

**THE RELATIONSHIP BETWEEN POVERTY AND INFLATION IN  
SHARPEVILLE**

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To my lovely daughter Ntiyiso Vun'we Maluleke

and

my mother Mthavini Evelyne Maluleke

In loving memory of my father, Mbhazima Phineas Maluleke

1955 – 1999

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Jeremiah 29:11 “For I know the plans I have for you,” declares the Lord, “plans to prosper you, plans to give you hope and a future.”

## **ABSTRACT**

All over the world, the level of poverty is increasing. In South Africa it is mainly concentrated in rural areas and differs significantly from whether considering race, sex, provinces or community areas. This dissertation studies the relationship between poverty and inflation in Sharpeville by determining the impact of rising prices on the poor households in Sharpeville. The study focuses on three areas, namely the theoretical background of poverty and inflation, the impact of rising prices in expenditure patterns and the relationship to poverty.

There are different approaches in defining poverty. Poverty can either be absolute or relative. For the purpose of this study, poverty is defined as absolute. Thus the study defines individuals as poor due to their inability to attain a minimum material standard of living. This minimal standard of living is normally referred to as the poverty line.

Inflation may be defined in different ways. For the purpose of this dissertation, inflation is defined as the rise in the general price levels over a specific period of time. Changes in expenditure patterns are caused by an increase in inflation.

This study uses the regression model to determine the impact of inflation on poverty in Sharpeville. According to the macroeconomic theory's implication, the same level of inflation on the same basket of commodities has a different level of effect on each household. Accordingly, in this study, all households are assumed to be faced with the same inflation rate.

Household size is positively related to poverty gap squared. This means that the more members there were in a household in Sharpeville the poorer they were. Households with the highest number of members were poorer than those with few members. Statistically, the null hypothesis that there is no relationship between household size and poverty gap is rejected, even at the 1% level of significance.

EXPINFL is negatively related to poverty gap. The correlation matrix confirms the results in the regression analysis. The correlation coefficient between

EXPINFL and PGAP is -0.34467. Although it is relatively weak, the fact that there is a negative correlation confirms that inflation negatively affects poverty.

Finally, the study recommends that government provides more job opportunities for the individuals without any source of income in Sharpeville. The government could also provide business funding to the unemployed individuals to enable them to start their own businesses. This would enable those individuals to create additional employment. In addition, measures should be introduced to determine the effect of inflation on those households who are not employed (that is, not receiving any form of income, not even through any form of grant), but do benefit from some form of feeding scheme administered by either government or non-profit organisations.

### **Key terms**

Poverty, inflation, price, unemployment, Sharpeville, South Africa, poor, headcount index, poverty gap index, HSL, average income, poverty lines, education, labour force, rising prices, Emfuleni, poverty alleviation, average income, expenditure, household income, Eviews, regression, cross-section, poor, cross-section analysis, expenditure, poverty gap, poverty severity gap.

## OPSOMMING

Die vlak van armoede in Suid-Afrika het toegeneem het, net soos in meeste ander lande. Armoede in Suid-Afrika is hoofsaaklik in landelike gebiede. En verskil aansienlik tussen ras, geslag, provinsies en sowel as die gemeenskap gebiede. Hierdie verhandeling / verslag bestudeer die verhouding tussen inflasie en armoede in Sharpeville deur die verhouding van stygende pryse op die arm huishoudings in Sharpeville. Die studie fokus op drie gebiede, naamlik die teoretiese agtergrond van armoede, armoede, en die impak van stygende pryse in die bestedingspatrone en die verhouding tot armoede.

Daar is verskillende benaderings om armoede te definieer. Armoede kan of absoluut of relatief wees. Vir die doeleindes van hierdie navorsing, word armoede as absoluut definieer. Met ander woorde, hierdie navorsing definieer persone as arm as gevolg van hulle onvermoe om 'n minimum metriele standaard van lewe te bekom. Daar word normaalweg verwys na hierdie minimale lewens standaard as die broodlyn.

Inflasie kan gedefinieer word in verskillende terme. Vir die doel van hierdie verhandeling inflasie is gedefinieer as die styging in die algemene prysvlakke oor 'n periode van tyd. Die veranderinge in die bestedingspatrone in inflasie te verhoog.

Hierdie studie word gebruik om die armoede regressiemodel en die impak van inflasie in armoede in Sharpeville te bepaal. Alle huishoudings het gedoen met dieselfde inflasiekoers en word dus ekonometriese analise, nie moontlik nie, aangesien die instrument in die hand, Eviews, aanvaar dat die datastel is in 'n matriks-formaat is.

Die huishoudelike groote is positief met betrekking tot die armoede gaaping kwadraat. Dit beteken dat hoe meer lede in 'n huishouding in Sharpeville hoe armer was hulle. Huishoudings met die grootste aantal lede is armer as dié met 'n paar lede. Statisties, is die geen hipotese dat daar geen verhouding tussen huishoudelike groote en armoede gaping verwerp selfs op die 1%-peil van die betekenis.

EXPINFL is negatief verwant aan armoede gaping. Die korrelasie matriks bevestig die resultate in die regressie-analise. Die korrelasiekoëffisiënt tussen EXPINFL en PGAP (armoede gaping) is -0,34467. Alhoewel dit relatief swak is, is die feit dat daar 'n negatiewe korrelasie bevestig kan word dat inflasie 'n negatiewe invloed op armoede het nie.

Ten slotte, die studie beveel aan dat die regering meer werkseleenthede moet verskaf in die vorm van subsidies aan “township” gemeenskappe. Dit stel die huishoudings in staat om hul eie begin en dit toe te laat om meer werkseleenthede te skep vir ander. Terselfde stel dit die gemeenskappe in staat om die effek van inflasie in hul huishoudings te verlig. Ander maatreëls word ingestel om die verligting van inflasie op daardie huishoudings wat nie werk nie (en geen vorm van inkomste ontvang nie, selfs nie deur enige vorm van subsidies) te bepaal, maar hulle ontvang in die vorm van 'n voedingskema van hetsy die regering of nie-winsgewende organisasies.

### **Sleuteltermes**

Armoede, inflasie, prys, werkloosheid, Sharpeville, Suid-Afrika, swak, koptelling indeks, armoede gaping indeks, HSL, gemiddelde inkomste, armoede lyne, onderwys, arbeidsmag, stygende pryse, Emfuleni, die verligting van armoede, die gemiddelde inkomste, uitgawes, huishoudelike inkomste, Eviews, regressie, deursnit, swak, dwarsnit-analise, uitgawes, armoede gaping, armoede erns gaping.

## **DECLARATION**

I declare that

### **THE RELATIONSHIP BETWEEN POVERTY AND INFLATION IN SHARPEVILLE**

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  
submitted the thesis for a degree at another university

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T.C MALULEKE

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## **LIST OF ABBREVIATIONS**

|        |   |                                                         |
|--------|---|---------------------------------------------------------|
| AD     | : | Aggregate Demand                                        |
| AIDS   | : | Acquired Immune-Deficiency Syndrome                     |
| AS     | : | Aggregate Supply                                        |
| BMR    | : | Bureau of Market Research                               |
| CEAS   | : | Central Economic Advisory Services                      |
| COLI   | : | Cost-of-Living-Index                                    |
| CPI    | : | Consumer Price Index                                    |
| CPIX   | : | Consumer Price Index (excluding mortgage rate exchange) |
| GDP    | : | Gross Domestic Product                                  |
| HEL    | : | Household Effective Level                               |
| HH     | : | Household                                               |
| HIV    | : | Human Immune-Deficiency Virus                           |
| HSL    | : | Household Subsistence Level                             |
| HSRC   | : | Human Science Research Council                          |
| ILO    | : | International Labour Organisation                       |
| ISCOR  | : | Iron and Steel Corporation                              |
| MLL    | : | Minimum Subsistence Level                               |
| PDL    | : | Poverty Datum Line                                      |
| PPI    | : | Producer Price Index                                    |
| SA-PPA | : | South African Participatory Poverty Assessment          |
| SARB   | : | South African Reserve Bank                              |

|          |   |                                      |
|----------|---|--------------------------------------|
| SAWEB    | : | South African Web                    |
| SLL      | : | Supplementary Living Level           |
| STATS SA | : | Statistics South Africa              |
| UNDP     | : | United Nations Development Programme |
| UN       | : | United Nations                       |
| US       | : | United States                        |
| USCO     | : | Union Steel Corporation              |

# **CHAPTER 1**

## **THE PROBLEM AND ITS SETTINGS**

### **1.1 BACKGROUND TO THE PROBLEM**

South Africa emerged victoriously from the oppression of Apartheid after the first democratic government election by all the people of the Republic in 1994. Although the political battle was won, war against poverty and under-development in the country remains a battle (Hirschowitz & Orkin, 1997). Poverty levels in South Africa are high, and have not been greatly reduced since 1994 (Luyt, 2008). The survey by Statistics South Africa in 2011 shows that poverty remains a dominant feature in South African households (Stats SA, 2011). Almost half of the South African population is living below the poverty line today (Naidoo, 2012).

South Africa's image as a political and an economic driving force in the African continent masked the extent of poverty in the country. The majority of the Black population had experienced the most extreme and repugnant form of repression by White rulers in South Africa. The Afrikaner-led National Party instituted a racial segregation policy that was known as "Apartheid" in 1948. Citizens were divided in terms of colour (race) in this policy. Discrimination in the country extended to all aspects of life, including job opportunities, education and health. This discrimination led to a worsening condition of most of the Black community (Makina, 2008). Women, the disabled, the elderly and children were the ones most affected by poverty within the Black community (Anon, 2006).

In South Africa poverty rates differ significantly according to the nine provinces, as well as according to urban or rural area of the country (Armstrong, Lekezaw & Siebrits, 2008:9). As in many other developing countries, poverty in South Africa is clearly differentiated along racial, gender and urban/non-urban divides. Black households not living in urban areas are likely not to have access to the most basic services. In most cases, households in these areas do not have access to electricity, tap-water, flush toilets or telephones. They are also more likely to be poorer than households in urban areas. Black female-headed households in non-urban areas are the poorest households in South Africa. These households' major proportion of expenditure goes to food – mainly grains and cereals (Hirschowitz & Orkin, 1997).

A study by Naidoo (2012) found that the majority of South African households below the poverty line survive on just over R500 a month. Inequality in the country has increased, as the gap between the rich and the poor has continued to grow.

Globalisation has had a huge impact on poverty levels and has also significantly contributed to the increase in inequality in South Africa (Naidoo, 2012). Globalisation is considered to be beneficial for the growth of economy. But there are also many adverse effects of globalization on growth in many developing countries. It increases poverty and worsens the income distribution. On the other hand, positive impacts of globalization have been witnessed in East Asian Countries. These countries integrated with the world economy within a carefully planned framework that was consistent with resource endowment, and as a result economic rewards were shared by the poor in the long-run. It seems that the extent of benefits reaped from economic globalization in any economy depend upon domestic macroeconomic policies, market structure, initial condition of economy, quality of institution and degree of political stability (Neutel & Heshmati, 2006).

Poverty is mainly concentrated in the rural areas of the country, with the highest poverty rates being in the Free State, the Eastern Cape and the Limpopo province). However, high levels of poverty are also experienced in and around urban areas, mostly affecting smaller rural towns, secondary cities and the metropolitan areas (Hindson, Xaba, & Associates, 2003:2). This includes Gauteng, the richest and smallest provinces in South Africa. The province is the hub of South Africa's financial and services sectors and has links to the mining industry (Cross, Kok, Wentzel, Thabela, Weir-Smith, & Mafukidze, 2005:4).

Many poor South African households maintain dual residence or double rootedness as a strategy to find economic opportunities in both rural and urban areas (Hindson *et al.*, 2003:2). In recent years, poverty indicators show that urban areas have less poverty than rural areas in South Africa. This notion has always been predicated on the idea that urban dwellers cannot possibly be worse off than their rural counterparts because they enjoy a higher level of amenities such as electricity and a better infrastructure. However, due to an increase in the influx of people from rural areas in search of jobs and better livelihoods in the country, more and more are ending up in less than satisfactory dwellings without basic social amenities

(Kimemia, 2009). Social grants have brought much-needed relief to many individuals and households trapped in poverty. In recent years, social grants have played a critical role in poverty reduction, but have not solved the poverty problem (Appel, 2008).

Studies such as those by Stats SA (2000) and May (1998) attempted to provide a crude estimate of the extent of poverty in South Africa and yielded results that are at variance with each other. Available estimates with regard to the prevalence of poverty in South Africa range from 45% to 57% depending on the poverty line that has been used. What is also clear from these respective studies is that although they have produced estimates that are at variance, there seems to be a consistent poverty trend with regard to 'where' and 'who' the poor are in South Africa (Mbuli, 2008).

As discussed above, daunting economic problems remain from the apartheid era – especially poverty and lack of economic empowerment among the disadvantaged groups. South Africa's economic policy is fiscally conservative, focusing on controlling inflation and attaining a budget surplus. The government largely follows these prudent policies to deliver basic services to low-income areas and to increase job growth. When doing so, the government must contend with the impact of the global crisis and faces growing pressure from special interest groups to use state-owned enterprises (SAWEB, 2012). South Africa's government has made poverty reduction its main focus since 1994. The quantitative description and analysis in this field has been slow to emerge (Simkins, 2000). Despite the government's main priority of poverty reduction, the research done by Schwabe (2004) indicated that the country could not solve the problems that are related to poverty.

Since the poor include both consumers and sellers of food commodities, a change in the price in either direction will inevitably affect the poor (Cardoso, 1992). Inflation or persistent rise in prices is a concern in the world today. This is due to many reasons. Firstly, the inflation rate in South Africa is higher in recent years. Secondly, inflation in these years coexists with a high rate of unemployment. This is a new phenomenon of inflation and this makes it difficult to control inflation (World Bank, 2007a).

South Africa's inflation rates were higher in the 1970s compared with the 1960s. Inflation had averaged 2.6% per year between 1960 and 1970. According to Mboweni (2000) faster growth could have been expected in the 1970s than in the 1960s, if indeed inflation was good for growth. This did not happen, however – in fact, quite the contrary happened. Economic growth slowed down from 5.7% per year in the 1960s to 3.4% in the 1970s (Mboweni, 2000).

The inflation rate for a specific economy is based on the total amount of money spent on each type of item. This rate tends to influence to a greater degree on the items which the richer people buy. The rich are more able to protect themselves against the effects of inflation than the poor. In particular, the rich are more sophisticated and hence are likely to have better access to financial instruments that may hedge against inflation. The poor may also depend on state-determined income (such as social grants) which is not fully indexed to inflation. Inflation will also directly reduce the real income among the elderly poor, as pensions are often not fully indexed (Easterly & Fischer, 2001).

### **1.1.1 History and geographical area of the study area**

The establishment of towns in the Vaal Triangle economic region includes the Emfuleni municipality (consisting of six townships and two towns) in Southern Gauteng, as well as the Free State's Metsimaholo municipality. This establishment was closely related to the exploitation of coal and the establishment of an iron and steel works by the Union Steel Corporation (USCO) and the Iron and Steel Corporation (ISCOR). New iron and steel plants gave birth to nearby Vanderbijlpark in 1941 and Meyerton later, while one decade afterwards, the chemical giant Sasol created Sasolburg. The discovery of gold, as well as finance and commercial activity in the nearby Witwatersrand also stimulated the economy (Pelupessy, 2000, quoted in Sekatane, 2004:1).

According to Pelupessy (2000) the past economic development was accompanied by the creation of corresponding African labour force reservoirs on the urban boundaries. Evaton, which is the oldest township, was created in 1904; the second township was Sharpeville, created in 1941; Sebokeng in 1965; then Bophelong and Boipatong in the Emfuleni area in 1955; while Zamdela and Refenkgotso appeared

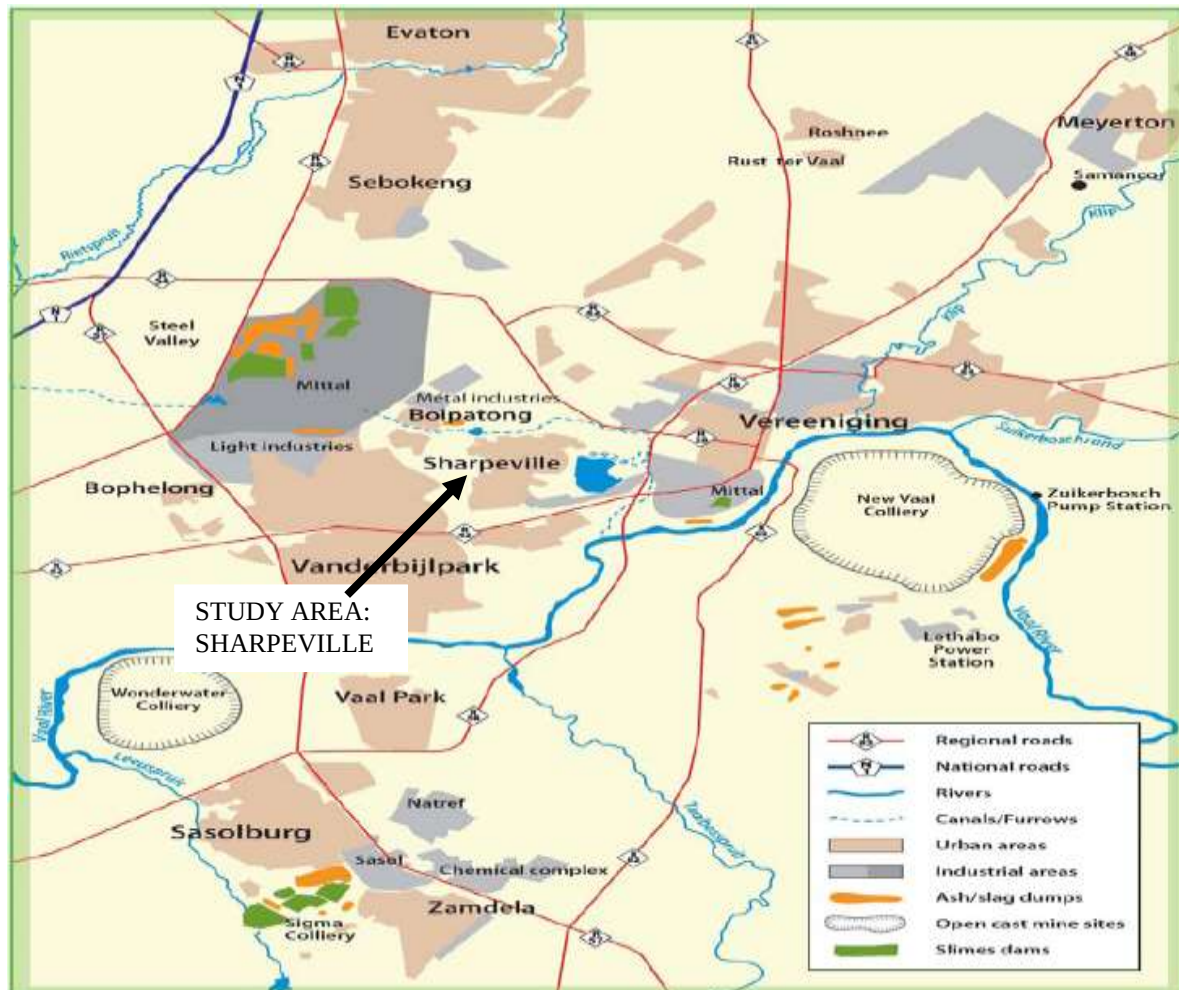
near Sasolburg in the 1970s. The above-mentioned townships were linked through the extensive road system to the sources of labour and inputs, as well as the markets, of the Johannesburg area.

Sharpeville is the second oldest of the seven townships in the Vaal Triangle and was established when 5,466 dwellings were erected (SAWEB, 1996). This township is situated two miles west of the central area of Vereeniging (as indicated in figure 1.1 below), and was named, at the request of the residents themselves, in honour of Mayor John Lillie Sharpe. Sharpe was a man renowned for taking an interest in the welfare of the African people. It was through his efforts that resettlements of Bantu workers in the township were created and acknowledged (Anon, 2009).

Between 1973 and 1983, the Oranje Vaal Administration Board controlled Sharpeville, as well as the other six townships in the Vaal Triangle. The Lekoa municipality, which took over the administration of the township in 1983, was established in accordance with the Black Local Authorities Act of 1982 (SAWEB, 1996). According to Stats SA (2003), an estimated 41 031 households existed in Sharpeville in 2001. Sharpeville had an average of 3.59 persons per household in 2001. Sekatane (2004:61) estimated that 3 609 households in the township were living in poverty in 2004. The average household size in Sharpeville had increased to 3.9 persons per household in 2009 (Hatla, 2010). The level of poverty within the township is highly undesirable.

Emfuleni municipality (of which Sharpeville forms a part) had experienced a relatively high population growth rate (2.85% p.a) in the past because of high inward immigration, especially in the years after the abolition of the Group Areas Act in 1991. From 1996 to 2001, the growth rate in Emfuleni municipality was 1.95% per annum. (Slabbert, 2004:164). According to the Emfuleni local municipality (2012) the total population of Emfuleni municipality slightly decreased from approximately 658 422 in 2001 to 650 86 in 2007.

**FIGURE 1.1 Sharpeville's geographical location**



Source: Adapted from Hallowes and Munnik (2006:97)

## **1.2 THE RESEARCH PROBLEM AND REASON FOR THE STUDY**

According to Motloun (1999:6) most people in South African townships are poverty stricken. Poverty is an international phenomenon. Poverty in South Africa is mainly a result of a very complex history and cannot be understood without reference to the impact of race and racism. The fact that the country overpowered the apartheid political order did not result in a decline or reversal of poverty, nor did it change the resultant social and economic dynamics of exclusion. In fact, there have been subsequent increases in the levels of poverty and inequality in South Africa (South African National Treasury, 2007:17).

