of inequality in society, where a large proportion of the population do not have full access to basic necessities. Without access to quality health care and education and income-earning opportunities, the lives of the large majority with inadequate income appears to face a day-to-day struggle to barely survive. Access to basic necessities such as medicines or medical treatment, water, electricity and fuel for cooking have an effect on the quality of life in the South African township of Kwakwatsi.

In general, access to medicines and medical treatment was found to be the biggest challenge to the residents of Kwakwatsi (15 095 people), as they share only one clinic. They struggle to have access to electricity, fuel for cooking, and clean water for home use, subject to households' income constraints. It was found, based on LPI, that almost half (48%) of households in Kwakwatsi were poor because they lack basic necessities. Households identified as poor were much more likely than those who are not poor to experience a lack of access to necessities.

Female-headed households were found more likely to be poorer than male-headed households because, female's poverty incidence was found to be higher (53.62) than male's (45.51). A greater proportion of male-headed households in the area reported to have never experienced shortages of basic necessities, compared to female-headed households. This was found to the majority of basic needs such as food, cash income, electricity and fuel for cooking. A greater proportion of female-headed households than male-headed households have always experienced a shortage of

medicines and medical treatment, fuel for cooking and electricity while a greater proportion of male-headed households, with a slight difference to female-headed households, have always experienced a shortage of food, water for home use and cash income.

Access to basic necessities might depend on demographic and socio-economic factors such as gender of the household head, household size, age of the household head, marital status, household head's education attainment, employment status of the household head, number of household members who are employed, household head's income and other income of the household. Using descriptive analysis, the gender of the household head was found to be related to poverty. Female-headed households have a higher average index for lived poverty (2.05), accompanied with a higher percentage of poverty, compared to male-headed households (2.03). While the proportion of poor kept declining as the number of households members increased in female-headed households; the relationship was the opposite in male-headed households. Households with a larger number of members in male-headed households were found to be less likely to experience poverty than those with a small number of members. However, a higher family size in female-headed households was associated with a higher incidence of poverty.

Overall incidence of poverty increased with the age of the household head until 50 years and above that started to decrease with an increase in age in both male and female-headed households. The relationship between poverty status and household head's education attainment showed that household heads that did not attend or finish secondary education have less access to basic necessities than those who have secondary education and tertiary education in both male and female-headed households. In terms of the relationship between poverty and marital status, a larger proportion of poor households was found in male unmarried household heads compared to married ones. However, the relationship was the opposite in female-headed households, where unmarried household heads were found to be less likely to be poor than those whose heads are married. The majority of married female heads rely on infrequent remittances from their husbands who stayed at their places of work in other parts of the country.

In theory employed people have a lower probability of being poor than unemployed people. On the contrary, households whose head are males and employed were found to be more likely to be poor than those with unemployed household heads. This was found to be the reason that most of the unemployed get social grants. However, households whose heads are females and employed were found to be less likely to be poor than those with unemployed household heads. The addition of a working adult to a household was found to increase the level of poverty in male-headed households while, it reduced poverty in female-headed households. Such relationships occur when the additional working individual consumes more than he/she brings into the household. This can also be explained by other factors such as level of education or sector of employment. Income of the household head and other income of the household were found to be related to poverty in both male and female-headed households. A higher percentage of poor was found to be concentrated in low income earners' households.

The results of the regression analysis on the factors influencing household poverty status showed that the number of household members who are employed, household head's income and other income of the household are significant predictors of poverty in Kwakwatsi. The sign of the number of household members who are employed was found to be positive, which means that the increase in the number of household members who are employed increases the probability of being poor and this relationship was noticed in the descriptive analysis. Income of the household head and other income of the household were found to be negatively related to poverty. In this sense, the income of the household head and other income of the household decrease the probability of being poor.

CHAPTER 5: SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 INTRODUCTION

The aim of the study was to analyse the relationship between gender and poverty in the South African township of Kwakwatsi. A household survey was undertaken during April and March 2013, to achieve this purpose. The problem of poverty is evident in many parts of the world. The research on the relationship between the poverty status and the gender of the household head has been motivated by the idea that the household head is mostly in charge of the sustainable economic well-being of the whole household. Female household heads, in comparison to their male counterparts, tend to be underprivileged in accessing society's economic resources and opportunities. This study aimed at providing empirical findings about the gender difference in poverty among township residents in South Africa. This chapter consists of a summary of the study; it then re-emphasises the major empirical findings of the study and ends with concluding remarks and recommendations.