A survey undertaken within the Emfuleni municipality in 2003 showed that 51.5% of all Emfuleni households lived in poverty in that year. The same survey showed that

96% of all the poor in the Emfuleni municipality lived in the townships (Sekatane 2004:5). In 1994, about 42% of the townships' households were below their respective poverty lines; by 1999 it was 53%; and in 2003 it was 62%. The survey conducted in 2009 by Hatla (2010:49) showed that an estimated of 26 834 people in Sharpeville lived in poverty. An estimated 37% of the total Emfuleni municipality lived in poverty in 2010 (Stats SA, 2011).

In light of the high unemployment and poverty in South Africa, any increases in food prices would lead to some concern. South Africa's inflation rate has been increasing since September 2001. It has become apparent that the increasing inflation rate in South Africa is largely the result of an increase in food price inflation (Kirsten, Vink, Scheepers, Meyer, Calcaterra & Jenkins, 2002).

The costs of inflation are borne most heavily by the poor (Griffith & Nallari, 2006). The same authors showed that inflation was more likely to be rated a top national concern by the poor in the economy than by the rich. The improvements in the share of per capita income for the poor were negatively correlated with the rate of inflation, as was the percentage decline in poverty and the percentage change in the real minimum wage. On a more practical level, the poor households are the ones that suffer heavily from inflation. They lack the wealth that would enable them to diversify into inflation-proof assets. Furthermore, it is likely that they have no access to the financial system and hold whatever balance that they have in cash that quickly erodes in value as a result of inflation. Due to lack of assets, the poor only have their labour to offer. Therefore they are overly dependent on wage labour and, in the short term, the poor also suffer disproportionately when inflation is increasing rapidly. High inflation tends to lower real minimum wage - and increase poverty (Griffith & Nallari, 2006).

Government intervention and assistance are urgently needed in the alleviation of poverty problems that are facing the nation (Budlender, May, Mokate, Rogerson & Stavrou, 2001). Due to this urgency, the country finds itself faced with the clashing imperatives of promoting equity and alleviating poverty on the one hand, and tightening fiscal screws and the discipline of international factor markets on the other (Kruger, 1998:3). In South Africa, most people agree that there is an urgent need to address and reduce poverty (South African National National Treasury, 2007:17).

The large number of people living in poverty in Sharpeville, as indicated earlier in this section, and the fact that the costs of inflation are borne most heavily by the poor, as outlined above, are the factors around which this case has been built. The case confirms that there is a great possibility of Sharpeville households being negatively affected by high inflation. As the majority of the households are poor, there seems to be an urgent need for the government to implement the necessary measures to curb inflation in and around the Sharpeville area.

### **1.3 OBJECTIVES OF THE STUDY**

The objectives of the study are:

- To reflect the true state of affairs in Sharpeville with regard to poverty and rising prices using data extracted from Hatla (2010), and;
- To determine the relationship between poverty and rising prices in Sharpeville.

### **1.4 METHODOLOGY**

#### **1.4.1 Literature study**

The literature study is carried out through the use of secondary sources, such as textbooks, government publications, the internet and published reports, as well as unpublished information like theses. Primary sources such as newspapers and periodicals are also consulted to obtain information.

#### **1.4.2 Empirical study**

For the purpose of the study, the sample used to determine the relationship between poverty and inflation in Sharpeville was from 2009 survey by Hatla (2010). The study used the regression model (which is a statistical technique that identifies the relationship between two or more quantitative variables) to determine the impact that rising prices have on poverty. According to the Statistical inference principles, for the central limit theorem to be valid, the observations must be at least 30. About 79 poor households from a survey by Hatla (2010) were analysed. The survey was conducted in 2009 by Hatla (2010) using the household survey (see Annexure B)

and the household questionnaires (see Annexure C). The variables that are used to determine the relationship between poverty and inflation in this study are: household size, age, educational levels, income of the household, as well as the amount that each household spends.

#### **1.4.3 Model**

Data extracted from the study by Hatla (2010) is analysed in this study using the regression and correlation analysis in Eviews. The advantage of using Eviews is that it affords a concrete visualisation, which in turn allows the creation/visualisation of new connections and issues that could have been missed. In specific terms, it allows the researcher to make assumptions / conclusions; for example, that “if the model is correct, then it should also be true that inflation has a major impact on poor households; thus inflation has a major impact on the Sharpeville community”.

### **1.5 DEPLOYMENT OF THE STUDY**

The study is divided into five different chapters that investigate the topic in depth. The following is a brief outline of the study.

Chapter 1 (*The problem and its setting*) introduces the research problem, statement of the problem, aims and objectives of the research, importance of the study, research methodology and the deployment of the study.

Chapter 2 (*Theoretical background of poverty and inflation*) describes the impact of increase in prices in terms of inflation. Characteristics of inflation such as the definition, types, and measures, as well as its impact, are also described. The definitions, types, causes, and dimensions of poverty, as well as the different measures of poverty in South Africa, are also discussed in this chapter. The aspects of the relationship between inflation and poverty, as well as the methods in an attempt to control inflation in South Africa, also form part of this chapter.

Chapter 3 (*Empirical research methodology*) describes the methodological procedures used in the study. The purpose is to provide information about the nature and scope of the empirical research methodology used.

In Chapter 4 (*The relationship between poverty and inflation in Sharpeville*) data collected in 2009 by Hatla (2010) is used to determine the relationship between poverty and inflation in Sharpeville. The main variables that are used to determine the relationship between poverty and inflation in the study are discussed in this chapter. These variables are household size, age, education levels, income of the household, as well as the amount that each households spends.

Chapter 5 ( *Summary, conclusion and recommendations*) summarises the findings of the study. Conclusions are drawn from the outcomes. Recommendations to reduce and/or alleviate the effects of rising prices on poverty in Sharpeville households are made in this chapter.

## **CHAPTER 2**

### **THEORETICAL BACKGROUND TO THE STUDY**

#### **2.1 INTRODUCTION**

While access to income or lack thereof, lies at the heart of characterising inequality and poverty in society, poor households' welfare levels are greatly influenced by fluctuations in the real values of whatever incomes they do have access to. This line of enquiry, namely the impact that relative final price movements have on households across the income distribution, is one for post-apartheid South Africa, with its local intellectual origins lying in Kahn (Bhorat & Oosthuizen, 2005).

Characteristics of poverty, such as definitions, types, cause and dimensions as they apply in South Africa, as well as the different measures of poverty, are discussed in this chapter. With regard to inflation, this chapter explores the definitions, types, measures, and impact. Aspects relating to expenditure, such as the expenditure patterns, as well as the distribution of expenditure amongst South African households, are included in this chapter. These aspects of expenditure are described in this chapter since inflation implies a rise in the general price level and thus affects the expenditure patterns of the economy. The relationship between poverty and inflation, as well as the methods designed to control inflation in South Africa are also discussed.

#### **2.2 POVERTY**

According to Hirschowitz, Orkin and Alberts (2000) poverty is perceived by poor South Africans as including alienation from the community, food insecurity, crowded homes, usage of unsafe and inefficient forms of energy, lack of adequately paid and/or secure jobs, and fragmentation of the family. Poverty will be explored in depth in the following sub-sections.

The definitions and types of poverty that exist, the causes of poverty, the different indicators of poverty, and dimensions and measures of poverty are subjects relating to poverty which are discussed in this section.

### **2.2.1 Definition of poverty**

Absolute poverty is a shortage of necessary things such as food, clothing, shelter and safe drinking water, all of which determine the quality of life. It is defined as the inability to attain the minimal standard of living, measured in terms of basic consumption needs, or the income required to satisfy them. It includes lack of access to opportunities such as education and employment. To be poor is to be deprived of those goods and services and pleasures which others may take for granted. Poverty exists in both developed and developing countries. It is manifested in a set of social problems, including homelessness and the persistence of the “ghetto cluster” in developed countries (World Bank, 2009a).

Poverty is seen as a shortage of necessary things, as mentioned above. Defining poverty is still not an easy task, however, because it is a highly contested term. Many works on the subject become so technical that it is very difficult to draw conclusions from them, or to employ them in policy-making endeavours (Mokoena, 2004:15). The important factor regarding definitions of poverty is that the definitions drive policies. The way in which poverty is defined and measured tends to determine the types and direction of policies aimed at reducing it (Sekatane, 2004:24).

Arguments over how poverty should be conceptualised, defined and measured go beyond semantics and academic hair-splitting. The conceptualisation, definition and measurement of poverty are such that the society sees poverty as, or relates poverty to, a mirror image of itself. People often refer to poverty as relating to the way they like things to be in their society. It is therefore vital that the concepts, definitions and measurements of poverty, as well as being theoretically robust, are appropriate to the society to which they are applied (Johanneburg, 2007).

Poverty also has a political aspect, as it relates to the allocation or distribution of resources, and reflects the impact of past and present policy choices. The ways in which politicians, citizens and experts use the concept of poverty have very divergent and diverse roots in social, political and philosophical discourses. Poverty discourse draws on complex and sometimes contradictory underlying assumptions about what people need or are supposed to attain in order to have a minimal standard of living. These discourses argue about the obligations to reduce poverty

among the individuals in the society, about the relation between having and lacking, ill-being and suffering, and also about social life and individual agency. These underlying discussions and narratives are not closely aligned, and this means that the concept of poverty as it exists in ordinary language has an inherent 'messiness' about it (World Bank, 1990). The discourse is often used in different ways to highlight different phenomena, and to serve a wide range of purposes. This is not necessarily a bad thing, however, due to its ability to quickly change the measurements of what makes the concept of poverty so important and powerful in the debates according to which government, social arrangements, institutions and policies are legitimised (Johanneburg, 2007).

From the above information, is it clear that there are diverse factors that are important in any attempt to define poverty. Some of these factors are described below:

- Political and cultural influences: Poverty is not only a social issue, but also a highly political one, over which power and interest groups have a significant influence. Definitions of poverty therefore normally vary geographically and territorially depending on the politics of the area. For example, in sharp contrast with economists like Schumpeter, Karl Marx explained poverty as exploitation of the masses, which lies in the phenomenon of surplus value, linked to the institution of private property (Mokoena, 2001:10).
- In South Africa, the proposition that poverty is a political issue is punctuated by the elevation, in many definitions of poverty, of income and wealth inequalities and disparities resulting from past policies. The Poverty and Inequality Report (May, 1998:1) does not, for example, divorce the notion of poverty from inequality. There seems to be an unquestioned assumption in the report that there exists a cause-effect relationship between the two. The prevailing political climate therefore underpins definitions of poverty. The same may be argued regarding cultural differences. Even within the same political environment, people may be seen as poor or well-off depending on the cultural group to which they belong (Mokoena, 2001:10).
- Deprivation and basic needs: most definitions of poverty are grounded in the idea of a state of deprivation. What the poor are deprived from is not often

clear. What is seen as basic needs or necessities is not clear-cut and may differ from researcher to researcher, and indeed from place to place. What is perceived as a basic need in one area may not necessarily be such in another area.

- According to the ILO (1995), basic needs include two elements. Firstly, they include certain minimum requirements of a family for private consumption, such as adequate food, shelter and clothing, as well as certain household equipment and furniture. Secondly, they include essential services provided by and for the community, such as safe drinking water, sanitation, public transport, and health and education facilities. Streeten (1982), on the other hand, states that “there is nothing yet that could be described as a fully articulated Basic Needs Strategy, even as an adjunct to other strategies”. There is therefore little agreement as to what constitutes basic needs, and therefore a state of deprivation from basic needs (Mokoena, 2001:10).

The above factors are essential to note as they may be indicative of bias in a number of poverty definitions. Many definitions of poverty are based on income or material-based poverty (Atkinson & Bourguignon, 1999:1). This then militates in favour of income-based policies in poverty reduction. There are also other dimensions to poverty.

The South African Poverty Participation Assessment (SA-PPA), which was undertaken in 1998, voiced some important complementary elements of a definition of poverty by the poor themselves. These included alienation from the community and the institutions of kinship, food insecurity, crowded homes, use of basic forms of energy, lack of adequate paid and secure jobs and fragmentation of the family (May, 1998:3).

There are other factors used in an attempt to define poverty, such as:

- Inequality, which refers to the unequal distribution of income across a country, and is measured internationally by the Gini coefficient, on the one hand, and by the income shares of domiciles of households, on the other (Sekatane, 2004:27).

- Vulnerability, which is particularly relevant in reflecting the phenomenon of transient poverty and in targeting those poor “who move in and out of poverty, as the negative outcome of processes of change, whether they be economic, social, environmental or political” (Anon, 2000).

A distinction has emerged between transient and chronic poverty. Jalan and Ravallion (2002:83) define transient poverty as the contribution of consumption variability over time to expected consumption poverty. Chronic poverty, on the other hand, is poverty that remains when inter-temporal variability in consumption has smoothed out. They identify three categories of poor households. The first category is persistently poor; that is, households that are poor at every date for which data is available. The second category does not have a consumption level below the poverty line at every date, but the average consumption is below the poverty line. This category is defined as chronically poor. The third category comprises of the transitory poor, who have an average consumption level above the poverty line, but who are poor sometimes.

The examples of the definitions given above show that poverty may be defined either based on income or non-income dimensions. Although non-economic aspects are understood, they are not easily quantifiable. It is therefore much more convenient to employ income-based measures for ease of measurement. It is nevertheless equally important to attempt the measuring of non-income indicators as well (Schiller, 1984:5-10).

The ILO (1995:20-21) suggests that if poverty is to be alleviated, the following issues are important:

- Enabling poor households to have access to productive assets and employment opportunities and to receive adequate prices and wages.
- Increasing the productivity of the labour and assets of the poor households, through access to capital, education and skills.
- Providing adequate access to a range of basic services, such as agricultural extension services and other types of infrastructure.

- Providing systems of protecting people against the abuse and exploitation of the economically or socially weak.
- Enabling poor households to live in a situation of law and order, as well as being protected against violence (ILO, 1995:20-21).

For the purpose of this study, poverty is defined as the inability to attain a minimum material standard of living. This minimal standard of living is normally referred to as the poverty line. Absolute poverty is determined by the income (or expenditure) necessary to buy a minimum standard of nutrition and other basic necessities (Sekatane, 2004:10). In contrast, relative poverty is defined as the inability of many people to satisfy their needs, while the minority enjoys extreme prosperity (World Bank, 1990)

### **2.2.2 Approaches in defining poverty**

Although defining poverty is a debatable issue, there is common agreement about the degrees of poverty, namely: absolute (extreme) poverty, moderate poverty and relative poverty. These measures are discussed below.

- Absolute poverty: According to World Bank (2009a) absolute poverty refers to a set standard which is consistent over time and between countries. An example of an absolute measurement would be, for example, the percentage of the population eating less food that is required to sustain the human body.
- Relative poverty: In contrast, relative poverty views poverty as socially defined and as dependent on social context – it is a measure of income inequality. Relative poverty is usually measured as the percentage of population with income less than some fixed proportion of median income (Ravallion, 2008). In its narrowest sense, relative poverty is conceptualised in relation to the national distribution of income/expenditure. However, parameters of a concept of relative poverty can range from the notion of ‘making ends meet’ or satisfying a socially acceptable minimum standard of living, to living in a way which is customary or average for society, and beyond that to full participation in society. Each of these parameters precedes and informs the definition process (Johanneburg, 2007).

- Moderate poverty: This refers to conditions of life in which basic needs are met, but just barely. Moderate poverty is generally perceived to be a household income level below a given proportion of average national income (Triegaardt, 2006).

### **2.2.3 Types of poverty**

There are many different types of poverty which can exist in a single society (Feuerstein, 1997:5-6). These types are given below, along with their main causes:

- Inherited poverty: caused by most poor parents usually passing on their poverty to their children. This forms part of an unending poverty cycle (Hatla, 2010:10).
- Instant poverty: caused by sudden hazards and circumstances such as earthquakes, typhoons, drought, bankruptcy, war and refuge movements (Hatla, 2010:10).
- Temporary poverty: caused by some of the same hazards as create instant poverty, but lasting a shorter time; for instance, rains come at the end of drought, loans are obtained or war ceases. This type of poverty does not last forever (Feuerstein, 1997:5-6).
- New poverty: caused by the manifestation of circumstances which may cause individuals or society to be poor. Examples are income/savings of workers and pensioners being eroded by high unemployment, inflation rates, or small cash-crop farmers being ruined by high input costs and low prices of agricultural products (Feuerstein, 1997:5-6).
- Hidden poverty: This can be similar to relative poverty, in that people may have adequate food and shelter, but they lack other basic needs, such as sufficient heat in cold weather or access to health care, and do not report such needs. Also, deprivation of remote populations may be “hidden” (Foster, 1998).
- Endemic poverty: caused by low productivity and a poor resource base, it is reflected by low income, poor nutrition and health, and often affects

smallholders on rain-fed farmlands, displaced banana workers, small-scale fishermen and herders (Johanneburg, 2000).

- Overcrowding poverty: caused by a population being heavily concentrated into areas of high density; for instance, rural Bangladesh (Feuerstein, 1997:5-6).
- Terminal poverty: some people were born poor and are more likely also to die poor. These people are regarded as poor both at the beginning and the end of their lives (Feuerstein, 1997:5-6).

#### **2.2.4 Causes of poverty**

In pre-industrial society, poverty was the norm, as the economy produced far too little to give every member of society a decent standard of living. Causes of poverty are therefore mainly concerned with why insufficient output is produced in the first place, or, if sufficient output is produced, why it fails to reach the poor (World Bank, 2009a).

There are a number of different approaches to understanding the causes of poverty. Different views about the causes of poverty can impact on the types of policies that are used to reduce the levels of poverty (Lever, 2005:3). These causes are grouped into three categories, and are briefly described below:

- individual or internal causes, which explain poverty in terms of the characteristics or life styles of poor people, such as a lack of skills, effort or savings;
- social or external causes, which attribute poverty to unfavourable social and economic forces, such as the inequitable distribution of wealth, exploitation of the poor, lack of education, low wages and absence of social opportunities; and
- Fatalism, including causes of poverty related to bad luck or a determination by inscrutable superior forces, such as God, fate, etc. (Lever, 2005:3).

According to Lever (2005:5) there is a tendency in developed countries to overestimate the power of individual factors as opposed to structural, situational or

external factors, since it is believed that in a democratic society, with equal opportunities for all, individuals are responsible for their own economic situation. In contrast, in developing countries, there is a greater tendency to attribute the causes of poverty to structural or fatalistic factors (Hatla, 2010:11).

Poverty in countries, or its continuation, can be caused by a number of various factors. According to the World Bank (2009a) the factors below have been cited to explain why poverty occurs, although no single factor has yet gained universal acceptance. These factors are described briefly in the sub-sections below.

#### **2.2.4.1 The economic causes of poverty**

- **Recession:** Poverty rates increase in recessions and decline in booms (World Bank, 2009a). During the recession period between 2008 and 2009, nearly one in five children under the age of 18 lived in poor families in South Africa. Children in nine states or jurisdictions were at particularly high risk of poverty in 2009, reflecting a combination of high child poverty in 2008 and very high increase in use of nutrition assistance between 2008 and 2009 (Anbumozhi & Bauer, 2010).
- **Economic inequality:** Even if average income is high, it may be the case that the poverty rate is also high, if incomes are distributed unevenly. However, the evidence on the relationship between absolute poverty rates and inequality is mixed, and sensitive to the inequality index used (World Bank, 2009a). In the South African context, even if absolute conditions of people might be improving, the fact that the upper income groups experience a faster rate of improvement in their conditions creates a sense of relative poverty in lower income groups (Appel, 2008).
- **Shocks to food prices:** the poor tends to be more affected by rising food prices than the rich. Poor people spend a greater portion of their budgets on food than the rich. As a result, poor households, and those near the poverty threshold can be particularly vulnerable to increases in food prices; for example, in late 2007, increases in the price of grains led to food riots in some countries. Poverty can also be affected by decreases in food price, although

they tend to impact a different group – small farmers – than food price increases (World Bank, 2009a).

#### **2.2.4.2 The governance causes of poverty**

Access to drinking water, girls' literacy, and health care are more starkly divergent in the world today. For example, in terms of life expectancy, rich democracies typically enjoy life expectancies that are nine years longer than poor autocracies (World Bank, 2007a). Some of the aspects of the link between governance and poverty are discussed briefly below (World Bank, 2007a):

- The effective governance of governments has a major impact on the delivery of socioeconomic outcomes for poor populations.
- A weak rule of law can discourage investment and thus increase poverty.
- Poor management of resource revenues can mean that revenues from activities such as oil production or gold mining actually lead to a resource curse, rather than such activities lifting countries out of poverty.
- Failure by governments to provide essential infrastructure worsens poverty.
- Poor access to affordable education traps individuals and countries in cycles of poverty.
- High levels of corruption undermine efforts to make a sustainable impact on poverty.
- Welfare states have an effect on poverty reduction (World Bank, 2007a).

The African National Congress (ANC) government has made significant achievements in terms of delivery of services to the poor. This is especially the case with regard to housing, water and sanitation, electricity, health and education. Nonetheless, the results of this increased pro-poor social expenditure by the state are disappointing in terms of reduction of poverty and addressing on going socio-economic problems (Luyt, 2008).

### **2.2.4.3 Demographics and social factors**

The location of a household – its country of residence and its location within the country – has a large impact on potential household welfare. A person's country of residence determines his or her access to services, infrastructure, and markets, and thus determines the return an individual can expect to get on his or her assets. The disparity in rates of poverty and hunger across countries attests to the importance of location characteristics in determining poverty and hunger (Ahmed, Hill, Frankenberger, Smith, & Wiesmann, 2007:58)

Some of the main factors which contribute to poverty, especially in developing countries, are among others: overpopulation and lack of access to birth control methods (population growth slows or even becomes negative as poverty is reduced due to the demographic transition); crime; historical factors, such as imperialism, communism and post-communism; war (including civil war and genocide); and divorce; as well as discrimination of various kinds, such as that involving age, stereotyping, gender and race (World Bank, 2009a).

### **2.2.5 Factors related to poverty**

Factors and causes of poverty are not exactly similar. A cause can be seen as something that contributes to the origin of poverty, while a factor can be seen as something that contributes to its continuation after it already exists (Luyt, 2008). Poverty is sometimes the result of social institutions which contribute to and sustain it. It is also the product of de-industrialisation; meaning that poverty in the economy is sometimes caused by the removal or reduction of industrial capacity or activity in a country or region, especially the removal or reduction of heavy industry or manufacturing industry (World Bank, 2009b).

The factors of poverty contribute to secondary factors such as lack of markets, poor infrastructure, poor leadership, bad governance, under-employment, lack of skills, absenteeism, lack of capital, and others. Each of these factors contributes to the perpetuation of poverty and their eradication is necessary for the removal of poverty (Bartle, 2010).

Listed below are the five major factors of poverty:

- Ignorance: ignorance means having a lack of information, or lack of knowledge. When people in the community have knowledge that might improve the lives of others, but they try to keep the information to themselves (as a strategy of obtaining an unfair advantage), and hinder others from obtaining knowledge, this has a great impact on poverty in the community (Bartle, 2010).
- Diseases: when a community has a high disease rate, absenteeism becomes higher, productivity lower, and less wealth is created, which is a major factor of poverty in the community. The economy is much healthier if the population is always healthy; more so, than if people get sick and have to be treated. Health contributes to the eradication of poverty as it emphasises access to safe and clean drinking water, separation of sanitation from water supply, knowledge of hygiene and disease prevention (Bartle, 2010).
- Apathy: this is the condition when people do not care, or when they feel so powerless that they do not try to change their situations. It occurs when people in the community feel so discouraged that they do not want to improve their lives or achieve a better future. Sometimes, people feel so unable to achieve something that they are jealous of relatives or members of their community who attempt to achieve this – they then seek to bring the attempting achiever down to their own level of poverty (Bartle, 2010). Poverty is also tied to production in an economy, among a group of workers, or within an informal subsistence sector. Production must improve in order to reduce poverty and achieve higher standards of living. Improvement in production will spur economic growth and, in turn, economic growth will produce the resources that are necessary to reduce poverty (Heintz & Jardine, 1998).
- Dishonesty: another major factor that contributes to the continuation of poverty is when resources intended for the use of community services or facilities are diverted into the pockets of individuals in positions of power (Bartle, 2010).

- Dependency: dependency results from being on the receiving end of charity. In the short run, after a disaster, that charity may be essential for survival, but it can contribute to the possible demise of the recipient, and certainly to on-going poverty in the long run. It is an attitude, a belief, that one is so poor, so helpless, that one cannot help one self, that a group cannot help itself, and that it must depend on assistance from outside. This attitude and shared belief are the biggest self-justifying factors in perpetuating the condition where individuals must depend on outside help (Bartle, 2010).
- Health care: Poor access to affordable health care makes individuals less resilient to economic hardship and more vulnerable to poverty. In addition, inadequate nutrition in childhood undermines the ability of individuals to develop their full human capabilities and thus makes them more vulnerable to poverty. Clinical depression leads the poor to be more vulnerable to poverty – clinical depression undermines the resilience of individuals and, when not properly treated, makes them vulnerable to poverty. Similarly, substance abuse, including, for example, alcoholism and drug abuse, undermines resilience and can consign people to a vicious poverty cycle (World Bank, 2009b). Maternal mortality is a one of the areas in which South Africa is making inadequate progress in terms of improvement, although there is a higher incidence of child birth taking place in hospital. It is likely that AIDS related illness, with the largest cause of maternal deaths, is the most important reason for this lack of progress (May, 2010).

These factors are not independent of one another. Disease contributes to ignorance and apathy. Dishonesty contributes to disease and dependency. And so on; they contribute to each other (Bartle, 2010). From the above factors, it is clear that we cannot fight poverty by alleviating its symptoms, but only by attacking the factors of poverty.

### 2.2.6 Poverty indicators

A basket of poverty indicators can be compiled that reflect the different dimensions of poverty and deprivation that have been identified as important (by experts or through consultation). In some respects, each indicator can be seen as being a mini-poverty line: the selection of each indicator requires just as much attention as a poverty line (Gordon, 2005) – for example, is one ‘poor’ in terms of access to water if one has no access to clean running water within a certain distance, or if one does not have a tap with running water in the house? Indicators can be left uncombined, which has the advantage of transparency, but the possible disadvantage of losing an ‘overall message’ regarding levels of poverty. When indicators are combined into indices, it is important that a clear theoretical rationale is used and that statistical techniques are used to address issues such as double-counting, cancellation properties (for example, does being deprived in terms of education, cancel out not being deprived in terms of income?) and explicit and implicit weights (Gordon, 2005).

Poverty can have different meanings to the same group of people or community, depending on the indicators that are used to define it. Despite the wide divergence of the circumstances of the various communities that participated in the SA-PPA, there was a constant view of what poverty meant to the participants (Barberton, Blake & Kotze, 1998:33). The essential indicators (or features) were:

- Alienation from the community: The poor were isolated from the institutions of kinship and community. The elderly without care from younger family members were seen as poor, even if they had a state pension which provided an income that is relatively high by local standards. Similarly, young single mothers without the support of older kin or the fathers of their children were perceived to be poor (Barberton *et al*, 1998:33).
- Lack of adequate paid secure jobs: The poor perceived lack of employment opportunities, low wages and lack of job security as major contributing factors to their poverty (Heinz, 1998).
- Food Insecurity: The inability to provide sufficient or good quality food for the family was an outcome of poverty. Households where children went hungry or

were suffering from malnutrition were seen as living in poverty (Barborton *et al.*, 1998:34).

- Inadequate Housing: The poor lived in overcrowded conditions and in homes needing maintenance (Scott, 2010). Having too many children was seen as a cause of poverty, not only by parents, but by grandparents and other family members who had to assume responsibility for the care of children (Barborton *et al.*, 1998:34).
- Lack of basic services: The poor lacked access to safe and efficient services, such as clean water, electricity and sanitation. The lack of basic services in both urban and rural settlements is a major problem in South Africa (Scott, 2010).
- Fragmentation of the family: Many poor households were characterised by absent fathers or children living apart from their parents. Households may be split over a number of sites (Barborton *et al.*, 1998:33).

### **2.2.7 Measuring poverty**

It might be said that arguing about definitions and measures of poverty is splitting hairs. In a country such as South Africa, the presence of poverty is so obvious that there is no reason to undergo complicated processes to measure and quantify poverty. Instead the country should be concentrating on doing something to eradicate the causes of poverty and alleviate its effects (Johanneburg, 2007).

While the existence of poverty might be all too clear, it is also true that government is directing many billions of rands to social spending. These funds are on spending that is specially directed at poor people – the social grants programme is an example. However, being able to measure aspects of poverty helps ground debate, and is essential as part of the design of policy and government interventions (Johanneburg, 2007). In addition, South Africa is bound by a number of international obligations to both adopt a poverty measure, and to work towards ending the current poverty levels (Bhorat & Van der Westhuizen, 2011). Policies can contribute to effective poverty eradication in the following ways (Johanneburg, 2007):

- By being able to measure poverty one can also begin to map geographically where poverty is more severe and so direct resources accordingly.
- By understanding the various dimensions of deprivations experienced by people living in poverty, government can focus its resources on specific programmes, such as housing, basic services, etc.
- By having a country specific poverty measure, the country would be able to evaluate at appropriate intervals whether the poverty programmes are being effective and are moving people out of poverty and improving their well-being in the short term and over an extended period of time.
- By placing information about the levels of poverty and the resultant inequality in South Africa in the public domain, the country can build a national commitment to eradicate poverty, a commitment that goes beyond government (Johanneburg, 2007).

According to Sekatane (2004:30) the exercise of defining poverty is done in order to be able to employ appropriate tools of measurement. Sekatane (2004:30) added that measuring poverty is not an easy task, due to the fact that poverty measurements as well as the definitions of poverty change dynamically with time.

There are issues that need to be clarified in order to come to an agreeable measure of poverty. These issues are discussed below.

- Individuals and households: Individuals experience poverty and the state of deprivation is essentially an individual matter. Individuals are members of family units or households with whom they share their resources (Alcock, 1997:99). The household and the family concepts are different in that a family is constituted of members with compulsory moral obligations and responsibilities towards one another; on the other hand, a household is a looser concept implying any arrangement of sharing of resources. The household concept is more important in this study, rather than the family concept; this is because the household phenomenon is more relevant in South Africa as the extended family system is widely spread in the country (Sekatane, 2004:30).

- According to Alcock (1997:107) another aspect that needs to be considered is the life-cycle hypothesis of income. An individual receives varying resources over his/her life span. Earlier in life (during childhood) and late in life (during old age and retirement), an individual may find that they depend on other family members more than during early adulthood and middle age. These aspects also play an important role in measuring poverty.
- Income: Many measurements of poverty make use of the concept of income. These should also include 'in-kind or cash benefits' such as student loans, public housing subsidies and business transportation, since omission of such benefits understates income (Sekatane, 2004:31).

The Central Economic Advisory Services (CEAS, 1986:16) includes the following in income:

- salaries, wages, overtime pay and commissions before deduction of pension and taxes;
- net profit from business activities;
- estimated cash value of fringe benefits; and
- any other income, such as interest and dividends.

According to Sekatane (2004:31) some researchers prefer non-income measures of poverty because of the uncertainty involved in the use of income as a measure. Wealth, or lack of it, has also been used as a measure of poverty. Poverty can be divided into qualitative and quantitative measures. According to Mokoena (2001:20) the qualitative measure of poverty is drawn from the experiences of poverty by those individuals actually suffering from it. Such experiences give life and meaning to the seemingly dry and impersonal mathematical tables and graphs. Quantitative measures on the other hand, make use of data independent of feelings and emotions.

The World Bank (1997:1-4) has contrasted the qualitative and quantitative approaches against each other in terms of their inherent characteristics. Some of its findings include the following:

- The philosophical underpinning of the quantitative approach is a positivist paradigm rejected by qualitative approaches.
- Quantitative determination of poverty is done by external surveyors, whereas qualitative approaches, on the other hand, are done by participants and facilitators.
- Geographic coverage of quantitative approaches is wide and national, whereas the qualitative approach is small and in selected communities.

These qualitative and quantitative approaches have difficulties, advantages and disadvantages and are best used together, as they supplement each other (Sekatane, 2004:32). As discussed above, there are different approaches and different methods of measuring poverty. The poverty line, headcount index and the poverty gap are the three most relevant and used methods of measuring poverty in South Africa, and are therefore discussed in the sub-section below.

#### **2.2.7.1 Poverty lines**

According to Gumede (2008:8) poverty lines are defined as the money needed to achieve the minimum level of well-being that is required to not be deemed poor. It is a statistical representation of the value of all the goods and services considered necessary for either an individual or a household. Once this value has been determined as a poverty line, it can be used to analyse the distribution of resources within a country using quantitative survey data. This is done in order to answer how many people in that country fall above the poverty line and how many fall below it (Johanneburg, 2007).

The most commonly used approach to setting poverty lines is the 'cost of basic needs' approach. The other one is the 'food-energy intake' method. The 'cost of basic needs' approach is anchored on the nutritional requirements for good health. As appealing as the approach may appear in theory, it should be noted that the 'cost of basic needs' approach used to determine poverty lines differs from one country to the other, as the food items consumed by the poor differ across the globe (Gumede, 2008:8).

A poverty line is typically constructed as a measure of “income” adequacy, expressed in money terms. It comprises an aggregate cost of a minimum basket of goods, and therefore indicates a required level of household expenditure, but not the actual composition of individual household consumption (Hatla, 2010:17). The use of the poverty lines to measure poverty is an age-old practice. Some of these lines are antiquated and irrelevant in modern societies. Generally, poverty lines show the level of income necessary to provide for minimum subsistence level. They demarcate a group of households whose income or consumption is too low in comparison to that of the general population (Sekatane, 2004:32).

Poverty lines are income and price elastic, i.e. they are adjusted for changes in the median or mean income or consumption of the general population, as well as for changes in the general price level (Sekatane, 2004:32). According to Fisher (1995) as technology progresses and new products are introduced, these products may initially be bought by the upper income households, but generally diffuse to lower income households. This causes income elasticity of those goods. The goods may initially be seen as conveniences, but end up as necessities in modern society. The price elasticity occurs as a result of inflation. Thus poverty lines are normally adjusted upwards with the passage of time, due to technology and inflation.

The term Poverty Datum Line (PDL) was used to determine the subsistence level of poverty in South Africa up until 1973 (Slabbert, 1997:43). Other poverty lines have been introduced since then (Sekatane, 2004:33). South Africa does not have a single official poverty line (Bhorat & Van der Westhuizen, 2011). The examples of poverty lines used in South Africa, as well as their compositions, are showed on Table 2.1. The Minimum Subsistence Level (MLL) is the minimum level at which a non-white family would be able to maintain the health of its members and conform to Western standards of decency. It includes the cost of items such as tax, medical expenses, education and household equipment, in addition to the items included by the PDL. The Supplementary Living Level (SLL) includes items such as recreation, personal care, pension, unemployment, insurance funds, medical aid and burial contributions, plus 30.0% more of the items included by the MLL (Sekatane, 2004:33).

The Household Subsistence Level (HSL) contains the Household Effective Level (HEL). The HSL is defined as an estimate of theoretical income needed by an individual household to maintain a defined minimum level of health and decency in the short-term, and is calculated as the lowest retail cost of a basket of necessities of adequate quality. This 'basket' includes: food, clothing, fuel and lighting, and washing and cleaning material for each individual in a household and for the whole household, and the cost of rent and transport (Sekatane, 2004:34).

**TABLE 2.1: Examples of poverty lines used in South Africa**

| <b>POVERTY LINES COMPARED</b> |                                                                                                                                                                |
|-------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PDL                           | Food, Clothing, Fuel/Lighting, Washing/Cleaning, Rent, Transport                                                                                               |
| MLL                           | PDL plus: Tax, Medical expenses, Education, Household equipment replacement                                                                                    |
| SLL                           | MLL plus: More of each item plus Recreation, Personal care, Pension, Unemployment, Insurance fund, Medical aid, Burial contributions. Approximately MLL+30.0%. |
| HSL                           | As for PDL                                                                                                                                                     |
| HEL                           | HSL + 50.0%                                                                                                                                                    |

Source: Adapted from Mokoena, 2001:22

#### **2.2.7.2 The headcount index and the poverty gap**

The headcount index is defined as the fraction of the population below the poverty line (Sekatane, 2004:10). It measures the proportion of the population whose consumption (or other measures of standard of living) is less than the poverty line. According to the World Bank (1990) a poverty line is selected and households are identified as being poor on the basis of a shortfall in income related to the poverty line. Poor households can be distinguished from non-poor (rich) households by

comparing the total income of a household with the calculated cost of the minimum adequate caloric intake and other necessities of the household. The simplest way to indicate the degree of poverty is to express the number of poor as a proportion of the population. This is called the headcount index (Sekatane, 2004:10).

The headcount index (refer to Annexure A) is adapted from Sekatane (2004:35) to indicate the fraction of the population that falls below their individual poverty lines, and is described by means of the equation:

$$H(Y;Z) = M/N$$

Where:       $H$  = the fraction of households below the poverty line;

$Y$  = the household income;

$Z$  = the poverty line;

$M$  = number of households with incomes less than  $Z$ ; and

$N$  = the total number of households.

Though it is clear from reading the equation that the headcount index is relatively easy to construct and to understand, it ignores differences in well-being between different poor and households. That is, it assumes that all poor people are in the same situation. It does not cover the depth of poverty of the poor (Sen, 1981:24-32). According to Sekatane (2004:35) to make up for this shortcoming, the poverty gap ratio is normally used. The poverty gap measures the average shortfall of the incomes of the poor from the poverty line, while the poverty gap index indicates the average extent to which individuals fall below the poverty line. The poverty gap of an individual household (in monetary terms) can therefore be expressed by the equation (Sekatane, 2004:35):

$$G_i(Y;Z) = Z_i - Y_i$$

Where:       $G_i$  = the income shortfall of a household;

$Y_i$  = the income of a specific household; and

$Z_i$  = the poverty line of a specific household.

The poverty gap index is adapted to be a measure of a specific household as it measures the extent to which the individuals are poor, and it is described by the equation:

$$R_i(Y;Z) = (Z_i - Y_i)/Z_i$$

Where:  $R_i$  = the income shortfall of the household expressed as a proportion of the household's poverty line;

$Y_i$  = the income of a specific household; and

$Z_i$  = the poverty line of a specific household.

In addition to these three equations, there is the squared poverty gap index, which is a weighted sum of poverty gaps (as a proportion of the poverty line), where the weights are the proportionate poverty gaps themselves. This measure takes inequalities among the poor into account (Gumede, 2008:3). For instance, a cash transfer from a poor person to an even poorer person would reduce the index and a transfer from a very poor person to a less poor person would increase the index. However, it is very difficult to read and interpret this index. As a result, in policy terms, it is advisable that these poverty measures presented above are dealt with in totality. According to Gumede (2008:3) each one of these measures has merits and demerits. They are, however, very useful in simplifying the poverty problem being addressed at a particular point in time. As such, these measures of poverty are better calculated and responded to in total, with the clear aim of alleviating poverty.

#### **2.2.7.3 Dependency ratio**

The dependency ratio refers to the ratio of the number of non-income earners that depends on income earners. This tendency is particularly acute in extended family systems. Those who earn income have to support many non-earners so that their incomes are spread so thinly that they can afford very little food, clothes and shelter (Slabbert, 1997:57). According to Sekatane (2004:36) this tendency obviously increases the incidence of poverty. Dependency ratios are calculated by dividing the total number of non-earners by the total earners.

### **2.2.8 Effects of poverty**

According to (World Bank, 2009b) those living in poverty and lacking access to essential health services, suffering hunger or even starvation, experience mental and physical health problems which make it harder for them to improve their situation. The analysis by the World Bank (2009b) shows that one third of deaths (some 18 million people a year or 50 000 per day) are due to poverty-related causes: in total 270 million people in the world, most of them women and children, have died as a result of poverty since 1990. Those living in poverty suffer lower life expectancy. This analysis shows that nearly 11 million children living in poverty die before their fifth birthday every year. According to the analysis, those living in poverty were also found to suffer from hunger - 102 billion people go to bed hungry every night. Poverty also increases the risk of homelessness – there are over 100 million street children worldwide. Increased risk of drug abuse may also be associated with poverty.

Moreover, there is a high risk of educational underachievement for children who are from low-income housing circumstances. Children from low-income households are at a higher risk of not completing school than other children in their grades. They face a risk of being on special placements during the school's hours and even not completing their high school education. Thus, poverty often drastically affects children's success in school. Therefore, children who live at or below the poverty level will have far less success educationally than children who live above the poverty line. Poor children have a great deal less healthcare, and this ultimately results in many absences from the academic year. In addition, poor children are much more likely to suffer from hunger, fatigue, irritability, headaches, ear infections, and colds. These illnesses could potentially restrict a child's or student's focus and concentration (World Bank, 2009b).

Africa's economic malaise is self-perpetuating – poverty engenders more poverty, as well as the warfare, misgovernment, and corruption which created the poverty in the first place. Other effects of poverty have similar consequences. One of the direct consequences of low GDP is Africa's low standard of living and quality of life. Except for the wealthy elites and the more prosperous people of South Africa, quality of life does not correlate precisely with a nation's wealth. Angola, for instance reaps large

sums annually from its diamond mines, but, after years of civil war, conditions there remain poor. Radios, televisions, and automobiles are rare luxuries. Most Africans are on the far side of the digital divide and are cut off from communications technology and the internet. Quality of life and human development are also low (World Bank, 2009b).

According to the relative poverty of countries ranked according to quality of life by the UNDP's 2004 list of countries, African nations dominated the lower reaches of the UN Human Development Index. Infant mortality in African nations is high, while life expectancy, literacy, and education are low. The UN also ranks African states lowly because the continent experiences greater inequality than any other world region. The best educated often choose to leave the continent to seek a better life in the West or the Persian Gulf. In the case of some nations such as South Africa, many Caucasians have left the continent because of employment bias (World Bank, 2007a).

Hunger, disease, and minimal education all describe a person in poverty. Those living in poverty suffer disproportionately from hunger, or even starvation, and disease. Those living in poverty also have a lower life expectancy. According to the World Health Organisation, hunger and malnutrition are the single gravest threats to the world's public health, and malnutrition is by far the bigger contributor to child mortality (World Bank, 2007a).

Health services in poorer countries are largely based on a model for treating acute illness. Such a model in public sector clinics catering for the poor rarely provides for appropriate health promotion initiatives or the educational needs of patients with chronic disease (Bradshaw & Steyn, 2001). According to the World Bank (2009a) nearly 11 million children living in poverty die before their fifth birthday every year, and 1.02 billion go to bed hungry every night. Poverty increases the risk of homelessness. There are over 100 million street children worldwide. Poverty is also associated with increased risk of drug abuse.

According to the Global Hunger Index (World Bank, 2009a) South Asia has the highest child malnutrition rate of the world's regions. Nearly half of all Indian children are undernourished, one of the highest rates in the world and nearly double the rate

of Sub-Saharan Africa. More than half a million women die in pregnancy or childbirth every year. Almost 90% of maternal deaths occur in Asia and Sub-Saharan Africa, compared to less than 1% in the developed world.

Women who have children born in poverty cannot nourish the children sufficiently or provide the right prenatal care. They may also suffer from diseases that may be passed down to the child through birth. Asthma is a common condition which children acquire when born into poverty (World Bank, 2009a).

The findings by Stats SA (2011) reveal that poverty remains a dominant feature in South African households and that the poorer households are the ones which have less access to adequate services to maintain an adequate and healthy standard of living.

#### **2.2.9 The state of poverty in South Africa**

During the country's apartheid past, poverty in South Africa was concentrated mostly among Blacks, as compared to that of the mixed-race 'Coloureds', Indians and Whites (Schwabe, 2004). Widespread poverty and inequality left South Africa in crisis (Naidoo, 2010). The poorest in the country are the Black households, and their situation of poverty had not improve significantly by 2011 (Stats SA, 2011).