5.2 SUMMARY

5.2.1 Theoretical background

Poverty is not a simple phenomenon that can be defined by the adoption of a single approach. It captures a wide range of definitions which sometimes cover the partial meaning of poverty or contradictions in the realm of the understanding of this condition. Each approach used in the definition of poverty has its weaknesses and strengths. In order to understand problems caused by poverty, one needs to understand its definitions, concepts, measurement and the areas in which it appears to be deepened. In popular discourse, poverty is generally defined as a lack of income. In a complex sense, however, poverty is described as a multidimensional concept which includes lack of food, sanitation facilities, shelter, health, safe drinking water, education and information. Elucidation of the definition of poverty is vital, because different definitions of poverty involve the use of different indicators for measurement and may lead to the identification of different individuals and groups as poor. Furthermore, different definitions require different policy solutions for poverty alleviation. Although there is no agreement about the definition of poverty, a

worldwide consensus is that poverty alleviation has to be an important goal of policy development.

In this study, the relative and absolute meanings of poverty were provided. Relative poverty is defined as a comparison of the economic position between an individual and other members of society, while an absolute measure of poverty is based on the view that the poor are those who live below their subsistence level. Among the many approaches in understanding poverty are the monetary, capability, social exclusion and participatory approaches. The monetary approach identifies poverty with a shortfall in consumption (or income) from some poverty line. The capability approach focuses on indicators of the freedom to live a valued life. In this thinking, poverty is related to the fact that certain groups of people are persistently excluded or disadvantaged from social, economic and political life. Discrimination on the basis of gender, race, religion, ethnicity or social status usually leads to social exclusion and locks people into long-term poverty traps. Poverty assessment methods do not ignore the beliefs of those poor who said to be poor. The participatory approach emphasises the necessity of taking into consideration local people's perspectives and giving them a greater say in describing their economic conditions and deciding on the measures to be undertaken to alleviate identified inadequacies.

There is ample literature of the best way to assess poverty. Some of the most important contributions towards poverty measurement are the poverty lines, Foster-Greer-Thorbecke (FGT) measures, Sen Index and Lived Poverty Index. A poverty line is a fixed level of income or expenditures needed to afford a basket of goods and services that satisfy the individual or household consumption at a minimum level in order to be out of poverty. The FGT poverty measurement is a family of three indices, namely headcount index, poverty gap index and squared poverty gap. Headcount index measures the proportion of households below the poverty line. This measure is widely used because it is easy to compute and understand, but it does not capture the depth and severity of poverty and does not satisfy the principles of monotonicity and weak transfer axioms. Contrary to the headcount index, the poverty gap index measures the depth of poverty, but it still has the weakness of not capturing the severity of the poverty. On the other hand, the squared poverty gap captures the severity of poverty, but it is criticised in being difficult to interpret and is

consequently not widely used. Sen has proposed an index that sought to combine the effects of the number of the poor, the depth of their poverty and the distribution of poverty within the group. The Sen Index is a combination of three parameters, namely headcount ratio, income gap index and the Gini coefficient. However, the Sen Index cannot be used to decompose poverty into contributions from different subgroups; hence, it is almost never used outside of academic literature.

The link between poverty and inequality was also discussed in this study. Poverty and inequality are different, but inequality matters for poverty. The definition of inequality is based on the whole population, while poverty includes the percentage of the population below a defined poverty line. There are many ways of measuring inequality, among others, the Lorenz curve, the Gini coefficient, the Human Development Index (HDI) and the Human Poverty Index (HPI). Income inequality can be measured by the Lorenz curve and Gini coefficient, while the HDI and the HPI measure human inequality (income, health and education). In addition to this measure of inequality, there are gender inequality measurements which include the Gender-related Development Index (GDI) and the Gender Empowerment Measure (GEM). The GDI measures gender inequality based on achievements by similar dimensions as the HDI, but it takes into account the gap between women and men on each of the three dimensions. GEM is designed to measure whether or not men and women have an equal power in the economic and political spheres.