The majority of South African citizens are poor, and pervasive inequality exists between men and women, and between Black and White peoples of the country. In recent years, South Africa has witnessed a series of social unrest. Many of this unrest ended in violence by very poor communities who allege poor delivery of basic goods and services (Ozoemena, 2010). According to Nkabinde (2012) inequality in South Africa is so high that even if it remains static and is accompanied by strong GDP growth of around 3.7%, the number of people living in absolute poverty in South Africa is likely to continue increasing. Even if the poverty rate in the country falls, it will not be enough to offset the impact of a rapidly growing population, so the absolute number of people living in poverty would still rise (Nkabinde, 2012).

The majority of South African children are exposed to poverty. More than 11 million children in South Africa live in poverty. Children growing up in deprived communities are less likely to have access to adequate sanitation and water. These children are

two times less likely to be exposed to early childhood development programmes, and are three times less likely to complete secondary education. These children are also seventeen times more likely to experience hunger (Nkosi, 2010).

#### **2.2.9.1 Causes of poverty in South Africa**

Poverty in South Africa is most evident in the lack of opportunities for economically active citizens to earn a wage (Bhorat & Van der Westhuizen, 2011). In addition to this, poverty in South Africa is a result of different reasons / causes. Some of the causes of poverty are discussed briefly below:

- The apartheid era certainly accounted heavily for the high incidence and persistence of poverty in South Africa. As a result of discriminatory planning, spatial isolation and the underdevelopment of townships and former homelands, the poor were left with limited access to productive resources, such as land and capital, and this effectively prevented their exploitation of economic opportunities (Hindson *et al*, 2003:2).
- There is a high degree of racial disparity in South Africa today despite the dispensation of democracy, and this is evident in the levels of the distribution of poverty that are prevalent in the country. Racial discrepancies can be seen in the quality of life of people within the society (Matlhole, 2005:26).
- The increasing level of unemployment since 1994 has been another important factor in the high level of poverty. Over the past few years, employment fell sharply (at least in the formal sector) and retrenched workers faced significant difficulties in finding income earning opportunities, even in the informal sector of the economy (Hindson *et al*, 2003:2).
- Pervasive inequality between men and women, and between black and white people, still exists in South Africa. This led to an increase in the number of Blacks, especially women (Ozoemena, 2010).
- Globalisation has aggravated the negative tendencies, as described above, with regard to the labour market, by limiting the needs of unskilled labour, and

therefore reinforcing the economic and social exclusion of the poor (Hindson *et al*, 2003:2).

- Last, but not least, the Human Immune-Deficiency Virus/Acquired Immune-Deficiency Syndrome (HIV/AIDS) epidemic has become the best ally of poverty. This virus is further reducing the access of the poor to income and assets, and weakening their capabilities, all to the detriment of the productivity and economic growth of the country (Hindson *et al.*, 2003:2). The channels through which the illness affects households are numerous, and it is convenient to distinguish direct impacts from indirect ones. Direct impacts are the consequences in terms of morbidity and mortality. Even if morbidity and mortality are spaced in time, their consequence can be considered to be short-term. Indeed, the duration between the onset of the symptomatic phase of AIDS and death from the illness is about 12 to 18 months in African countries. The direct economic consequences for the household in this regard are a decrease in productivity of those who are ill, consequently leading to a sharp decrease in household income (Marzo & Murtin, 2007).

One can safely conclude that the above causes are all independently important and challenging. These causes therefore need to be addressed as independent issues, but also in connection with poverty.

Food prices are continuously on the rise, causing an increase in global poverty. Poverty, food prices and hunger are inextricably linked. Poverty causes hunger. Not every poor person is hungry, but almost all hungry people are poor. Many people live in hunger and malnourishment because they simply cannot afford to buy enough food due to increase in prices. Hunger can thus be viewed as a dimension of extreme poverty (Pinstrup-Anderson, 2007).

An increase in the general prices level implies a decrease in the purchasing power of the currency. That is, when the general level of prices rises, each monetary unit buys fewer goods and services (the value of money decreases). Thus, consumers can no longer purchase as many goods as they could before with the same amount of money. The effect of inflation is not distributed evenly, and as a consequence there are hidden costs to some and benefits to others from this decrease in the purchasing

power (World Bank, 2007a). For example, borrowers will benefit from inflation, while lenders or depositors who are paid a fixed rate of interest on loans will lose the purchasing power from their interest earnings. Individuals or institutions with cash assets will experience a decline in the purchasing power of their holdings. Increases in payments to workers and pensioners often lag behind inflation, especially for those with fixed payments (World Bank, 2007a). Thus, an increase in the general price level affects the quantity of goods purchased with the same value of money.

## **2.3 INFLATION**

Mboweni (2000) noted that there were broad slowdowns in growth and accelerations in inflation in some parts of the world during the 1970s. South Africa's inflation accelerated to 14.6% per year in the 1980s, and growth fell back to 1.5%. Inflation in South Africa slowed down to about 7.5% between 1993 and 1999, and was reported at 6.1% in February 2012 (Stats SA, 2012). South Africa's inflation rate will be discussed in sub-section 2.3.8.

South Africa experienced eight consecutive quarters of positive growth following the recession in 2008/2009. This growth rate recovery is considered to have been fairly reasonable, when considering the severity of the past recession (Lings, 2011). South Africa's inflation rate averaged a very respectable 4.3% year-to-year for January 2010. The inflation rate was higher from February 2010 to September 2011. However, the Reserve Bank has kept the interest rates on hold, because of the extreme concern about the slowdown in domestic economic activity. The Reserve Bank's aim is to balance the need for higher economic growth against the importance of keeping inflation under control (Lings, 2011).

For the purpose of this study, inflation is assumed to be constant across the households. This is because the inflation rate in a specific period is always the same for all households in the economy, even if it does not affect all households equally.

The theoretical background to inflation is described in this section. The definitions, origins, types, causes, effects, dimensions and measurements of inflation are topics relating to inflation that are also discussed in detail in this section. Finally, methods attempting to control inflation in South Africa are also described in the section.

### **2.3.1 Definition of inflation**

Inflation is defined as the pervasive and sustained rise in the aggregate level of prices for goods and services measured. Repetitive price increases reduces the purchasing power of money and other financial assets with fixed values, creating serious economic distortions and uncertainty (World Bank, 2007b). Inflation results when actual economic pressures and anticipation of natural developments cause the demand for goods and services to exceed the supply available at existing prices, or other available output is restricted by faltering productivity and market place constraints (Geyser & Lowies, 2001:6).

Inflation can be defined as a rise in the general level of prices of goods and services in an economy over a period of time. Inflation can also be defined as a decline in the real value of money – a loss of purchasing power in the medium of exchange which is also the monetary unit of account (World Bank, 2007b). Inflation is thus defined as a rise in the general price level rather than a once-for-all rise in it.

In addition, economists generally agree that high rates of inflation and hyperinflation are caused by an excessive growth of the money supply. Views on which factors determine low to moderate rates of inflation are more varied. Low or moderate inflation may be attributed to fluctuations in real demand for goods and services, or changes in available supplies, such as during scarcities, as well as growth in the money supply. However, the consensus view is that a long sustained period of inflation is caused by money supply growing faster than the rate of economic growth (World Bank, 2007b).

### **2.3.2 The origins of inflation**

Inflation originally referred to the depreciation in the value of the currency. According to the World Bank (2007b) “When gold for instance, was used as currency, gold coins could be collected by the government, melted down, mixed with other metals such as silver, copper or lead, and reissued at the same nominal value. By diluting the gold with other metals, the government could increase the number of coins issued without also needing to increase the amount of gold used to make them. When the cost of each coin is lowered, the government profits from an increase in seignior age” (World Bank, 2007b). This practice would increase the money supply,

but at the same time lower the relative value of each coin. As the relative value of the coins decreases, consumers would need more coins to exchange for the same goods and services. These goods and services would experience a price increase as the value of each coin is reduced (World Bank, 2007b).

Economists categorise three separate factors that caused a rise or fall in the price of goods in the nineteenth century. These factors are a change in the value, or resource costs of goods, a change in the price of money, and currency depreciation resulting from an increased supply of currency relative to the quantity of redeemable metal backing the currency (World Bank, 2007b). The inflation rate for the economy is based on the total money spent on each type of item. The inflation rate effects on the poor in the economy is usually not known, because the poor buy a limited range of goods compared to the rich (Berkley, 2003).

### **2.3.3 Types of inflation**

Inflation is the most important concern of people as it negatively affects their standard of living. This is the reason economies of all countries calls inflation “enemy number one of the people” (Mboweni, 2000). Inflation can be divided into many types, depending upon the reason for causing it. Below are the three major types of inflation (World Bank, 2009b):

- Demand-pull inflation: sellers may simply exploit the opportunity to increase prices because consumers are spending more, and not necessarily because there is a product that is in short supply. This type of price increase in the economy is called demand-pull inflation (Krugel, 2009).
- Cost-push inflation: this is also called “supply shock inflation”. This represents the condition where prices may still rise even though there is no increase in aggregate demand, and it is caused by drops in aggregate supply due to increased prices of inputs (Krugel, 2009).
- Structural inflation: this type of inflation occurs because of changes in structure of economies. Because change in economic structure gives rise to increase in prices, this generates inflationary pressure (World Bank, 2009b).

### **2.3.4 Causes of inflation**

According to World Bank (2007b) inflation results from an increase in the amount of circulating currency beyond the needs of trade; an oversupply of currency is created, and in accordance with the law of supply and demand, the value of money decreases. Any process (for example war) that makes money without offering something in trade for that money causes inflation (Bocco, 2011). A company that makes bombs pays its employees who are able to buy food, cars, houses etc. if something happens to the company and the bombs are destroyed blowing up something in a foreign country, the bomb company and those employees do not offer up something in exchange to the producers of cars, food and houses. These employees could perhaps only offer the joy of knowing that their country polices the world. Inflation may occur when the executives of large companies in the country want more money in their pockets; they keep raising the prices of their goods to cover for such increases in their income (Bocco, 2011). According to the SARB (2008) the increase in the prices of food and petroleum are important drivers of inflation in South Africa. Food prices recorded double digit rates of increase in 2008, with the price of petrol increasing inflation (Mbola, 2008). South Africa is still experiencing increases in food prices and petrol prices today (SARB, 2012).

The increase in the fuel price poses an inflation risk, since it leads to increased transport costs and transport often forms a large part of the production process. There are specific factors and changes in the economy that lead to increased consumer spending or increased input costs (Krugel, 2009). For example, increased input costs may result from a weaker exchange rate. If a producer has to import a large proportion of his inputs and the exchange rate should weaken, it may cause an increase in his input costs. Excessive increases in labour costs can also increase input costs and cause inflation. If the price of water and electricity goes up, inputs' costs may rise and result in inflation (Krugel, 2009).

Historically, there were different schools of thought as to what causes inflation. Most were divided into two broad areas, namely, quality theories of inflation and quantity theories of inflation. The quality theory of inflation rests on the expectation of a seller accepting currency to be able to exchange that currency at a later time for goods that are desirable as a buyer. The quantity theory of inflation, on the other hand, rests on

the quantity equation of money which links money supply, its velocity, and the nominal value of exchange (World Bank, 2007b).

As stated by the World Bank (2007b) the quantity theory of money is widely accepted as an accurate long term model of inflation. Consequently, there is now broad agreement among economists that in the long run, the inflation rate is essentially dependent on the growth rate of money supply. However, in the short and medium term, inflation may be affected by supply and demand pressures in the economy, and influenced by the relative elasticity of wages, prices and interest rates.

Issues concerning whether the short-term effects last long enough to be important are the central topic of debate between Monetarist and Keynesian schools. In Monetarism, prices and wages adjust quickly enough to make other factors merely marginal behaviour on a general trend-line. While, on the other hand, in the Keynesian view, prices and wages adjust at different rates, and these differences have enough effects on real output to be “long term” in the view of people in the economy (Black, Calitz & Steenekamp, 2003:23).

#### **2.3.4.1 The Keynesian view**

According to the Keynesians, inflation begins when the elasticity of supply of output in response to increase in money supply has fallen to zero, or when output is unresponsive to changes in money supply. If there is full employment, and an increase in the money supply, then the condition will be clearly inflationary (World Bank, 2007b).

Keynesian economic theory proposes that money is transparent to real forces in the economy, and that visible inflation is the result of pressures in the economy expressing themselves in prices. Inflation may be caused by an increase in the quantity of money in circulation relative to the ability of the economy to supply – its potential output. When a government, for instance, finances spending in a crisis, such as a civil war, by printing money excessively, often leading to hyperinflation, prices can double in a month or less. Another cause can be a rapid decline in the demand for money (World Bank, 2007b).

Keynesians also propose active counter-cyclical policies to stabilise economic activity. Their proposed policy is working on the demand side of the economy. This means that, in times of recession, governments should reduce taxes, increase their expenditure and boost credit expansion in order to raise the country's aggregate demand and stimulate economic activity. Therefore Keynesians propose that inflationary overheating of the economy should be addressed by higher taxes and lower levels of state spending and credit expansions. Thus, the government should moderate aggregate demand (Black, *et al.*, 2003:25).

#### **2.3.4.2      Monetarist view**

According to the World Bank (2007b) Monetarists believe the most significant factor that influences inflation or deflation is the management of money supply through the easing or tightening of credit. They consider fiscal policy, or government spending and taxation, as ineffective in controlling inflation. According to the Monetarists, inflation has always been a monetary phenomenon – the theory of money simply stated that the total amount of spending in an economy is primarily determined by the total amount of money in existence. This theory begins with the identity  $MV = PQ$  (World Bank, 2007b):

Where       $P$  = is the general price level;

$V$  = the velocity of money in final expenditures;

$Q$  = is an index of the real value of final expenditures;

$M$  = is the quantity of money.

In the above, the general price level is affected by the level of economic activity ( $Q$ ), the quantity of money ( $M$ ) and the velocity of money ( $V$ ). This formula is an identity because the velocity of money ( $V$ ) is defined to be the ratio of final expenditure to the quantity of money ( $M$ ). Velocity of money is often assumed to be constant, and the real value of output is determined in the long run by the productive capacity of the economy (World Bank, 2007b).

Monetarists do not recognise any anti-cyclical or anti-inflationary role for fiscal policy. Their only interest is the financing of whatever budget deficit arises, and particularly

in the extent to which government expenditure is financed by money creation (Black *et al*, 2003:26).

According to the assumptions that the primary driver of the change in the general price level is changes in the quantity of money, with constant velocity, the money supply determines the value of nominal output (which equals final expenditure) in the short run. This means that in practice, velocity is not constant, and can only be measured indirectly, and so the formula does not necessarily imply a stable relationship between money supply and nominal output. However, in the long run, changes in money supply and level of economic activity usually dwarf changes in velocity. If velocity is relatively constant, the long run rate of increase in prices (inflation) is equal to the difference between the long run growth rate of money supply and the long run growth rate of real output (World Bank, 2007b).

The money supply plays a major role in determining moderate levels of inflation, although there are differences of opinion on how important it is. For example, monetary economists believe that the link is very strong; Keynesian economics, by contrast, typically emphasise the role of aggregate demand in the economy rather than the money supply in determining inflation (Black *et al*, 2003:26). On the other hand, some economists disagree with the notion that central banks control the money supply, arguing that central banks have little control because the money supply adapts to the demand for bank credit issued by the commercial banks. This is the theory of endogenous money (World Bank, 2007b).

#### **2.3.4.3 Structuralist view of inflation**

Until the advent of stagflation, the conventional wisdom maintained that high rates of inflation would only occur if unemployment rates were exceptionally low; while the high rates of unemployment would suggest that inflation is proceeding, at worst, at a slow creep (Cornwall, 1981). Unemployment and inflation are two intricately linked economic concepts. There is an inverse correlation between the two terms in the short term. As per this relation, when the unemployment is on the higher side, inflation is on the lower side and the inverse is true as well. This relationship between unemployment and inflation is also known as the Phillips curve. In the short term the Phillips curve happens to be declining curve (World Bank, 2009a).

The Structuralist view that inflation has a positive effect on growth is based on the contention that inflation is a mechanism which induces forced savings. First, the government of a developing country faced with an inadequate fiscal system, may resort to borrowing from the central bank as a way to finance expenditure. Thus, inflationary finance may increase capital formation if the government uses its inflation-tax revenue to increase real investment. As long as private sector investment does not fall one-for-one, inflationary finance may contribute to real growth. Secondly, nominal wages may lag behind prices because of slowly adjusting expectations, sluggish wage bargains, or systemic governmental wage recession. If this is so, then inflation may increase growth in neoclassical fashion by shifting the income distribution in favour of higher saving capitalists and hence increasing savings and growth (Jung & Marshall, 1986).

According to Jung and Marshall (1986) an alternative view is that inflation has a negative effect on growth. This position might be labelled the distortionary inflation view. Inflation may create a variety of output-reducing inefficiencies. First, inflation in a country with a fixed exchange rate will lead to a deteriorating trade balance and to speculative capital. Money supply can only respond passively to changes in money demand with a commitment to convertibility at a fixed exchange rate. If citizens want to hold more domestic currency, they can exchange their foreign currency assets for domestic currency at a fixed rate. If citizens, on the other hand, desire to hold more foreign currency, they have the right to exchange their domestic currency for foreign currency at the fixed exchange rate. A potentially troublesome result, commonly observed in exchange rate based stabilisation, has deterioration in the trade balance and the current account. Since inflation does not stop even when the exchange rate had been fixed, a sharp growth in output while there has been a real exchange rate appreciation would results in deterioration in the trade balance (Awan, Shahbaz, Sher & Javed, 2012).

### **2.3.5 Measures of inflation**

Inflation is usually measured by calculating the inflation rate of a price index. The price index that is usually used to measure inflation is the Consumer Price Index (CPI). The CPI measures prices of a selection of goods and services purchased by a “typical consumer”. The inflation rate is then the percentage rate of change of a price

index over time. The CPI uses data collected by surveying households to determine what proportion of the typical consumer's overall spending is spent on specific goods and services, and weights the average prices of those items accordingly. Those weighted average prices are then combined to calculate the overall price. The World Bank (2007b) added that, to better relate price changes over time, indexes typically choose a "base year" price and assign it a value of 100. Index prices in subsequent years are then expressed in relation to the base year price. The Gross Domestic Product (GDP) deflator is a measure of the prices of all the goods and services included in the GDP (World Bank, 2007b).

The CPI which measures consumer prices, and the GDP deflator which measures inflation in the whole of the domestic economy, are the most well-known measures of inflation. In South Africa, inflation is measured by the increase in the Consumer Price Index (CPI), which is compiled by the staff of Statistics South Africa (Moola, 2008). Every month, Statistics South Africa collects the prices of about 1500 goods and services that make up the average household budget from outlets all over the country. Each item is then given a weight reflecting its importance in the spending pattern of the "average" household (Moola, 2008).

Producer Price Indices (PPI) measure the average changes in prices received by domestic producers for their output. This differs from the CPI in that the price subsidisation, profits, and taxes may cause the amount received by the producer to differ from what the consumer paid. There is also typically a delay between an increase in the PPI and any eventual increase in the CPI. The Producer Price Index measures the pressure being put on producers by the costs of their raw materials. This could be passed on to consumers, or it could be absorbed by profits, or offset by increasing productivity (World Bank, 2007b).

### **2.3.6 Effects of inflation**

The impact of rising food commodity prices on inflation and poverty are of particular concern mostly for developing countries. Although domestic food prices have not risen as rapidly as international prices, the International Monetary Fund (2008) estimates found that between December 2007 and March 2008 the median 12 month rate of price inflation for a sample of 120 countries rose from 10% to 12%

between December 2007 and March 2008, almost twice the median food price inflation rate of 2006 (Lustig, 2009).

An increase in instability in currency exchange prices which is caused by unpredictable inflation has negative impacts on trade. These negative impacts are listed below (World Bank, 2007b):

- Cost-push inflation: rising inflation can prompt employees to demand higher wages, to keep up with consumer prices. Rising wages in turn can help fuel inflation. In the case of collective bargaining, wages will be set as a factor of price expectations, which will be higher when inflation has an upward trend. This also begets further inflationary expectations.
- Hyperinflation: inflation can hurt the ability of the economy to supply if it gets out of control. The purchasing power of the country's currency might fall incredibly fast due to a rise in inflation. Money will no longer fulfil its most basic function, which is a medium of exchange (System, 2007). Hyperinflation affects the profitability and growth of companies in the economy (Whittington, Saporta & Singh, 1995).
- Allocative efficiency: a change in the supply or demand for a product will normally cause its price to change, giving warning to buyers and sellers that they need to re-allocate resources in response to the new market conditions (World Bank, 2007b). On the other hand, when prices are constantly changing due to inflation, genuine price signals get lost in the noise, so agents are slow to respond to them. Then there will be a loss of allocative efficiency as a result.
- Shoe leather cost: high inflation increases the opportunity cost of holding cash balances and can influence people to hold a greater portion of their assets in interest paying accounts. However, since cash is still needed in order to carry out transactions, this means that more "trips to the bank" are necessary in order to make withdrawals, proverbially wearing out "shoe leather" with each trip. Inflation often causes misallocations of resources as consumers seek to protect the purchasing power of their nominal assets (Pakko, 1998).

- Menu costs: firms will have to change their prices often due to inflation, in order to keep up with economy wide changes. Changing of these prices also includes the costs of printing new menus (Gorodnichenko, 2010).
- Austrian School explanation of business cycles: according to the Austrian Business Cycle Theory, inflation sets off the business cycle. This is considered the most damaging effect of inflation. According to this theory, artificially low interest rates and the associated increase in money supply lead to reckless, speculative borrowing, resulting in clusters of malinvestments, which eventually have to be liquidated as they become unsustainable (World Bank, 2007b).

When confronted with rising food prices, governments in developing countries face difficult policy dilemmas, especially when it comes to the prices of basic foods such as rice and corn. One option is to let domestic prices adjust to reflect the full change in international prices, shifting the burden of adjustment to its own private sector. Since food represents a relatively large share of developing countries' consumption baskets, this causes inflationary pressures and hurts the living standards of the poorest consumers (Lustig, 2009:3).

Apart from the negative impact that inflation has on growth and wealth creation, inflation also affects income distribution and worsens inequality in a number of ways. Inflation can have a direct impact on income distribution where wage increases are below the inflation rate, or where marginal tax rates are not adjusted to take account of nominal adjustments in wages. Inflation can indirectly also affect income distribution by slowing output growth and hence job opportunities. The rich can invest their surplus income in assets such as real estate and tradable securities, in many instances benefitting from non-taxed inflation-induced capital gains. The poor are usually not able to do this and may see their savings at banks being whittled away by high inflation (Mboweni, 2000).

In addition, a perhaps even more important argument against an artificial stimulation of the economy through the creation of money, lower interest rates and higher inflation is that in a globalised economic environment this may lead to the withdrawal of foreign capital. If non-residents start expecting depreciation in a country's

currency, they will probably immediately react by withdrawing the funds that they have invested in such a country. Foreign investors can do this easily now that world financial markets are better integrated. If large amounts of capital are withdrawn, this could lead to an exchange rate crisis with a sharp rise in inflation (Mboweni, 2000).

Inflation has many other disadvantages which, all in all, can only lead to the conclusion that the central bank must always carefully monitor economic developments and maintain price and financial stability. No country can afford to move out of line with inflation rates in the rest of the world (Mboweni, 2000).

Besides the above mentioned negative impact, inflation also has some positive (moderate) effects. Some of these effects are (World Bank, 2007b):

- Labour Market Adjustments: Keynesians believe that nominal wages are slow to adjust downwards. This can lead to prolonged disequilibrium and high unemployment in the labour market. Since inflation would lower the real wage, if nominal wages are kept constant, Keynesians argue that some inflation is good for the economy, as it would allow labour markets to reach equilibrium faster.
- Debt Relief: Debtors who have debts with fixed nominal rates of interest will see a reduction in the “real” interest rate as the inflation rate rises.
- The Liquidity Trap: The primary tools for controlling the money supply are the ability to set the discount rate (the rate at which banks can borrow from the central bank), and open market operations, which are the central bank’s interventions into the bonds market with the aim of affecting the nominal interest rate. If an economy finds itself in a recession with already low, or even zero nominal interest rates, the bank cannot cut these rates further in order to stimulate the economy, since negative nominal interest rates are impossible. A moderate level of inflation tends to ensure that nominal interest rates stay sufficiently above zero so that, if the need arises, the bank can cut the nominal interest rate (World Bank, 2007b).
- Tobin effect: A moderate level of inflation can increase investment in an economy, leading to faster growth or at least a higher steady state level of

income. This is due to the fact that inflation lowers the return on monetary assets relative to real assets, such as physical capital. To avoid inflation, investors would switch from holding their assets as money to investing in real capital projects (World Bank, 2007b).

Inflation does not affect everything equally. Oil prices can double while peoples' homes lose value. This makes financial planning more difficult. Inflation is really bad for retirement planning because the target has to keep getting higher and higher to pay for the same quality of life. In other words, savings will buy less. As a result, one will need to save more today to pay for higher priced goods and services in the future. Since everything bought costs more, one will have less left-over income available to save (Amadeo, 2009).

Inflation has another bad side-effect: once people start to expect inflation, they spend now rather than later (Levin, 2004). This is because they know things will only cost more at a later stage. This consumer spending heats up the economy even more, leading to further inflation. This situation is known as spiralling inflation, because it spirals out of control. Inflation is important if a person is holding bonds or Treasury notes. These fixed price assets only give a fixed return each year. As inflation spirals faster than the return on these assets, they become less valuable. As they become less valuable, people rush to sell them, further depreciating their value. As their value becomes lower, the government is forced to offer higher interest rates to sell them at all. This increases mortgage interest rates (Amadeo, 2009).

Most individuals are concerned that inflation may lower their standard of living; that their incomes will not keep up with the rise in prices. This anxiety is particularly pronounced for retirees, who are uneasy about inflation adjustments to their pensions and financial investments. To plan for retirement requires forming expectations of prices in the future. Inflation makes this more difficult because even a series of small, unanticipated increases in the general price level can significantly erode the real (adjusted for inflation) value of savings over time (Levin, 2004). Concern about inflation's costs increases dramatically, as individuals near retirement age (Hellerstein, 1997).

Social Security payments are now indexed to inflation, a policy change that has somewhat reduced the effects of inflation uncertainty on retirement. Thus, anxiety now focuses more on savings in long-term maturities such as bonds and on employer pensions which typically are not indexed. Concern about living standards also stems from the widespread belief that inflation pushes up prices before it pushes up wages. Many people understand prices rise because of inflation, but they seem to attribute nominal increases in their wages more to their own accomplishments than to the feedback effect of inflation (Hellerstein, 1997).

Economists emphasise that inflation can do economic damage by distorting investment and consumption decisions. According to Hellerstein (1997) "Distortions result first from households' and businesses' uncertainty about inflation's future course and second from inflation's interaction with the U.S. tax code". This interaction plays out with owner-occupied housing, where mortgage interest payments are deductible. Inflation then gets built into nominal interest rates; so even a moderate rise in the price level increases this deduction. Housing services that represent part of the return to housing investment, escape taxation. Moderate to high inflation thus prompts households to spend more on housing than would be optimal in a low-inflation environment (Hellerstein, 1997).

When the balance between supply and demand spirals out of control, buyers will change their spending habits as they meet their purchasing thresholds and producers will suffer and be forced to cut output. This can be readily tied to unemployment rate (Levin, 2004). The real estate boom in the 1970s was fuelled in part by inflation-induced distortions. High rates of inflation accelerated home buying by increasing the real, after-tax returns to investment in owner-occupied housing relative to alternative investments. A lag in interest rates reinforced this increase in demand. As house prices in turn began to rise faster than the general price level, people rushed to buy rather than face higher prices later. These distortions in the housing market reverberated across other markets. Distortions in economic activity also may result from the uncertainty that arises about inflation's future course. When inflation is stable, people are more likely to have roughly the same anticipation of its future level. When inflation is highly volatile, by contrast, people have different

guesses, many of which inadvertently turn out to be wrong, some ending up winners and others ending up losers (Hellerstein, 1997).

### **2.3.7 Methods in an attempt to control inflation**

There are a variety of methods that have been used in an attempt to control inflation. Two common methods are discussed below:

#### **2.3.7.1 Monetary policy**

According to Lustig (2009) in order to eliminate inflationary pressures, monetary authorities have two options, namely, either to accommodate the price increases as a one-time spike in the rate of inflation, or to stick to the inflation target through tight monetary policy.

In South Africa, the main instruments of monetary policy are money supply and interest rates. For the period from 1986 onwards, interest rates were relatively stable and in real terms had been negative since the 1970s. Interest rates were therefore not intensively used as instruments of monetary control during the period. Instead, various forms of credit ceilings were used to bolster the authorities' control over the monetary aggregates (Akinboade, Niedermeier, & Siebrits, 2001). The direct controls were ineffective instruments for curbing money supply growth and for preventing the rise in inflation. Moreover, the controls had a distorting impact on measured money supply growth as disintermediation became pervasive (Akinboade, *et al.*, 2001).

As was the case in many other countries, South Africa experienced serious problems with monetary targeting, including difficulty in controlling the money supply. The targets were seldom met, and the discrepancies between guidelines and actual money supply growth increased sharply in the 1990s as South Africa's reintegration into the international financial system accelerated. Furthermore, the relationship between money supply growth and ultimate policy objectives proved to be highly unstable (Akinboade, *et al.*, 2001). The decision to adopt formal inflation targeting was then taken in 1999 (World Bank, 2007b).

The primary tool that is commonly used to control inflation today is monetary policy. Most central banks are tasked with keeping the federal funds lending rate at a low

level: normally to a target rate around 2% to 3% per annum, and, within a targeted low inflation range, somewhere from about 2% to 6% per annum (World Bank, 2007b). In addition, according to the World Bank (2007b) central banks such as the U.S Federal Reserve can affect inflation to a significant extent through setting the interest rates and through other operations. High interest rates and slow growth of the money supply are the traditional ways through which central banks fight or prevent inflation, though they have different approaches. For example, some follow a symmetrical inflation target, while others only control inflation when it rises above the target, whether express or implied. South Africa's recent adoption of inflation targeting increases the need for good forecasting models of inflation and models for understanding the transmission mechanism (Aron & Muellbauer, 2000).

Monetarists' insist on increasing interest rates (slowing the rise in the money supply, monetary policy) to fight inflation. Keynesians on the other hand emphasise reducing demand in general, often through fiscal policy, using increased taxation or reduced government spending to reduce demand, as well as by using monetary policy. Supply-side economists advocate fighting inflation by fixing the exchange rate between the currency and some reference currency such as gold. This would be a return to the gold standard. All these policies are achieved in practice through a process of open-market operations (World Bank, 2007b).

### **2.3.7.2 Fixed exchange rates**

Under a fixed exchange rate currency regime, a country's currency is tied in value to another single currency or to a basket of other currencies (sometimes to another measure of value, such as gold). A fixed exchange rate is usually used to stabilise the value of a currency in relation to the currency to which it is pegged. It can also be used as a means to control inflation. However, as the value of the reference currency rises and falls, so does the currency pegged to it (World Bank, 2007b). This essentially means that the inflation rate in the fixed exchange rate country is determined by the inflation rate of the country to which the currency is pegged. In addition, a fixed exchange rate prevents a government from using domestic monetary policy in order to achieve macroeconomic stability (World Bank, 2007b).

The determination of exchange rates can either be left to market forces or carried out administratively by the monetary authority of the country. A country can adopt a freely floating regime where the exchange rate is allowed to be determined entirely by the market force. In this case, the authorities do not intervene directly in the currency market in order to influence the exchange rate, but only do so indirectly by applying other policy measures to influence the country's exchange rate (Van der Merwe, 2008).

Issues related to exchange rate management are amongst the most important concerns of the debate on economic reform in South Africa (Aron, Elbadawi & Kahn, 1997). Most countries around the world had currencies that were fixed to the US dollar. This limited inflation in those countries, but also exposed them to the danger of speculative attacks. However, this broke down in the early 1970s, when countries gradually turned to floating exchange rates. Then, some countries reverted to a fixed exchange rate as part of an attempt to control inflation in the latter part of the 20<sup>th</sup> century. This policy was used in many countries in South America in the latter part of the 20<sup>th</sup> century (World Bank, 2007b).

It is clear from the above two methods that, in order to curb inflation, economies thus need to fill the gap between AD and AS. To increase AS is the best tool which can be used. By increasing AS, they either need to increase the production capacity of all current production units to build new production plants. As it is not possible to meet the gap between AD and AS in the short run, the economies of the countries must focus on decreasing liquidity by reducing money supply from the market. For, by decreasing cash reserve ratio, repo rate and reverse repo rate, liquidity from the market would be drained (World Bank, 2007b).

According to Prinsloo (2010) a fixed exchange regime would not be a solution for South Africa, as this would be hard to implement and would carry a range of economic costs. This regime would require South Africa to give up its monetary sovereignty and adopt the same monetary policy stance to the country whose exchange rate is being targeted, even if it is not appropriate for domestic economic conditions (Prinsloo, 2010).

### **2.3.8 South Africa's inflation rate**

According to Denning (2008) some South Africans worry that this country is headed in the same direction as Zimbabwe. The cost of living is low in South Africa, but it is going up just as it is everywhere else, as the retail price of petrol and diesel continuously go up (Lehohla, 2011). According to the SARB (2012) most international commodity prices remained high in 2011, supported by the generally stronger growth outcomes in emerging-market economies, supply constraints and geopolitical tensions. This was reflected in food and energy prices which, in turn, contributed to upward pressure on inflation in 2011. In early 2012, oil prices surged further as tensions around Iran flared higher.

The South African Reserve Bank remains concerned about the impact of rising oil and food prices on the outlook for inflation (SARB, 2012). On average, prices increased by 0.6% between December 2011 and January 2012 up to February 2012. These prices then increased by 1.1% between February 2012 and March 2012 (Stats SA, 2012). The cost of basic food increased by R54.78, which is 14.3% in nominal terms from January 2011 to January 2012. The cost of the food basket expressed as a share of the average monthly income of the poorest 30% of the population increased from 33.9% in January 2011 to 38.7% in January 2012 (Thabethe, Vermeulen, Joubert, Jooste & Phahlane, 2012).

There are still some positive risks with regard to South Africa's inflation rate. These risks include administered prices, while the latest round of wage agreements in the country could also reflect in a broadening of inflation. The extent to which these price pressures will impact on inflation will be heavily influenced by the strength of the domestic economy, as well as the Rand exchange rate (Lings, 2011). However, the strength of the domestic economy is currently slowing down and is creating less opportunity for companies to pass on cost pressures (Lings, 2011).

The South African inflation rate created many concerns, especially during the recession period, which have had a huge effect on most South African consumers. South Africa's inflation rate has decreased significantly, when comparing the figures between January 2008 and March 2012 (as illustrated in Table 2.2 below). From 1981 until 2010, the country's average inflation was 10.0%, reaching a historical high

of 20.80% in January 1986 and recorded low of 0.10% in January 2004 (Stats SA, 2012). The inflation rate in South Africa was reported at 3.70% in January 2011, and was reported at 6% in March 2012. The 6% in March 2012 was 0.1% of a percentage point lower than the corresponding annual rate of 6.1% in February 2012 (Stats SA, 2012). The provinces in South Africa with an annual inflation rate lower than or equal to headline inflation in March 2012 were Gauteng at 5.8% and Western Cape at 5.5%. The provinces with an annual inflation rate higher than the headline inflation were Northern Cape (7.7%), Eastern Cape (6.8%), KwaZulu-Natal (6.6%), Mpumalanga (6.%), North West (6.5%), Limpopo (6.5%) and Free State (6.4%) (Lehohla, 2012).

Table 2.2 below illustrates South Africa's inflation rates from January 2008 to March 2012. The table shows that between January 2008 and January 2011 South Africa reached the highest inflation rate in July 2008 at 13.70% and the lowest in September 2010 at 3.20%. The inflation rate of 6.3% in January 2012 was 0.2 of a percentage point higher than the corresponding annual rate of 6.1% in December 2011, and the 6.1% in February was also 0.2 percentage point higher than the corresponding rate of 6.3% in January 2012.

**TABLE 2.2 South Africa's inflation rate from 2008 to March 2012**

| Year | Jan  | Feb  | Mar   | Apr   | May  | Jun  | Jul  | Aug  | Sep  | Oct  | Nov  | Dec  |
|------|------|------|-------|-------|------|------|------|------|------|------|------|------|
| 2012 | 6.3  | 6.1  | 6.0   |       |      |      |      |      |      |      |      |      |
| 2011 | 3.70 | 3.70 | 4.1   | 4.2   | 4.6  | 5.0  | 5.3  | 5.3  | 5.7  | 6.0  | 6.1  | 6.1  |
| 2010 | 6.20 | 5.70 | 5.10  | 4.80  | 4.60 | 4.20 | 3.70 | 3.50 | 3.20 | 3.40 | 3.60 | 3.50 |
| 2009 | 8.10 | 8.60 | 8.50  | 8.40  | 8.00 | 6.90 | 6.70 | 6.40 | 6.10 | 5.90 | 5.80 | 6.30 |
| 2008 | 9.20 | 9.80 | 10.60 | 11.10 | 11.7 | 12.2 | 13.5 | 13.7 | 13.1 | 12.1 | 11.7 | 9.50 |

Source: Adapted from Statistics South Africa, 2012

### **2.3.8.1 Causes of Inflation in South Africa**

Salary and wage increases in excess of productivity growth, inadequate competition, tax increases and imported inflation had an effect on inflation in South Africa (Akinboade, *et al.*, 2001). Moore and Smit (1986) emphasised that wage increases have had a powerful impact on inflation in South Africa. Wage increases contributed to the structural acceleration and cyclical upward movements of inflation rate. Inflationary impact was seen in rising import prices, intersectoral productivity differences not reflected in relative levels of remuneration and market distortions, such as administered prices, markets characterised by low levels of competition and increases in indirect taxes. Fiscal and monetary factors had contributed to cyclical movements in inflation, but had not been major determinates of its secular upward trend (Akinboade *et al.*, 2001). Changes in labour costs, largely driven by inflation expectations, were crucial elements influencing prices in South Africa. The cost of imported goods had also been identified by Pretorius and Smal (1994) as another important variable in inflation.

Oil and food prices are the main risks to the inflation outlook in South Africa (SARB, 2012). During September 2011, there were a number of significant increases in CPI in South Africa. The first was the scheduled increase in electricity prices, which rose

by 16%. The annual adjustment in electricity tariffs at the municipal level were implemented in June 2011. Another factor was an 8.7% increase in water cost, which pushed the annual rate of inflation for water up to 9.2%. Together, these two factors added 0.7% points to the monthly change in inflation. In addition to this, there was also a 0.6% increase in food inflation, adding 0.1% points to the monthly change in CPI (Lings, 2011). In January 2012, South Africa's annual inflation quickened to 3.7% (SARB, 2012).

### **2.3.8.2 Policy implications of inflation in South Africa**

Since 2007, a spate of generally unpopular interest rate hikes in South Africa has placed the SARB under increasing pressure. Those consumers who feel the pinch of rising credit costs due to inflation increases criticise the central bank for pursuing its mandated forward-looking and rules-based monetary policy of inflation targeting. On the other hand, politicians advocate the abandonment of inflation targets for short-term job creation – hence gaining more votes (Davis, 2009).

According to Akinboade *et al* (2001) it is very important to note that inflation in South Africa is largely structural in nature and that the monetary authorities have limited control over the main determinants thereof. This suggests that it will be difficult to achieve the objective of reducing inflation to the levels prevailing in the country's main trading partners. Inflation reduction is likely to be particularly slow and costly in terms of output and employment, if pursued exclusively by interest rate manipulation continuously counteracted by depreciation of the exchange rate and wage increases in excess of productivity growth (Akinboade *et al.*, 2001).

Possible alternatives to South Africa's monetary policy framework of inflation targeting include targeting of a monetary aggregate or the nominal exchange rate. The country's results indicate that the variables targeted by both these frameworks are important determinants of inflation in South Africa. However, Jonsson (1999) argues that neither of these frameworks is appropriate in the South African context. Monetary targeting is unlikely to have the desired effect on inflation because of the monetary authorities' limited ability to control the monetary aggregates; moreover, such a framework will lack credibility in view of its earlier failure in South Africa.

Nominal exchange rate targeting is likely to result in wide swings in interest rates, inefficient output stabilisation and regular speculative attacks on the rand. In many respects, inflation targeting is also a limited framework for monetary policy in South Africa. In common with the other two frameworks, it relies strongly on the interest rate as an instrument to fight inflation, and has no direct influence on the crucial labour costs variable in the inflation equation. However, its greater transparency and more explicit focus on the reduction of inflation may eventually exert stronger downward effects on inflation expectations than those of alternative frameworks (Akinboade *et al*, 2001).

In 2009, the Reserve Bank increased the interest rate to control exogenous price factors. It did so, however, with the intention of controlling the second round effect of inflation expectations, where rising inflation (in this case caused by exogenous factors) has the effect of creating an expectation of continued rising inflation which people automatically build into their future pricing structures – thereby affecting continued inflation based on perceived inflationary pressures rather than real price pressure (Davis, 2009). In conclusion, the interest rate remains the principal instrument of monetary policy in South Africa, despite being subject to long outside lags (since interest rate adjustments only affect inflation rate after nine quarters).

## **2.4 INFLATION AND THE POOR**

According to the World Bank (2007b), inflation is an autonomous occurrence that is impacted by money supply in an economy. The interest rate is used by the central governments to control money supply and, consequently, the inflation rate. When interest rates are high, it becomes more expensive to borrow money and savings become attractive. When interest rates are low, banks are able to lend more, resulting in an increased supply of money (Davis, 2009). According to Economy Watch (2010) alteration in the rate of interest can be used to control inflation by controlling the supply of money: a high or increase in interest rate influences expenditure patterns, as consumers and businesses shifts from borrowing to savings mode.

People who are poor can only afford a limited range of goods. To many people, the price of maize, rice or wheat is what matters, not the price of other goods or services

in the economy. It is traditional in economics to treat the overall inflation rate as an indicator of price rises for everyone (Berkely, 2003). The answers to the questions of whether rich or poor suffer most from inflation may well differ among economies. As the potential effects of inflation on the economy do not lead to a clear presumption that it is the poor who are hurt relatively more by inflation, especially because so many effects of inflation come through complicated details of the tax system, including capital taxation (Easterly & Fischer, 2001).

The effects of inflation on the incomes of the poor are more likely to differ between cyclical and longer-term perspectives. In the short run, an increase in (unanticipated) inflation will be associated with a decline in unemployment; that may well relatively benefit the poor. However, in the long term, higher inflation cannot permanently reduce unemployment, and the effects of inflation on the poor could then be reversed. Even from a cyclical perspective, the effects of unemployment on the income distribution were stronger in earlier decades than in the nineties. On the international level, lower inflation tends to increase the income of the poor over the longer term; which is a negative association between inflation and economic growth (Easterly & Fischer, 2001).

Small poor farmers tend to benefit from higher food prices. However, the poor in urban areas and those in rural areas with little or no access to land are hurt, and hurt badly, when food prices increase (Lustig, 2009). Cardoso (1992) also argues that inflation affects the poor mainly through its impact on real wages, because nominal wages fail to increase as fast as prices in episodes of rising inflation rates.

Inflation worsened a consumption-based poverty measure in the United States between 1959 and 1992, but had no significant impact on the income-based poverty rate. In contrast, an increase in inflation reduced the poverty rate over between 1959 and 1989. Moving to other countries, such as those in Latin America, inflation tax did not affect those already below the line because of their negligible cash holdings. However, higher inflation was associated with lower real wages in a panel of seven Latin American countries. An additional fragment of evidence is that the Gini coefficient in Brazil increased steadily with rising inflation in the 1980s and then declined with the successful inflation stabilisation of 1994 to 1996. On the other

hand, observations in India saw higher inflation rates coincide with higher poverty rates (Easterly & Fischer, 2001).

According to Easterly and Fischer (2001) inflation is regarded as more of a problem by the poor than it is by the non-poor and it appears to reduce the relative income of the poor. It is a dangerous assumption that “if prices for the goods rise, then the poor may in year 2 consume less but have higher overall-inflation-adjusted income than in year 1” – this is due to the fact that a mistake could be made that the poor consumed more, when they in fact consumed less.