A review of empirical studies showed that there has been a large increase in the proportion of female-household heads in numerous African countries. This increase was derived from demographic and social antecedents. Gender disproportion caused by war deaths and conflicts leave a surplus of female residents. This number is increased by refugees and sex-specific migration where, women left behind become heads of households in the place of origin, or migrant women create households at the destination. There is also marital breakdown (separation and divorce), widowhood, and out-of-wedlock births. The increase of female-headed households is a leading social preoccupation as it is linked to the high level of poverty among these households.

The literature review showed that female-headed households tend to be poorer than male-headed households because female heads seem to face labour market

disadvantages and time constraints. These disadvantages and constraints emerge from tasks related to the upkeep of the household, which makes it difficult for these female household heads to earn sufficient income. Female heading households are disadvantaged in the following three ways: they experience the burden of poverty; they sometimes become victims of gender discrimination; and they are exposed to the absence of support as they head the household by themselves without a supporting partner. In measuring gender-related poverty, many studies use a simple comparison of income or consumption between female and male-headed households. However, this approach ignores some reasons concerning female welfare. The participatory approach, the capability approach and social exclusion can therefore provide a better assessment of gender differences in poverty. In considering this, in the participatory approach, women sometimes find it difficult to express their views in public and there is no given inclusive list of capabilities or important fields of exclusion which can be applied in gender inequalities studies, this study used the LPI to assess the gender difference in accessing basic necessities.

Poverty in southern Africa was found to be multidimensional and cannot be measured by the affordability of basic necessities without adding other indicators. The LPI captures how frequently a household has gone without basic necessities during the last twelve months instead of focusing on things like income, expenditure, assets or access to services. It measures the incidence of poverty through the following items: food, water, medical treatment, cash income, home fuel and electricity. The LPI was used to estimate the proportion of people who are poor in Kwakwatsi Township and compare the level of poverty between households headed by females and those headed by males. Further analysis compared poverty with the various socio-economic and demographic variables, such as gender of the household head, household size, age of the household head, marital status, household head's educational attainment, number of employed members in the household, income of the household and other income of the household. This information was used to identify the main factors which determine the probability of a household falling below or above the identified poverty line.

5.3 THE EMPIRICAL FINDINGS OF THE STUDY

The survey research method, on the basis of a questionnaire, was used to collect the data from participants at their place of residence. A total of 225 households were visited and the average household size for Kwakwatsi Township was calculated to be 4.39 persons per household. The description based on the gender of the household showed that male-headed households size is slightly higher (4.57) than those headed by females (about 4). Kwakwatsi Township has more females (60.2%) than males (39.8%), but females only account for 30.67 percent of household heads. The reasons for the existence of female-headed households are mostly widowhood (46.39%), migration, where partners on female heading households live in their workplace (24.63%), situations where marriage never existed (13.04%) and marital breakdown (divorce: 11.59% and separation: 4.35%). More than a half (58.65%) of the sampled population is young (under 35 years). People between the ages of 15 and 64 record 71.52 percent and 4.44 percent were those aged 65 years and older.

About 33.1 percent of the sampled population are school-going population and the remaining 66.9% is a combination of people who are no longer at school and those without schooling. The enrolment for grade 12 was found to be 10.09 percent and tertiary education with a first diploma was only 0.31 percent. Of the sampled population, 34.14 percent of those who are not school-going had grade 12, while 35.2 percent had not attained grade 7. Only 0.91 percent was found to have a tertiary qualification. When it comes to employment, about 12.2 percent of the labour force in Kwakwatsi was found to be employed in the formal sector and 72.1 percent in the informal sector. However, the unemployment rate of the sample was 15.7 percent and unemployment rate among the household heads indicates that more males (27.56%) were unemployed compared to females (26.09%). The income distribution of the sampled population showed that the average income of the household head was calculated at R2061.33 per month.

As was mentioned in the earlier section, LPI self-reported the measure of people's capacity to get the basic necessities of life. Participants were asked: "over the past year, how often, if ever, have you or your family gone without enough food to eat, enough clean water for home use, medicines or medical treatment, electricity in your home, enough fuel to cook your food and cash income?" The response options

employed range from 1 (never: no lived poverty) to 5 (always: which reflects a regular absence of all basic necessities) and 6 (= do not know). The high value indicates the great level of lack of access to these basic necessities.

The empirical results indicate that access to basic necessities such as medicines or medical treatment, water, electricity and fuel for cooking have an effect on the quality of life in the township of Kwakwatsi. Access to medicines and medical treatment remains a perpetual challenge for the inhabitants of Kwakwatsi. About 70.2 percent of the population experienced a shortage of medicines or medical treatment several times over the year prior the survey, while 16 percent reported this as a common occurrence. The findings showed that there appears to be a low level of access to electricity and clean water for home use due to household income constraints. In the analysis of poverty, about a half (48%) of the sampled households were found to be poor.

The findings of in this study demonstrated that there appears to be a feminisation of poverty related to the extent and severity of the lack of access to basic necessities. Female-headed households appeared to be poorer than male-headed households, because the poverty incidence of females was found to be higher. A greater proportion of male-headed households than female-headed households reported they had never experienced a shortage of basic necessities such as food, cash income, electricity and fuel for cooking. For example, 82.5 percent of male-headed households had never experienced a shortage of cash income over the past year, compared to 68.12 percent of female-headed households. Furthermore, 5.21 percent among male-headed households have never experienced a shortage of electricity in their home over the year prior to the survey, compared to 2.90 percent of female-headed households. A greater proportion of female-headed households have always experienced a shortage of medicines and medical treatment, fuel for cooking and electricity. For example, 5.80 percent of female-headed households always went without medicines or medical treatment, over the year prior to the survey, compared with 3.85 percent among male-headed households.

The study made use of a range of household characteristics to examine the level of poverty among residents of Kwakwatsi (female-headed households and those headed by males). Descriptive analysis showed that the gender of the household

head appeared to be related to poverty. Female-headed households were found to have a higher average LPI (2.05) and a higher percentage (53.62%) of the poor than those headed by males (index: 2.03; poor: 45.51%). There appeared to be no big difference in the average size of households between poor female-headed households (4.3 people) and those headed by male (4.2 people). The number of household members was found to increase with the poverty status in female-headed households, while there was no effect among male-headed households. Overall, the incidence of poverty (in both male and female-headed households) increased with the age of the household head up to 50 years and started to decrease with an increase in age after that.

The relationship between poverty status and the household head's education level showed that household heads that did not attend or finish secondary education have less access to basic necessities than those who have secondary education and tertiary education in both male and female-headed households. In terms of the relationship between poverty and marital status, 64.3 percent of unmarried male heads was found to be poor, while only 48.1 percent of unmarried female heads were found to be poor. Unmarried male household heads (64.3%) were found to have less access to basic necessities than married ones (43.7%). The relationship was the opposite in female-headed households, where married household heads (70.6%) appeared to have less access to basic necessities than those who are not married (48.1%). It was noted that most of the married female-headed households rely on infrequent or non-existent remittances.

Households whose head are males and employed were found to be more likely to be poor than those with unemployed household heads. Most of these unemployed households were found to be beneficiaries of the various social grants provided by the government. However, households whose heads are females and employed were found to be less likely to be poor than those with unemployed household heads. The addition of a working adult to a household was found to increase the level of poverty in male-headed households, while it reduced poverty in households headed by females. Such relationship occurs when the additional working individual consumes more than what he/she brings into the household. The average income of female heads (R1551.01) appeared to be lower than that of males (R2287.05). Apart

from the head's income, the total income in households headed by females (R3084.35) was consistently lower than that of male-headed households (R4420.13). More male household heads (12.82%) than females (4.35%) earn incomes greater than R4000 per month. Almost 79.7 percent of female household heads earn an income which is less than or equal to R2000. Income of the household head and other income of the household were found to be related to the poverty status in both male and female-headed households. A higher percentage of poor households were found to be concentrated in the households of low income earners.

The results of the regression analysis on the factors influencing household poverty status showed that the number of household members who are employed, household head income and other income of the household are significant predictors of poverty status in Kwakwatsi. The number of household members who are employed was found to be positively related to poverty, which means that an increase in the number of household members who are employed increases the probability of being poor. The positive relationship between employed members and poverty was evident in both descriptive and regression analyses. Income of the household head and other income of the household were found to be negatively related to poverty status. In this sense, an increase in income of the household head and other income of the household decreases the level of poverty (LPI), *ceteris paribus*. Overall, the results indicate that female-headed households are poorer than male-headed households.