According to Bosch and Koch (2009) food has a larger welfare cost to poor households than it does for non-poor households. It affects poorer households more negatively than the non-poor households in the economy. Although the non-poor do not suffer from the impact of inflation as much as the poor, the non-poor households generally bear the effects of inflation primarily due to their larger expenditure. Most importantly, households in the country are more likely to change their expenditure patterns due to inflation increases. The expenditure patterns in South Africa are discussed briefly in the next sub-section, which reflects on the manner in which households in the country spend their income.

#### **2.4.1 Expenditure patterns in South Africa**

A case has been built from the above discussions in section 2.4 above that government controls inflation through controlling interest rate. In addition, it has been suggested that an increase in interest rate influences the expenditure patterns in an economy and it has been suggested as a fact that the poor are more likely to suffer from inflation than the non-poor. Expenditure patterns in South Africa are discussed briefly to indicate the impact of inflation on South African households.

In 2008 there were 1390 919 million households in South Africa. These households had a combined income of approximately R1.53 trillion compared to R1.37 trillion in 2007. More than half of these households (51.5%) were found to be in the lowest income group (Masemola & Van Wyk, 2008). In 2009, 13.65 million households in South Africa had at their disposal a combined income of R1.631 billion, which represents a nominal growth of 6.5% in comparison with 2008, when the household income was 1.531 billion (The Bureau of Market Research, 2010). According to The

BMR (2011/12) there were nearly 14 million households in South Africa in 2010 of which nearly half were poor. The emerging middle class in South Africa collectively had the biggest share of household income and expenditure in 2010. This group's annual income for 2010 was estimated at over R477 billion with a reported expenditure of R476 billion.

South African household spending increased by 5.7% in the first quarter of 2010, compared to a 1.6% rise in the fourth quarter of 2009. The expansion of spending by households was evident in all spending categories with the exception of spending on services (SARB, 2010). Household expenditure appears to have been positively influenced by several factors, including acceleration in the growth rate of real disposable income, the reduced cost of credit as a result of lower interest rates, relatively low inflation, rising confidence levels, and an improvement in households' net wealth as the prices of real estate and other assets continued to rise. Growth in real expenditure on durable goods surged at annualised rates of 15.2% in the fourth quarter of 2009 and 16.8% in the first quarter of 2010 (SARB, 2010).

The real household consumption expenditure continued to expand briskly in the first quarter of 2012. After a slight hesitation in the middle quarters of 2011, its pace of increase picked up in the final quarter as consumption expenditure continued to track growth in real disposable income. The lower interest rate environment was supportive of household consumption expenditure, along with the gradually declining level of household indebtedness, which had receded from more than 82% of annual disposable income in 2008 to less than 76% at the end of 2011. Spending on durable goods remained the strongest growing category within overall household consumption expenditure, recording double-digit rates of increase throughout 2011 (SARB, 2012).

The BMR (2010) survey found that a large number of consumers could not keep up payments on their financial obligations in 2010. Those consumers were obliged to make arrangements to pay off their debts over a longer period of time, and were not creditworthy as a result of over-indebtedness or credit bureau black-listing. In 2010, more than 11 million people, nearly a quarter of the country's population, struggle with debt in South Africa. The debt burden weighing on South African households

was increasing, even though interest rate and inflation were historically low in 2010 (Lana, 2010).

## **2.5 SUMMARY AND CONCLUSIONS**

During the country's Apartheid era, poverty in South Africa was mostly concentrated among Blacks. Poverty in South Africa is today concentrated not only according to race, but also according to gender and rural versus urban area. Households living in poverty in South Africa have sunk deeper into poverty and the gap between the rich and the poor also has widened.

There are many definitions of poverty. People define poverty in different ways mostly depending on their circumstances. There are a number of important factors to be taken into consideration when defining poverty. These factors include, among others, political and cultural influences, and deprivation of needs. Other concepts which are relevant to poverty are inequality and vulnerability. The above factors are essential to note as they may be indicative of bias in a number of poverty definitions. The approaches used in defining poverty are discussed. Poverty can either be absolute, relative, or moderate.

The issues that need to be clarified in order to come to an agreeable measure of poverty were discussed in this chapter. Individual and household, income, and the differentiation between qualitative and quantitative measures of poverty do play an important role in measuring poverty. The models used in measuring poverty are the poverty lines, headcount index and the poverty gap, as well as the dependency ratio. The model used to measure poverty in this study is the poverty gap index.

Inflation can be defined in different terms, but, for the purpose of this study, Inflation is defined as a rise in the general level of prices of goods and services in an economy over a period of time. There are three types of inflation discussed in this chapter: demand-pull inflation, cost-push, and structural inflation. This chapter described the three types of price indices that are widely used for calculating price inflation. These are the Consumer price index, Gross domestic product, and Producer price index. Inflation is usually measured by calculating the inflation rate of a price index, usually the Consumer Price Index (CPI). The CPI measures prices of a selection of goods and services purchased by a "typical consumer". The inflation rate

is then the percentage rate of change of a price index over time. The CPI inflation is used in this study.

Inflation results from an increase in the amount of circulating currency beyond the needs of trade. Salary and wage increases in excess of productivity growth, inadequate competition, tax increases and imported inflation had an effect on inflation in South Africa. Although domestic food prices have not risen as rapidly as international prices, the impact of rising food commodities prices' on inflation and poverty are of particular concern for developing countries.

Many South African households still suffer from inflation, mainly due to continuous increases in current rates of inflation and the fact that current inflation coexists with a high employment rate in the country. The main concern of the South African Reserve Bank is the impact of rising oil and food prices on inflation in South Africa. The retail price of petrol and diesel has continuously increased in recent years. This affects South African citizens, as the rise in petrol prices in turn increases the food and energy prices. It is clear from this chapter that increasing inflation is a major problem in South Africa's economy, in particular a major problem for the poor in South Africa.

It is clear from this chapter that inflation has an impact on the expenditure patterns in South Africa. South African household spending increased by 5.7% in the first quarter of 2010, compared to a 1.6% rise in the fourth quarter of 2009. South Africa's household expenditure patterns continued to expand into the first quarter of 2012. Expenditure on housing, transport and food continues to dominate consumption in the South African economy.

The South African monetary policy has made controlling inflation its top priority. This priority is also one of many attempts by government aimed at reducing poverty and the impact of inflation on the poor, as the poor suffer most from inflation. However, the extent to which the poor suffer from inflation is not easily determined. The purchasing power of money depreciates when prices rise, so if there is no increase in the value of their money, the individual household will purchase a smaller quantity of goods with the same level of income.

The number of people living in absolute poverty in South Africa is likely to increase. This may be the result of the fact that the level of inequality in the country remains

high. This chapter indicated in a number of ways that there is relationship between poverty and inflation. In conclusion, it is clear from the discussions throughout the chapter that there is a positive relationship between poverty and inflation in the economy. Blacks, especially those residing in rural areas, are the most likely to suffer from inflation than those in urban areas. Inflation is defined as the decline in the purchasing power of money determined by the basket of goods purchased, and it is considered that the poor usually suffer more due to increase in prices of goods.

The relationship between poverty and inflation in Sharpeville will be discussed through out the study. The empirical research methodology used in this study is discussed in the next chapter.

## **CHAPTER 3**

### **RESEARCH METHODOLOGY**

#### **3.1 INTRODUCTION**

There are different methodologies that are used to conduct different studies. This chapter describes the research methodology and the steps followed in conducting the research, as well as the model used in the study.

Research is mainly about finding out what is not already known (Taflinger, 1996). There are as many reasons to do research as there are researchers, yet the purposes of research may be organised into three groups based on what the researcher is trying to accomplish – explore a new topic, describe a social phenomenon, or explain why something occurs. The purpose of doing research is to learn something, or to gather evidence. To learn something is for one's own benefit. It is almost impossible for a human being to stop learning. Research is organised learning, looking for specific things to add to one's store of knowledge (Taflinger, 1996). Studies may have multiple purposes (for example, both to explore and to describe), but one purpose usually dominates.

The purpose of research study is to gather information from one or a few situations that are similar to the researcher's problem. The researcher might be interested in exploring and coming up with relationships and observations, either empirically or by means of reasoning. Another purpose is that the researcher might be thrilled by solving unsolved problems, as well as by the prospect of creating new theories and improving upon existing ones (Naik, 2009).

Adams and Schvaneveldt (1985:103) noted that completing a successful study depends on having a clearly defined purpose and access to useful data related to that purpose. A research design is a tool employed to realise successful research (Sekhampu, 2004). For research to be a success, Cooper and Emory (1995:12-14) emphasised that the purpose of the research should be clearly defined. The research procedure and design should be carefully planned to yield results that are as objective as possible. The researcher should report with complete frankness and the report should flow according to a procedural design (Sekhampu, 2004).

There are three main approaches to a research problem: quantitative research, qualitative research, and a mixed methods approach. The method that is chosen will affect the research and how the findings are concluded (Marczyk, 2008).

Empirical research enhances the scientific value of the study. A research design is a framework or plan for a study used as a guide for data collection and analysis. It is a blueprint that the investigator follows in completing the study (Churchill, 1991:108). Research designs can be classified as exploratory, explanatory, descriptive or casual. The choice of a research design depends on how much is known about the problem.

When doing research, if the issue is new or not much has been previously written on it, the researcher will be obliged to start from scratch with his or her research. This is called exploratory research. When a researcher has limited experience or knowledge about a research issue, exploratory research is a useful preliminary step. It can help ensure that a more rigorous, more conclusive future study will not begin with an inadequate understanding of the nature of the problem. Exploratory researches rarely yield definitive answers. They only address the “what” question (Chris, 2008). Zikmund (1994:33) states that exploratory studies are conducted to clarify ambiguous problems. The design includes secondary data sources, a literature review, interviewing knowledgeable people (this constitutes an informal experience survey). Exploratory designs are flexible in nature.

As explained above, a researcher must have purpose for conducting a research before undertaking one. Below are the main reasons for doing exploratory research (World Bank, 2011):

- Become familiar with the basic facts, setting, and concerns.
- Develop a well grounded picture of the situation.
- Develop tentative theories, generate new ideas, conjectures, or hypotheses.
- Determine the feasibility of conducting the survey.
- Formulate questions and refine issues for more systematic enquiry.
- Develop techniques and a sense of direction for future research (World Bank, 2011).

When a researcher encounters an issue that is already known and for which he or she has a description, he or she might begin to wonder why things are the way they are. The desire to know “why” is the purpose of an explanatory research. It builds on exploratory and descriptive research and goes on to identify the reason for something that occurs. Explanatory research looks for causes and reasons: for example, a descriptive research may discover that 10% of parents abuse their children, whereas the explanatory researcher is more interested in learning why parents abuse their children (Chris, 2008).

The goals of explanatory research are to (Chris, 2008):

- Explain things, not just report them. Elaborate and enrich a theory’s explanation.
- Determine which of several explanations is best.
- Determine the accuracy of the theory; test a theory’s predictions or principle.
- Advance knowledge about underlying processes.
- Build and elaborate a theory; elaborate and enrich a theory’s predictions or principle.
- Extend a theory or principle to new areas, new issues, and new topics.
- Prove evidence to support or refute an explanation or prediction.
- Test a theory’s predictions or principles (Chris, 2008).

Causal design is to determine the cause and the effect between two different variables. This type of research design attempts to establish and emphasise that when something is done or happens, something else is likely to follow (Zikmund, 1994:35). Descriptive research presents a picture of specific details of a situation, social setting, or relationship. The major purpose of descriptive research, as the term implies, is to describe the characteristics of a population or phenomenon. Descriptive research seeks to determine the answers to who, what, when, and how questions. Labour Force Surveys, population Census, and Educational Census are examples of this kind of research. This type of study offers a profile or description of relevant aspects of the phenomena of interest to the research (Churchill, 1991:108).

The purposes of descriptive research are listed below (Churchill, 1991:108):

- Describe the situation in terms of its characteristics – that is, provide an accurate profile of a group.
- Give a verbal or numerical picture of the situation.
- Present background information.
- Create a set of categories or classify the information.
- Clarify sequence, set of stages.
- Focus on 'who', 'what,' when', 'where', and 'how', but not why? (Chris, 2008).

Descriptive and causal research is appropriate when the problem to be investigated is precisely and unambiguously formulated. In these research designs, data is not flexible, but rigidly specified, both with respect to the data collection forms and the sample design (Churchill, 1991:48). Zikmund (1994:33) asserts that the purpose of descriptive research is to describe the characteristics of a given phenomenon. Unlike exploratory research, descriptive research is based on some previous understanding of the nature of the research problem. Churchill (1991:108) emphasises that descriptive research is concerned with determining the frequency with which something occurs or the relationship between two variables (Sekhampu, 2004:41). Descriptive researchers mostly use data gathering techniques such as surveys, filed research, and content analysis.

This study was aimed at analysing the relationship between poverty and inflation. Descriptive design is used throughout this study to determine the impact of rising inflation on poverty in Sharpeville Township. This chapter describes the research methodology used in this study.

### **3.1.1 Steps in doing research**

The steps that the researcher needs to follow in conducting research are described below:

#### **Step 1: Identify research purpose**

- The first step in conducting research is to examine the reasons why research is being undertaken. To do that effectively, a researcher has to look at where

the biggest challenges, problems and obstacles to success exist (Neil, 2000). Determining the research purpose sets the stage for the rest of the research plan because it lets everyone with a stake in the outcome of the research (for example, researcher, client, outside firms) know the general philosophy of the project and also establishes the urgency of the research (Chris, 1998).

#### Step 2: Identify what is to be learned

- Once the general purpose of research is determined, the researcher's next job is to decide what specific information he or she wants to obtain. While the purpose identified in Step 1 may be determined relatively quickly, in Step 2 the researcher may spend a considerable amount of time deciding what to study. Determining what is to be learned is also important in helping researchers envision the scope and demands of what must be done. The scope of a research project refers to the amount of information needed. If the scope is too large the researcher may find that it is not worth carrying out the research since he/she might lack the resources to accomplish the goal. Alternatively, knowing in advance what is needed may give the researcher the opportunity to break a larger project into smaller, more manageable parts (Chris, 1998).

#### Step 3: Research design

- To get answers to the issues raised in Step 2, the researcher lays out a design for obtaining the information. According to Chris (1998), the first part of the research design is to decide on the type of research that will work best for the purpose (that is, explain, predict, monitor, discover, test hypothesis) and information that is sought.

#### Step 4: Data collection

- The second part of research design involves laying out a plan to collect the information within the research method selected. To gather data, researchers have three choices: acquire pre-existing research, undertake new research themselves, and / or out-source the task of new research to a third party.

- The first option is associated with Secondary Research, which involves accessing information that was previously collected. The last two options are associated with conducting primary research, which involves the collection of original data generally for one's own use (Chris, 1998).

#### Step 5: Evaluate data

- The researcher's next task is to make sense of the collected data. Before the researcher can gain understanding from the collected data, he/she must first examine the raw information (that is, what was actually collected) to make sure the information exists as required (Chris, 1998).

#### Step 6: Analyse data

- Once data has been evaluated, the researcher's next step is to analyse the data to determine what has been learned. The method used to analyse data depends on the approach used to collect the information (secondary research, primary quantitative research or primary qualitative research). For primary research the selection of method of analysis also depends on the type of research instrument used to collect the information (Chris, 1998).

#### Step 7: Communicate results

- The final step in the research process is to report the findings. The research simply draws conclusions from what he or she gleans from the data analysis.

For the purpose of the study, data extracted from the study by Hatla (2010) (refer to 1.4.2: the empirical methodology of the study in chapter 1) is analysed using regression and correlation analysis in Eviews. Results of the model are explained in the next chapter, where the relationship between poverty and inflation in Sharpeville is explained.

### **3.2 REGRESSION ANALYSIS**

Regression analysis is a statistical technique that identifies the relationship between two or more quantitative variables: a dependent variable, whose value is to be predicted, and an independent or explanatory variable (or variables), about which

knowledge is available. The technique is used to find the equation that represents the relationship between the variables (Saez-Fernandez & Toledo, 1995).

In statistics, regression analysis includes any techniques for modelling and analysing several variables when the focus is on the relationship between a dependent variable and one or more independent variables. Regression analysis helps one understand how the typical value of the dependent variable changes when any one of the independent variables is varied, while the other independent variables are held fixed (World Bank, 2008). In addition to this, the World Bank (2008) elaborates that regression analysis most commonly estimates the conditional expectation of the dependent variable given the independent variables – that is, the average value of the dependent variables when the independent variables are held fixed. Less commonly, the focus is on a quintile, or other location parameter of the conditional distribution of the dependent variable, given the independent variables.

Regression analysis is widely used for prediction and forecasting (World Bank, 2008). It is used to understand the statistical dependence of one variable on other variables (Saez-Fernandez & Toledo, 1995). The World Bank (2008) emphasises that the model is also used to understand which among the independent variables are related to the dependent variable, and to explore the forms of the relationship. In restricted circumstances, regression analysis can be used to infer causal relationships between the independent and dependent variables. The relation between the variables can be illustrated graphically or more usually through an equation (Saez-Fernandez & Toledo, 1995).

Regression models involve the following variables (World Bank, 2008):

- The unknown parameters denoted as  $\beta$ ; this may be a scalar or a vector.
- The independent variables  $X$ .
- The dependent variable,  $Y$ .

Different technologies are used in various fields of application in place of dependent and independent variables (World Bank, 2009).

The regression model relates  $Y$  to a function of  $X$  and  $\beta$ .

$$Y = f(X, \beta)$$

The approximation is usually formalised as  $E(Y|X) = f(X, \beta)$ . To carry out regression analysis, the form of the function  $f$  must be specified. Sometimes the form of this function is based on knowledge about the relationship between  $Y$  and  $X$  that does not rely on the data. If no such knowledge is available, a flexible or convenient form for  $f$  is chosen (World Bank, 2008).

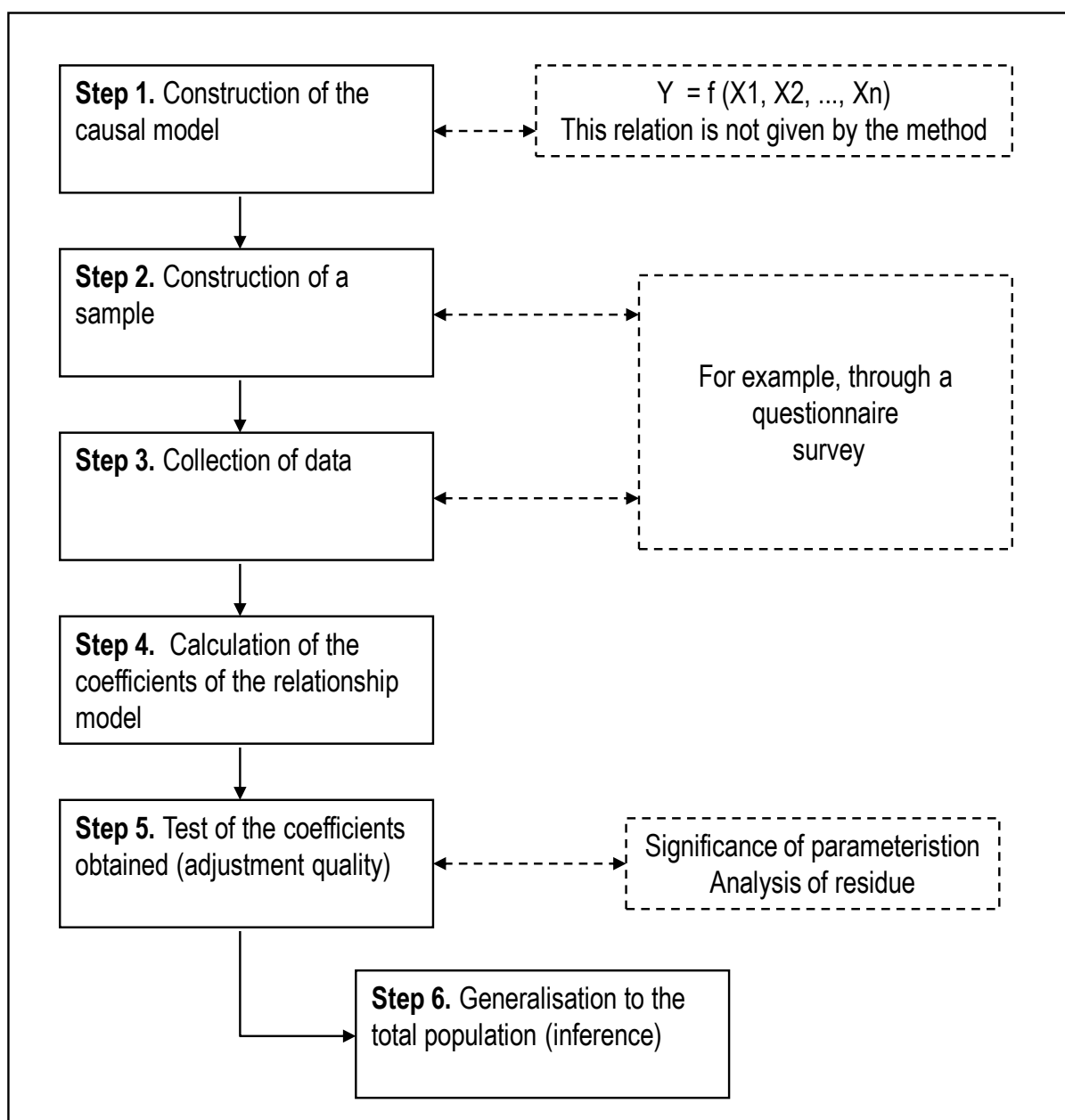
According to the World Bank (2008) a large body of techniques for carrying out regression analysis has been developed. Familiar methods such as linear regression and ordinary least squares regression are parametric, in that the regression function is designed in terms of a finite number of unknown parameters that are estimated from the data. Nonparametric regression refers to techniques that allow the regression function to lie in a specified set of functions, which may be infinite-dimensional (World Bank, 2008).

According to World Bank (2008) in statistics, linear regression is an approach to modelling the relationship between a scalar variable  $Y$  and one or more variables denoted  $X$ . In linear regression, data is modelled using linear functions, and unknown model parameters are estimated from the data. Such models are called linear models. Most commonly, linear regression refers to a model in which the conditional mean of  $Y$  gives the value of  $X$ . Less commonly, linear regression could refer to a model in which the median, or some other quintile of the conditional distribution of  $Y$  given  $X$  is expressed as a linear function of  $X$ . Like all forms of regression analysis, linear regression focuses on the conditional probability distribution of  $Y$  given  $X$ , rather than on the joint probability distribution of  $Y$  and  $X$ , which is the domain of multivariate analysis.

### **3.2.1 Steps in performing a regression analysis**

A sound model can only be applied where the effects of the intervention are well identified and where the production process of the effects is understood. There are six main steps involved in performing a regression analysis (World Bank, 2008). For the purpose of this study only the first three steps are used, as the study uses the sample from a previous study by Hatla (2010). These are illustrated on the diagram below.

**DIAGRAM 3.1: Main steps involved in performing a regression analysis**



Source: Adapted from Cassidy (1996)

Below are short descriptions of the steps in Diagram 3.1 (Cassidy, 1996):

Step 1: Construction of the causal model

- The construction of an explanatory model is a crucial step in the regression analysis. It must be defined with reference to the action theory of the intervention. It is likely that several kinds of variables exist. In some cases,

they may be specially created, for example to take account of the fact that an individual has benefited from support or not (a dummy variable, taking values 0 or 1). A variable may also represent an observable characteristic (having a job or not) or an unobservable one (probability of having a job). The model may presume that a particular variable evolves in a linear, logarithmic, exponential or other way (Gujarati, 1988).

Employment is assumed to be a dummy variable in this study, where the status is denoted by the numbers 1, 2, 3 and 4 (as described in the formula below).

In constructing the model for the purpose of this study, the poverty gap index (refer to Annexure A) adopted from Sekatane (2004:35) is used. While the poverty gap index is concerned with the depth of poverty (its magnitude) and therefore the extent of the shortfall of incomes below the poverty line, let the following hold, (adapted from Sekatane, 2004:35-36), where

$Z_i$  = the poverty line of a specific household;

$Y_i$  = the income of specific household; and

$Z$  = the poverty line of households.

Then we can express the poverty gap ratio PGAP as

$$PGAP = \frac{Z_i - Y_i}{Z}$$

The “poverty severity index” was identified for the purpose of this study. The “poverty severity index” is concerned with how harsh or severe the households are with regard to poverty. According to Foster, Greer and Thorbecke (2000:3) squaring the poverty gap ratio gives the poverty severity index.

For the analysis, the following equation is adapted from Foster *et al.* (2000:3):

$$PGAP_i = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + e_i$$

Where,

$X_i$  is employment, defined in terms of 4 variables, where 1 is individuals that are formally employed (working for 3 days or more per week for income / food / accommodation), 2 is informal activities (individuals that are involved in informal activities for 3 days or more per week for income), 3 is unemployment (which consists of those who can work, want to work, but cannot find work), and 4 is those individuals who are not economically active (they cannot or do not want to work – children, old people, or disabled).

$X_2$  is Education - which is measured in terms of the level of education for individuals in households.

$X_3$  is Age of each member in the households.

$X_4$  is Income – this takes into account only the take home pay for individuals that are active in terms of the labour force, pension, child grants from government, subsidies, and interest that individuals receives.

$X_5$  is Expenditure – measured in terms of how households spend their income on monthly basis,

and

$e_i$  is a residual, assumed non correlated with all other terms.

#### Step 2: Construction of a sample

- To apply regression, a large sample is usually required. Construction of the sample survey involves five steps, namely: defining the population, identifying the sample frame, determining the sample size, selecting a sampling procedure, and selecting the sample (Sekhampu, 2004:52).

According to the Statistical inference principles, for the central limit theory to be valid, the observations must be at least 30. For the purpose of the study the sample was from a survey conducted in 2009 by Hatla (2010) where 79 households were analysed (refer to Annexure B for household survey used).

### Step 3: Data collection

- Reliable data must be collected, either from a monitoring system, from a questionnaire survey or from a combination of both (Cassidy, 1996).

For the purpose of this study, data previously collected in 2009 (refer to Annexure B for the household survey, and Annexure C for the questionnaire used) by Hatla (2010) is analysed. Data extracted from the study by Hatla (2010) is analysed using Eviews. Results of the model are explained where the relationship between poverty and inflation in Sharpeville is explained.

### **3.3 THE EXPECTED SIGNS**

In economics terms, the relationship or combination between two terms produces either a negative or a positive result for the community concerned. As such, Table 3.1 below indicates the expected results at the completion of the study. The Table illustrates the expected relationships between the various variables that are used in the study. In the table a “-“ sign refers to the negative expected relationship between the variables, and a “+” sign refers to the positive expected relationship. A negative sign means that an increase in one variable would cause a decrease / decline in the other variable, and thus with a positive sign, an increase in one variable would cause an increase in the other, and vice-versa. The relationships between these variables are explained in detail in the next chapter of the study.

**TABLE 3.1: The expected signs**

| Variable  | Parameter | Expected sign | Reason for signs                                                                                                                                                                                                                                                             |
|-----------|-----------|---------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Inflation | $X_2$     | –             | As inflation rises, the number of poor individuals who drop out of school to seek job opportunities to sustain their basic need is more likely to increase. This is due to the fact that the individuals will buy the same quantity of products at higher prices than before |
| Education | $X_1$     | +             | The more educated the individuals, the better their chances of being employed                                                                                                                                                                                                |
| Inflation | $X_5$     | +             | A rise in inflation causes prices to increase, and thus consumers will spend more on the same quantity of goods and services                                                                                                                                                 |
| Income    | $X_4$     | +             | The higher the income that the individuals receive, the more they spend on goods and services                                                                                                                                                                                |
| Inflation | $X_1$     | –             | Increase in inflation might force companies to stop hiring or even retrenching to minimise the effects of inflation on their profits.                                                                                                                                        |

Source: Own construction

### 3.4 SUMMARY AND CONCLUSIONS

The empirical research methodology used to analyse the necessary data for the study was observed in this chapter. The steps to be followed in completing the study are discussed in this chapter. It was indicated in this chapter that the study includes

the statistical data analysis of data extracted from Hatla (2010). This statistical data analysis is done in the next chapter of the study.

Eviews, data set used in the study, as well as the model that will be used in the next chapter were discussed in this chapter. The chapter asserted that there are certain critical steps that need to be taken into consideration when a researcher intends conducting a successful research. It further asserted that a researcher must have a clearly defined purpose and have access to useful data related to that purpose before embarking on a research project.

This chapter described four types of studies that the researcher needs to decide on before undertaking the study. The exploratory designs mainly address the “what” question. The exploratory design focuses on collecting data from secondary sources, a literature review, and interviewing knowledgeable people. Explanatory research is aimed at the design to know “why”. It looks for causes and reasons regarding the problem situation of the researcher. Causal design is aimed at determining the causes, and the effect between the two different variables. The last type of study that the researcher can choose from when doing a research is the descriptive design. This design is used to determine the answer to who, what, when, and how questions.

The extent or the scope which the population in this study covers is the area of Sharpeville. The study uses Regression analysis to determine the relationship between poverty and inflation in Sharpeville (this will be done in the next chapter). Data extracted from a study by Hatla (2010) is analysed in this study using Eviews. Results of the model are explained where the relationship between poverty and inflation in Sharpeville is explained.

The extent to which how harshly or severely the households suffer poverty is called the poverty severity index. The poverty severity index will be used in the next chapter to determine how severely poor Sharpeville households experience poverty. The equation and the variable used in the next chapter to analyse the relationships are discussed in this chapter.

The study uses the model:

$PGAP_i = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + e_i$  to determine how harshly or severely Sharpeville's households experience poverty.

These variables are used in the next chapter to determine the relationship between poverty and inflation. These variables are employment, education levels, age, income and expenditure. Employment is represented by  $X_1$  in the equation, education is  $X_2$ , age is  $X_3$ , income is  $X_4$ , and  $X_5$  is expenditure

Finally, the expected signs at the end of the study are indicated in this chapter. These signs represent the relationship between the variables that are used in the study, where a “-” sign refers to the negative expected relationship between the variables, and a “+” sign refers to the positive expected relationship.

In conclusion, the type of design used in this study is descriptive. The study uses the sample from a survey conducted in 2009 by Hatla (2010) where 79 households were analysed. These data extracted from Hatla (2010) are analysed in the study using Eviews. Regression analysis is used to determine the relationship between poverty and inflation In Sharpeville. This analysis will be done in the next chapter of the study.

## **CHAPTER 4**

### **THE RELATIONSHIP BETWEEN INFLATION AND POVERTY IN SHARPEVILLE**

#### **4.1 INTRODUCTION**

Although the effects of inflation do not affect the individuals below the poverty line due to their negligible average cash holdings (refer to section 2.4 above), they may however wipe out the savings of the middle class and increase the numbers of the poor. Inflation also affects poverty mainly through its impact on real wages, because nominal wages fail to increase as fast as prices in episodes of rising inflation rates (Cardoso, 1992).

In South Africa, the government has developed policies focused on poverty alleviation, economic growth, relaxing import controls and reducing the budget deficit, in addition to the South African Reserve Bank's primary objective of controlling inflation. In spite of these pro-poor policies, South Africa remains amongst those countries at the top of the world income inequality list. This chapter investigates the relationship between poverty and inflation in Sharpeville. This is done by analysing the effects of inflation on the poor, using different variables extracted from Hatla (2010). The analysis uses the poverty regression model (as indicated in the previous chapter) to determine the relationship between poverty and inflation in Sharpeville.

#### **4.2 BACKGROUND OF VARIABLES USED IN THE STUDY**

As described in sub-section 1.4.5, poverty is defined as the inability to attain a minimum material standard of living. This minimal standard of living is normally referred to as the poverty line. It is determined by the income (or expenditure) necessary to buy a minimum standard of nutrition and other basic necessities (Sekatane, 2004:10). Poverty is also defined as the inability of many people to satisfy their needs, while a minority enjoys extreme prosperity (Sekhampu, 2004:9).

Poverty is defined in terms of the headcount index and the poverty gap index. The headcount index is defined as the fraction of the population below the poverty line

(Sekatane, 2004:35). The poverty gap usually measures the average shortfall of the income levels of the poor in relation to the poverty line, while the poverty gap index measures the extent of the shortfall of incomes below the poverty line (Sekatane, 2004:35).

As elaborated upon in sub-section 3.2.1 the “poverty severity index” is concerned with how harshly or severely households experience poverty. This is described as PGAP squared in this study, and indicated as PGAPS in Table 4.1. EXPINFL represents the effects of inflation on poverty and expenditure in the study.

The average household (HH) size in Sharpeville in 2009 was estimated to be 3.9 persons per household. The dependency ratio (which is an indicator of the number of persons who depend on the income of one earner) was estimated at 4.7 in 2009 (Hatla, 2010:39). Approximately 58.42% of the population was female, with the remainder of the population (41.58%) being males.

Hatla (2010:38) indicates that the population of Sharpeville was predominately composed of people in the age group 0 to 39 years of age. This group consists of 58.19% of the entire surveyed population. The headcount index for Sharpeville was estimated at 0.654 in 2009 (Hatla, 2010:49). Furthermore, Hatla (2010:49) estimated that 5 477 households out of the 8 374 households in Sharpeville lived in poverty in 2009.

According to Hatla (2010:53), the residents of Sharpeville in 2009 were more likely to participate in informal employment than in formal employment. Below half of Sharpeville’s poor population’s labour force was employed in 2009 – estimated at 44.19%. An estimated 55.82% of the poor population was employed in both formal and informal sectors. An estimated 35.43% of the employed individuals were employed in the formal sector, whilst 20.47% were informally employed

About 69.7% of Sharpeville’s poor population’s income was less than 10% of their HSL in 2009, whilst 10.5% of the township’s population had incomes of less than 50% of their HSL. The majority of the population in the township had difficulties meeting their physical needs to survive (Hatla, 2010:53). An estimated 58.89% of the poor population in Sharpeville is female and an estimated 41.11% of the poor population is male (Hatla, 2010:37).

A total of 62.5% of the poor population in the township had a grade 12 education or less in 2009. Of the 62.5%, only 12.5% of the population had a grade 12 education. An estimated 37.5% of the poor population in Sharpeville had a diploma, degree, post graduate or other qualification in 2009 (Hatla, 2010:47). The average households' income for 2009 in Sharpeville was estimated at R2 866 per household per month (Hatla, 2010:59).

According to Hatla (2010:61) estimated amounts of R863 000, R1.2 million and R1.5 million were spent per month in Sharpeville vegetables, bread and meat and/or chicken respectively. According to Hatla (2010:61) these monthly expenditure patterns were constant, with or without the presence of government grants in the household's income. About 82 568 kilograms of maize meal were consumed on a monthly basis, valued at R556 000. This means that an estimated R6.6 million per year was spent on maize meal by households in the township. An estimated R1.2 million per month and R14.5 million per annum, was spent on bread. Meat and/or chicken were the one item that constituted the highest expenditure for the households – an estimated R1.4 million per month was spent on it. An estimated 18 674 kilograms of washing powder was bought in a month, amounting to an estimated R6.3 million per year, an estimation of R523 000 per month (Hatla, 2010:62).

#### **4.3 ANALYSIS OF THE RELATIONSHIP BETWEEN POVERTY AND INFLATION**

This section describes the regression results, the relationship between different variables and, most importantly, it determines the relationship between poverty and inflation in Sharpeville through the effect of inflation on expenditure in the township.

##### **4.3.1 Descriptive statistics**

This subsection analyses data using the descriptive statistics. The mean, maximum and standard deviation of the main variables used in the study are described in this subsection. These variables are household size, age, educational levels, income of the household, as well as the amount that each household spends. These variables are indicated in Table 4.1 below. For the purpose of this study, 79 poor households (a number above the 30 required for the central limit theorem to function) were

extracted from Hatla (2010) data. Accordingly, the assumption of normal distribution in the data set holds.

As indicated in Table 4.1 below, the oldest respondent in the sampled population was 69 years of age. The poverty gap for the older population was 862.75, meaning that they had a positive PGAP and that their incomes were lower than the poverty line. The youngest respondent was 15 years with a PGAP of -3934.43. The PGAP for the population in the 15 year age group was negative and their income was higher than the poverty line because they do not work and, as such, do not form part of the economically active population. The mean poverty gap was -1974.67, the standard deviation was 883.2201 and the probability was 0.433407.

**TABLE 4.1 Descriptive Statistics**

|             | A<br>G<br>E | EXPEN<br>DITUR<br>E | HH<br>SI<br>ZE | INCOME   | I<br>N<br>F<br>L | PGAP     | PGAS     | YRS<br>SCH<br>OO<br>L<br>ING |
|-------------|-------------|---------------------|----------------|----------|------------------|----------|----------|------------------------------|
| Mean        | 39          | 1438.59             | 3.7            | 213.7975 | 4                | -1974.67 | 4669532  | 7                            |
| Median      | 39          | 1220.00             | 4.0            | 0        | 4                | -2006.72 | 4026925  | 7                            |
| Maximum     | 69          | 4959.00             | 8.0            | 3780     | 4                | 862.75   | 15479739 | 12                           |
| Minimum     | 15          | 0.00                | 1.0            | 0        | 4                | -3934.43 | 1032.98  | 1                            |
| Std. Dev.   | 12          | 913.40              | 1.4            | 552.9601 | 0                | 883.2201 | 3556960  | 2.3                          |
| Observ<br>t | 79          | 79.00               | 79.0           | 79       | 7<br>9           | 79       | 79       | 79                           |

Source: Own construction

The lowest expenditure was 0 for young individuals at minimum age of 15 years, meaning that this population group was not economically active. This population group was dependent on others to provide for them. The maximum expenditure level amount per month was R4959, which raises concerns about the entitlements or earnings, because the expenditure per month was higher than the highest income of R3780 per month. This means that households were more likely to spend their future earnings or sell their assets (investments) to maintain a particular standard of living. This raises much concern, as these would make households weaker members of society. As households sell their investments, they will not have funds to protect themselves against increased prices in the future as well as not being able to save

enough for their retirement. Thus further increase in prices will lead to households failing to maintain their standard of living, as they will not have any investments to cover for this. The average expenditure amount was R1438.594 per month.

The gender of individuals is indicated in Table 4.1 above in terms of digits, where number 1 stands for / means male and 2 stands for / means female. The Table indicates that households in Sharpeville had more females than males. The household size consisted of a minimum number of 1 member and a maximum of 8 members. The average size of the households was 3.696203. The average for individual number of years spent in school was 7.5 with the minimum of 1 year and maximum of 12 years.

The estimated minimum income received per poor Sharpeville households in 2009 was 0 per month, the maximum amounted to R3 780 per household per month, and the average amount spent a month by Sharpeville households was R213.7975. This indicates that there are higher levels of inequality in the community. The standard deviation was 552.9601 and the probability was 1758.141. The gap between the poverty line and the mean income of the poor, 0 in this case, indicated that there was a large depth of poverty among the poor population in Sharpeville.

The estimated minimum poverty gap squared for Sharpeville households (as described in sub-section 3.2.1 and section 4.2) was 1032.98 in 2009, the median 4026925, and the maximum poverty gap squared was 1547939. The average poverty gap squared for the year was an estimated 4669532, indicating that there were large differences in terms of how the poor were distributed below the poverty line.

Having described the data set, the study now turns to a more rigorous analysis based on relationships. First is correlation analysis.

#### **4.3.2 Correlation analysis**

Table 4.2 shows partial correlation coefficients between the variables used in the study. This is done by correlating the variables used in regression analysis to one another. These correlation coefficients are indicated in Table 4.2.

**TABLE 4.2 Correlation coefficients**

|          | AGE      | EXPINFL  | GENDERH  | HHSIZE   | INCOME   | PGAP     | YRSSCHOC | PGAPS    |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| AGE      | 1        | -0.08975 | -0.01979 | -0.23579 | 0.180119 | 0.197339 | -0.22924 | -0.23399 |
| EXPINFL  | -0.08975 | 1        | -0.05238 | 0.300961 | 0.060205 | -0.34467 | 0.214565 | 0.31459  |
| GENDERH  | -0.01979 | -0.05238 | 1        | -0.09673 | 0.074871 | 0.10319  | -0.19866 | -0.10134 |
| HHSIZE   | -0.23579 | 0.300961 | -0.09673 | 1        | 0.040585 | -0.70823 | 0.045601 | 0.675794 |
| INCOME   | 0.180119 | 0.060205 | 0.074871 | 0.040585 | 1        | 0.26585  | -0.32155 | -0.155   |
| PGAP     | 0.197339 | -0.34467 | 0.10319  | -0.70823 | 0.26585  | 1        | -0.24448 | -0.93743 |
| YRSSCHOC | -0.22924 | 0.214565 | -0.19866 | 0.045601 | -0.32155 | -0.24448 | 1        | 0.159501 |
| PGAPS    | -0.23399 | 0.31459  | -0.10134 | 0.675794 | -0.155   | -0.93743 | 0.159501 | 1        |

Source: Own construction

The correlation coefficient between EXPINFL and PGAP is -0.34467. Although it is relatively weak, the fact that there is a negative correlation confirms that inflation negatively affects poverty.

Inflation affects poverty via expenditure. Therefore, for an individual to be at the same welfare level as before a rise in inflation, they should spend more by an amount equal to the increase in inflation rate.

i.e:  $PGAP = E + \%E$

Where Expenditure =  $q \times p(\% \text{ inflation})$

Inflation  $\times$  = Income – inflation

Thus EXPINFL is the size that poverty is affected by inflation through the expenditure path. When inflation rises, it reduces the buying power of the household thereby taking them further away from the poverty line and becoming poorer. At the 10% level of significance, the null hypothesis that there is no relationship between poverty gap and inflation is rejected in support of an alternative hypothesis that there is a relationship between the two. Gender and education in this area for the sample extracted are statistically insignificant, thereby accepting the null that there is no relationship between these two variables and poverty in the economy. The larger the HH size, the more they are likely to be affected by inflation rises, as the HH would

fail to purchase the basic needs. There is a positive correlation between HH size and expenditure; if the HH size expands, the more that specific HH would spend to feed the extended HH. On the other hand, there is a negative relationship between inflation and expenditure in Sharpeville, because rising prices limit individuals to purchase more goods as they would if inflation was low or had remained constant

### **4.3.3 Regression analysis**

This sub-section communicates the findings of the regression analysis of the relationship between poverty and inflation in Sharpeville. Table 4.3 below indicates the results when using the poverty regression model.

The regression analysis indicates that larger households are more affected by poverty, as compared to the smaller household size (HH size). The poverty gap for least HH size is less severe compared to the larger households. Households with a large number of individuals depending on one breadwinner would fail to attain the minimum standard of living, as compared to the smaller HH size depending on one breadwinner. Household size is positively related to poverty gap squared. That means the more the members in a poor household in Sharpeville depend on an individual breadwinner, the poorer they were. Households with the highest number of members were poorer than those with few members. Statistically, the null hypothesis that there is no relationship between household size and poverty gap is rejected in this study.