5.4 CONCLUSION

Gender is a crucial factor in the analysis and eradication of poverty. On a global scale, the thinking that females experience a disproportionate and rising share of poverty has received attention in research and public forums and has became known as the "feminisation of poverty". This is based on the view that opportunities, constraints, needs and incentives differ by gender. Based on these premises this study investigated the link between poverty status and gender of the household head in a low income township, Kwakwatsi. The study found that more female-headed households in Kwakwatsi appear to be poorer than those headed by males.

The study revealed that female-headed households are more likely to experience a lack of basic necessities than male-headed households. Unemployment of the head was found to be slightly higher for male heads than female heads. Although this suggests that female heads are more usually employed than males, the total number of employed people within a house hold is less in female-headed households compare to those headed by males. Hence, the average total income in female-headed households was found to be lower than that in male-headed households. Female-headed households tend to be deprived of stable and sustainable access to basic necessities. To add to this, a high number of female-headed households work in the informal sector, with low wages and poor working conditions. Few female heads of households in Kwakwatsi Township had a matric exemption compared to the male heads of households. A high level of illiteracy among the female heads makes it difficult for these household head to compete with others in the labour market, especially in the formal sector.

Overall, this study found gender inequalities in accessing basic necessities. However, one cannot conclude without emphasising that, in townships, males tend to have a limited access to basic necessities and are exposed to factors such as low education level, unemployment, low wages and poor working conditions. Women, especially female heads, struggle to survive as their life is marked by limited access to basic necessities and lack of development. It is unfortunate that the majority of women in South Africa, where the Constitution guaranteed socio-economic rights, toil in conditions of deprivation and lack of access to basic amenities. These rights appear to be theoretical and tend to lack practical implementation, especial in low income areas such as townships.

5.5 RECOMMENDATIONS

An understanding of the link between gender and poverty status may assist in developing policies that can have the greatest impact on communities in South Africa. Poverty alleviation cannot focus only on the simple approach of increasing income, but should be understood as a multidimensional problem. The concept of poverty should not only include income or consumption poverty but also deprivation of basic necessities and human poverty. This section attempts to propose some recommendations that can help in reducing socio-economic challenges facing poor

residents of Kwakwatsi, in general, and poor female-headed households, in particular.

5.5.1 Women empowerment through collective action

Opportunities for income generation appear to be rare in Kwakwatsi. The gender gap in payment can be alleviated by empowering women labourers through collective action. The awareness of legal and constitutional rights for women should be increased so that the gender pay gap can be eradicated in low-income townships. Government should support and create a good environment for such co-operative organisations for women. Females in the area can be encouraged to establish employment associations where they can be reached easily by sponsors and relevant government departments. This will make their access to resources, such as credit, adequate training and knowledge, easier. Increased public provision of electricity and water to poor female-headed households or social grants can bring much-needed relief for many female households trapped in poverty.

5.5.2 Improved access to medicines or medical treatment

As discussed in Section 4.3 of Chapter 4, public primary health care centres have suffered poor management, lack of funds and inadequate infrastructure. While access is open for all residents, the quality of health care in public clinics appears to be inadequate. Kwakwatsi clinic serves approximately 15 095 people. This exceeds the guideline of 10 000 people per clinic given by WHO (ANC, 1994).

The South African Department of Health should find means of improving primary health care provision within the area, while waiting for the proposed National Health Insurance (NHI) to be implemented. NHI is a financial support of health care in which every income earner makes fixed and obligatory contributions, and all population get benefits, even low income earners who did not contribute. The present author encourages the implementation of the NHI, as it will help South Africans in the low income category. More specifically, the NHI will assist individuals from female-headed households who are less likely to have enough income or to be members of medical aid schemes than those in male-headed households.

5.5.3 Vocational education and training for better skills

Skills are a key factor for a thriving economy. Thus skill development should be used as one of the long-term solutions to poverty. The competitiveness, employability and productivity of poor individuals may be improved with well-designed and certified vocational training centres, especially for workers in the informal economy. A higher rate of unemployment may be associated with low educational level. This might result in lower bargaining power of the less-educated who are employed, and lower salaries compared to higher-educated individuals. While only 0.91 percent of Kwakwatsi inhabitants have tertiary first diploma qualifications, 45.07 percent of the population, who are no longer at school, have completed grade 10 to grade 12. This shows the availability of people who can be trained by Further Education and Training colleges (FETs). There is a need to build vocational schools in townships. These will prepare people for specific *metier* such as sewing, knitting, catering, hair dressing, to name a few. These colleges should be accommodative even to those who did not complete grade 10.

5.5.4 Public works programmes

The programmes of creating jobs through the financing of public works are one of the ways in which social funds transfer cash to the poor. Public works programmes give individuals with low skills short-term employment at low wages on labour-intensive projects such as road construction and maintenance of streets, cemeteries and general public infrastructure. In order to discourage the non-poor and so that the poor can select themselves into the programme, wages are set at a low level, even lower than the prevailing market wage for unskilled labour (Subbarao, 2003:4). In the present study it was found that 25.5 percent of the population in Kwakwatsi Township work in such a programme and are paid R500 per month. However, employment in these programmes seemed to increase the level of poverty in male-headed households. This shows that the policy of paying people a very low wage needs to be revised. The wage rate in the programmes should be adjusted, to allow beneficiaries to afford basic necessities.

5.5.5 Importance of the informal sector

The voices of informal workers need to be heard and considered in decision-making, with special attention to women. As many as 72.1 percent of the Kwakwatsi population work in informal jobs, and more female heads (55.07%) than male (48.72%) work in informal activities. This shows that women's employment opportunities tend to be concentrated in the informal economy and in low value added activities. Policy-makers should acknowledge the importance of the informal sectors of the economy and contribute to the improvement of productivity, working conditions and social protection, while easing and encouraging formalisation and reducing the risks in these sectors.

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ANNEXURE: QUESTIONNAIRE

Questionnaire #		Date	
House Number		Interviewer	

Please note that the Head of the household should preferably answer the questionnaire

A	BACKGROUND INFORMATION						
1	**What is the position of the respondent in the Household?**	Head (1)	Spouse (2)	Child (3)	Extended family member (4)	Boarder (5)	
2	**Gender of the head of the household**	Male (0)	Female (1)				
3	**How many housing units are on the site**						
4	**Record one main material used for the roof and walls of the dwelling**						
	Bricks	Cement / concrete	Corrugated iron / zinc	Wood	Plastic		
	Cardboard	Tile	Mud	Thatching	Asbestos		
5	**How many people stay permanently on the site**						
4	**What language do you mostly speak at home?**						
	Sesotho	IsiZulu	Sepedi	Tshivenda	IsiNdebele		
	English	IsiXhosa	Siswati	Afrikaans	Other:_____		
7	**How long have you (respondent) stayed in the Kwakwatsi (years)**						

B	HOUSEHOLD COMPOSITION									
	Please provide the following information about your households									
1	Number of people in the household									
2	Composition of members (Code list 2)									
3	Age of each member in years									
4	Sex (Male = 0; female = 1)									
5	Marital Status (code list 5)									
6	Highest qualifications (still at school) (Code list 6)									
7	Qualifications (not at school) (Code list 7)									
8	Employment Status (Code list 8)									
9	Sector of employment (Code list 9)									
10	**(10 – 13 for <u>unemployed</u> only)** Skills of unemployed (list 10)									
11	Duration of unemployment in years									
12	What is the Unemployed doing presently									
	INCOME (Take home pay per month)									
13	Wages/salaries (Formal)									
14	Old Age Pension									
15	Child Grant from Government									
16	Other Grants from Government									

17	Help (family/relatives/help in kind)								
18	Informal activities								
19	Other (Specify)								

C	**LIVED POVERTY INDEX**						
	Over the past year, how often, if ever have you and your family gone without:						
		Never	Just once or twice	Several times	Many times	Always	Don't know
1	Enough food to eat?	1	2	3	4	5	6
2	Enough clean water for home?	1	2	3	4	5	6
3	Medicines or medical treatment?	1	2	3	4	5	6
4	Electricity in your home	1	2	3	4	5	6
5	Enough fuel to cook your food?	1	2	3	4	5	6
6	A cash income?	1	2	3	4	5	6