**TABLE 4.3**                      **Regression Results**

| Variable           | Coefficient | Std. Error            | t-Statistic | Prob.     |
|--------------------|-------------|-----------------------|-------------|-----------|
| C                  | 191.4957    | 497.2902              | 0.385078    | 0.7013    |
| AGE                | -3.86994    | 5.746258              | -0.67347    | 0.5028    |
| EXPINFL            | -0.1375     | 0.078922              | -1.74218    | 0.0857**  |
| GENDERHEAD         | -24.7386    | 132.1453              | -0.18721    | 0.852     |
| HHSIZE             | -428.121    | 48.98858              | -8.73919    | 0***      |
| INCOME             | 0.442765    | 0.124503              | 3.55627     | 0.0007*** |
| YRSSCHOOLING       | -41.8561    | 31.226                | -1.34043    | 0.1843    |
| R-squared          | 0.622358    | Mean dependent var    |             | -1974.67  |
| Adjusted R-squared | 0.590888    | S.D. dependent var    |             | 883.2201  |
| S.E. of regression | 564.9242    | Akaike info criterion |             | 15.59569  |
| Sum squared resid  | 22978034    | Schwarz criterion     |             | 15.80564  |
| Log likelihood     | -609.03     | F-statistic           |             | 19.77612  |
| Durbin-Watson stat | 2.248692    | Prob(F-statistic)     |             | 0         |

Source: Own construction

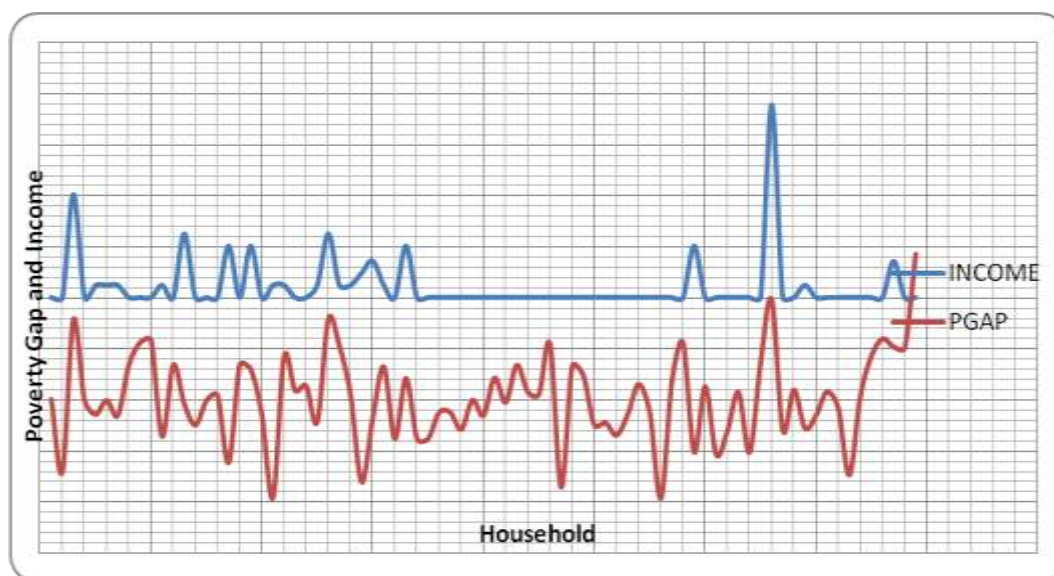
\*\*\* and \*\* significance at 1% and 5% level respectively.

The results in Table 4.3 show that there is a positive relationship between poverty and income. In other words, as incomes increases, the poverty gap gets narrower, signifying lower levels of poverty and therefore an improvement in development of the household.

It is clear from Figure 4.1 that there is a positive relationship between income and the poverty gap. The poverty gap for households with higher levels of income is less than those with lesser incomes. Those with more income are affected less than those with less income. In other words, those with less income are poorer. This is an important result considering that in this area (as discussed in sub-sections 1.4.2 and 1.4.3), many households had no formal or recordable income. Policy makers and

economic planning authorities should seriously and urgently consider providing income generating activities to this area in order to take people away from the poverty trap.

**FIGURE 4.1 The relationship between Poverty gap and Income**

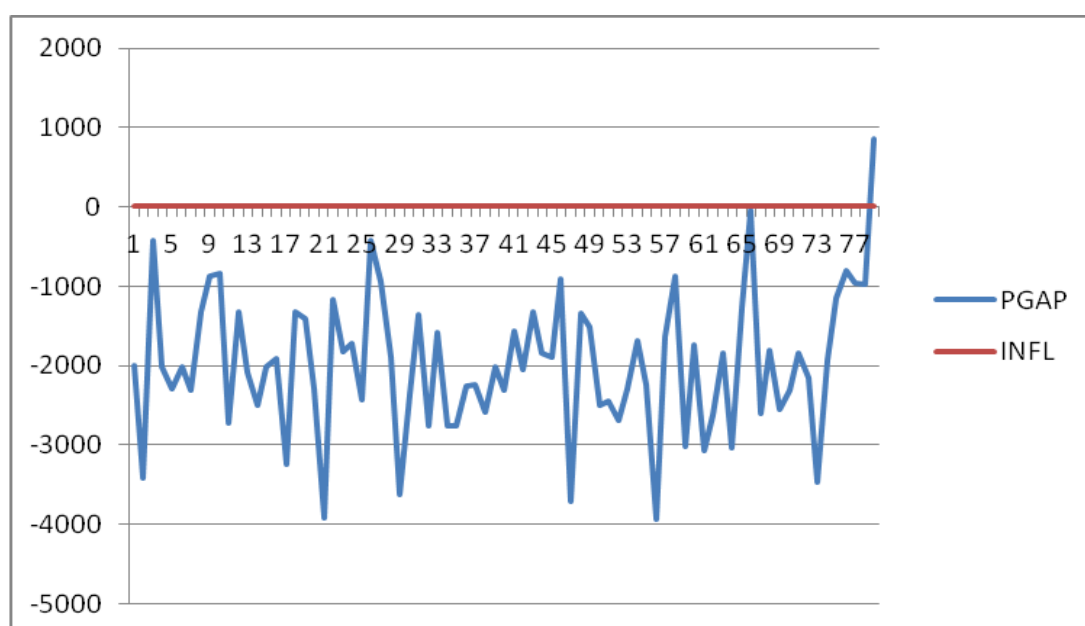


Source: Own construction

As Sekatane (2004:31-36) and Hatla (2010:17-21) have mentioned before, the relationship in Figure 4.1 confirms the arguments that income is indeed the basis of poverty.

In Figure 4.2 it is assumed that inflation is constant at 0. Inflation is then related to PGAP to determine how Sharpeville households' poverty situations are most likely to be affected by inflation.

**FIGURE 4.2 The relationship between poverty and inflation in Sharpeville**



Source: Own construction

To answer the question of whether inflation does affect poverty in Sharpeville, the procedure is deduced based on theory and results so far presented. Firstly, Figure 4.1 above read with Figure 4.2 indicates the relationship of inflation for each one of the households. It is clear from the two Figures that those households which had higher levels of income were better off than those with lesser income or nothing at all. The implication according to macroeconomic theory is that the same level of inflation on the same basket of commodities has a different level of effect for each household. Those with more income are less affected than those with less income.

The effect of inflation is that it erodes the buying power of economic agents, thereby making them worse off by taking them to a lower indifference curve. Smaller income households which, according to Figures 4.1 and 4.2 above, are also poorer are already at a lower indifference curve and therefore inflation takes them to a further lower indifference curve, thereby making them worse off. This means that there is some burden arising from the rise in prices, since consumers can now only enjoy only one set of goods (limited quantity) than before. The HH expenditure pattern moved away from what was previously regarded as optimal and desired and consumers therefore experienced a welfare loss, even though there was no direct inflation burden.

#### 4.3.3.1 Cross-section analysis

This subsection uses Cross-sectional analysis to determine relationships between the variables used. The results are presented in Table 4.2 in sub-section 4.3.3 above, and are evaluated based on hypothesis testing, signs and magnitude of the parameter, adjusted R-squared and the F-statistic (discussed in the next sub-section). The R-squared adjusted is 0.59% which, according to Gujarati (2004:75), means that the model explains 59% of the behaviour of poverty gap as a dependent variable for the sample selected.

For the individual /partial effect and relationships, the model starts with age. There is a negative relationship between age and the poverty gap. However it is statistically insignificant even at 10% level (10% level of confidence) of significance.

In the study, EXPINFL is a variable given by:

EXPINFL = Expenditure – (Expenditure × inflation rate)

For household size, there is a negative relationship between PGAP squared and the household size itself. This is also statistically significant even at the 1% level of significance. In other words, when a household size is higher, there is a greater likelihood that the household will be poorer.

Income has a negative relationship regarding poverty gap and it is statistically significant at the 1% level. This means that the more the income, the less the gap, since poverty gap rates are negative. The poverty gap is low for households with higher income, and vice versa.

#### 4.3.3.2 Assessing the influence of all the variables used on poverty

The F-statistic is a measure that is used to analyse the behaviour of the variance used to analyse the relationship and effect of all the variables (household size, age, educational levels, income of the household, as well as expenditure) on poverty in the model.

In this case, the hypotheses adopted from Alem (2011:13) are set as:

$$H_0: x_1 = x_2 = x_3 = x_4 = x_5 = 0$$

$$H_1: x_1 = x_2 = x_3 = x_4 = x_5 \neq 0$$

At 1% level of significance, the null hypothesis is rejected, meaning that all the variables jointly affect the poverty level in Sharpeville

#### 4.4 SUMMARY AND CONCLUSIONS

This chapter described the variables used in the study. These variables were correlated with one another to determine the relationship between poverty and inflation in Sharpeville. The size of household in Sharpeville was estimated at 3.9 persons per household in 2009 and the dependency ratio (which is an indication of the number of persons who depend on the income of one earner) was estimated at 4.7%. The household size consisted of a minimum number of 1 member; the household with the largest number consisted of 8 members. The average size of households in Sharpeville was estimated at 3.696203.

The poverty gap for the older population group over the age of 65 in Sharpeville was 862.75. This means that the older population had a positive PGAP and that their incomes were lower than the poverty line. The youngest respondent was 15 with PGAP -3934.43. The PGAP for population in the 15 years age group was negative and their incomes were higher than the poverty line, due to the fact that they did not work and as such did not form part of the economically active population. The standard deviation was 883.2201 and the probability was 0.433407. This indicated that there was a large difference between the PGAP for older population than that for younger population.

In 2009, approximately 58.42% of Sharpeville's population was female and 41.5% was male. The constructed sample indicated that Sharpeville households consisted of more females than males. The estimated minimum income received per Sharpeville household in 2009 was 0 per month; the maximum amounted to R3780 per household per month. This gap indicated high levels of inequality in the community. The standard deviation was 552.9601 and the probability was 1758.141. The gap between the poverty line and the mean income of the poor, 0 in this case, indicated that there was a high degree of poverty among the poor population in Sharpeville.

The average expenditure in Sharpeville was R1438.594 per month. The individuals below 15 years of age were not considered economically active (discussed in sub-section 3.2.1). This populations group was dependent on others to provide for them. The maximum amount of expenditure per month was R4959, which raised concerns about the entitlements or earnings due to the fact that the higher expenditure per month was higher than the highest income of R3780 per month. This means that households were more likely to spend their future earnings (could be by means of on-going debts) or they could simply be selling their assets (investments) to maintain the standard of living.

The estimated minimum poverty gap squared for Sharpeville households was 1032.98 in 2009, the median 4026925, and the maximum poverty gap squared was 1547939. The average poverty gap squared for the year was an estimated 4669532, indicating that there were large differences in terms of how the poor were distributed below the poverty line.

An increase in inflation reduces the buying power which leads to less quantity of goods purchased from the same amount of money. Consumption and welfare are therefore affected. Poverty is affected by inflation through the expenditure path. When inflation increases, it reduces the buying power of households, thereby leading them to poverty. Therefore EXPINFL is negatively related to the poverty gap.

The strongest correlation exists between household sizes (HHsize) and PGAP at -0.7. The regression analysis showed that there was a negative relationship which was also statistically significant even at the 1% level. It is therefore important to intensify birth control programmes in Sharpeville to reduce the size of households.

The cross-section analysis proved that there was a positive relationship between poverty and income. As incomes increases, the poverty gap narrows, signifying lower levels of poverty and therefore an improvement in development of the household.

Finally, it could be concluded that there was a positive relationship between poverty and inflation. As prices rise it negatively affects the expenditure patterns of the poor. Inflation erodes the buying power of economic agents thereby making them worse off by taking them to a lower indifference curve. Less income households who are poorer

are already at a lower indifference curve and therefore inflation took them to a further lower indifference curve thereby making them worse off.

## **CHAPTER 5**

### **SUMMARY, CONCLUSIONS AND RECOMMENDATIONS**

#### **5.1 INTRODUCTION**

The purpose of a research study was to obtain information from various sources that were related to poverty situations in Sharpeville as well as the country as a whole. The main objective of the study was to determine the relationship between poverty and inflation in Sharpeville. Data was extracted from a previous study by Hatla (2010). Analysis of the data was done using the poverty regression model as indicated in previous chapters. The previous chapters are summarised in this chapter, conclusions of the study are drawn, and recommendations on the subject are made.

#### **5.2 SUMMARY OF THE FINDINGS**

Poverty in South Africa is the result of a very complex history. Although the political battle was won in South Africa, the country still faces the war against poverty and under-development. Poverty rates in South Africa's nine provinces differ significantly, as do those of urban and rural areas in the country. Despite the fact that there is a large number of Blacks entering the labour force, the level of inequality in South Africa is still high. This causes more and more Black households in the country to sink deeply into poverty.

There are different approaches used in defining poverty. Poverty can either be absolute, which refers to a set standard consistent over time and between countries; relative poverty, in which people are described as poor when their household income is less compared to others in the community; and moderate poverty, refers to conditions of life in which basic needs are met, but just barely.

People define poverty in different ways which best suit the situations. Poverty is defined in the study as an inability to attain a minimum material standard of living. This minimal standard of living is referred to as the poverty line.

There are different factors that cause poverty in a community and in a country at large. These causes usually arise from individuals or from internal factors. Poverty in

the South African context mainly resulted from the apartheid era. In recent years, high levels of inequality in South Africa are also contributing to poverty.

A basket of poverty indicators which reflect the different dimensions of poverty and deprivation that have been identified as important can be collated. The essential indicators (or features) of poverty are alienation from the community, lack of paid secure jobs, food insecurity, inadequate housing, lack of basic services, and fragmentation of the family.

Certain issues need to be clarified in order to come to an agreeable measure of poverty. These issues include individuals and households, income, and differentiation between qualitative and quantitative measures of poverty which play an important role in measuring poverty. There are different poverty measures that can be used. Poverty lines were used in the study to analyse the number of poor households in Sharpeville in 2009 (using data extracted from Hatla, 2010). The headcount index describes the fraction of the population below the poverty line. The poverty gap was used in the study to measure the extent of poverty. Lastly, the dependency ratio was used, which refers to the ratio of the number of non-income earners that depends on others. The study used the poverty severity gap to determine how severely the Sharpeville households experience poverty.

Poverty will increase in the long-run as a result of higher inflation rates in the country. This is due to the fact that inflation cannot permanently reduce unemployment in the economy, which will consequently increase the number of the poor. South African monetary policy has made controlling inflation its top priority. This priority is also one of the many attempts by government which are aimed at reducing poverty and the impact of inflation on the poor, as the poor are the ones who suffer the most from inflation.

Inflation can be defined in different terms, but, for the purpose of this study, Inflation was described as a rise in the general level of prices of goods and services in an economy over a period of time. Any process that makes money without offering something in trade for that money causes inflation. For the purpose of this study, inflation rate was assumed to be constant for all households in Sharpeville.

Inflation is the most important concern of people in South Africa as it badly affects the standard of living. This is due to many reasons. Firstly, the rate of inflation these years is much higher. Secondly, inflation in these years co-exists with a high rate of unemployment, which is a new phenomenon and as such makes it difficult to control inflation. The continuous rise in world oil prices affects the South African economy negatively, as it results in an increase in food prices.

The effect of inflation on the income of the poor is more likely to differ between cyclical and longer-term perspectives. An increase in inflation reduces the purchasing power. This will lead to smaller quantities of goods for the same amount of money. An increase in prices will inevitably hurt the poor. The poor are more vulnerable to the effects of inflation than the rich.

Regression analysis was used in the study to determine the relationship between poverty and inflation in Sharpeville, using data extracted from the study by Hatla (2010). The variables that were used in the study to determine the relationship between poverty and inflation were employment, the level of education, the age of individuals, income, and the household expenditure. The study used a descriptive design to analyse the 79 household sample from the survey conducted in 2009 by Hatla (2010).

The household size in Sharpeville was estimated at 3 persons per household in 2009. The dependency ratio (which is an indication of the number of persons who depend on the income of one earner) was estimated at 4.7. The household size consisted of a minimum number of 1 member; the household with the largest number of members consisted of 8. The average size of households in Sharpeville was estimated at 3.696203, and the standard variation was estimated at 1.417423.

The estimated minimum income received per Sharpeville household in 2009 was 0 per month, the maximum amounted to R3780 per household per month and the average amount spent a month by Sharpeville households was R213.7975. This indicated that there were higher inequality levels in the community. The standard deviation was 552.9601 and the probability was 1758.141. The gap between the poverty line and the mean income of the poor, 0 in this case, indicated there was a large depth of poverty among the poor population in Sharpeville.

The average expenditure in Sharpeville was R1 438.594 per month. The lowest expenditure was 0 for young individuals at minimum of 15 years of age, meaning that this population group was not economically active. This population group was dependent on others to provide for them. The maximum expenditure amount level per month was R4959, which raised concerns about the entitlements or earnings, due to the fact that the higher expenditure per month was higher than the highest income of R3780 per month. This means that households were more likely to spend their future earnings (could be by means of on-going debts ) or they could simply be selling their assets (investments) to maintain the standard of living, which raises much concern as this would make them weaker members of society.

The poverty gap for those over the age of 65 in Sharpeville was 862.75. This means that the older population had a positive PGAP and that their incomes were lower than the poverty line. The youngest respondent was 15 with PGAP -3934.43. The PGAP for population in the 15 years age group was negative and their incomes were higher than the poverty line, due to the fact that they did not work and as such they did not form part of the economically active population. The mean poverty gap measured in terms of age was -1974.67, the standard deviation was 883.2201 and the probability was 0.433407. This indicated that there was a large difference between the PGAP for older population and that for younger population.

Different variables were correlated in the study to determine the relationship between poverty and inflation in Sharpeville. The variables used in the study were employment, educational level, age, income, and expenditure. The regression analysis was used to determine the relationship between poverty and inflation in Sharpeville. Eviews was used in the study to analyse data.

### **5.3 CONCLUSIONS**

A large number of people in Sharpeville live in poverty. According to Hatla (2010) an estimated 5 477 households out of 8 374 households in Sharpeville were estimated to be poor. These 5 477 poor households' income was below the poverty line.

An increase in the general price levels in the country increased the number of households that fell below the poverty line in Sharpeville. These households suffered from inflation as the costs of inflation in the economy are borne heavily by the poor.

This was due to these households' lack of wealth which that would have enabled them to diversify into inflation-proof assets. The regression analysis throughout the study proved there was a strong correlation between the household size and PGAP. The household size was negatively correlated to PGAP; this was significant even at the 1% level.

There was an inverse relationship between poverty and income. The discussions throughout the study supported this argument. The study showed that as income increased the PGAP narrowed, signifying lower levels of poverty. This led to an improvement in household development. The effect of inflation was that it eroded the buying power of economic agents, thereby making them worse off by taking them to a lower indifference curve.

Consumption and welfare of the economy are affected by rising prices in the economy. Rising prices negatively affect the expenditure patterns of the poor. Poverty is affected by inflation through the expenditure path. The purchasing power of the households' income was reduced by an increase in inflation. This led households to move into poverty, holding other factors constant. Therefore EXPINFL was negatively related to PGAP.

#### **5.4 RECOMMENDATIONS**

From this study there are a few recommendations that could be implemented to not only alleviating the effects of inflation on poverty, but also to improve the overall state of households. These recommendations are given below:

- Government assistance could be of great help to those households without income. As indicated on the survey, some of the poor households in Sharpeville are willing to work, but unfortunately cannot find jobs. Members of these households have gardening and farming skills. As such government can assist these households by financing them to start self-sustaining gardening services and small scale farming projects so that they can earn income.
- In addition to providing job opportunities for those individuals that are willing to work, the government and businesses should provide these individual households whose income levels are low (and the greater probability of them

being affected by poverty) with business funding to enable them to start their own businesses.

- Government need to provide training and skills to those individuals without appropriate training and skills so that they can be employable or be able to start their own businesses for them to sustain a minimum standard of living.
- The government and the private sector should provide financial assistance to those individuals who are willing to further their education but cannot due to financial constraints. Human capital will make these individuals employable and that can move out of the poverty trap and be able to deal to some extent with the effects of rising prices.
- The private sector, government and NGOs can help the poor households in Sharpeville by providing them with information on how and where to get help. Most of the people in the township are suffering from poverty and negatively affected by rising prices, whilst they possess some skills because they don't have information on how do go about utilising those skills to their advantage.

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## ANNEXURE A

### METHODOLOGY FOR MEASURING POVERTY

Annexure A describes the methodology for measuring poverty used by Sekatane (2004).

Following the guidelines of the World Bank, a poor household is defined as a household whose combined income of all its members is less than the HSL as determined for the specific household. If the combined income of a household is described by  $y_i$  and the poverty line (HSL) of the same household is described by  $z_i$ , the extent of poverty,  $P_i$ , of this household is described by  $P_i(y_i; z_i)$ .

The headcount index is defined as the fraction of the population below the poverty line. In this report the headcount index is adapted to indicate the fraction of households that fall below their individual poverty lines, and is described by means of the equation:

$$H(y; z) = M/N$$

Where:  $H$  = the fraction of households below the poverty line;

$y$  = household income;

$z$  = the poverty line of households;

$M$  = the number of households with incomes less than  $z$ ;

$N$  = the total number of households.

The poverty gap usually measures the average shortfall of the incomes of the poor from the poverty line while the poverty gap index measures the extent of the shortfall of incomes below the poverty line. In this report the poverty gap index is adapted to be a measure of a specific household, described by the equation:

$$R_i(y; z) = (z_i - y_i)/z_i$$

Where:  $R_i$  = the income shortfall of a household expressed as a

proportion of the household's poverty line;

$y_i$  = the income of a specific household; and  $z_i$  = the poverty line of a specific household. The poverty gap of an individual household (in monetary terms) can therefore be expressed by the equation:

$$G_i(y; z) = z_i - y_i$$

Where:  $G_i$  = the income shortfall of a household;

$y_i$  = the income of a specific household; and

$z_i$  = the poverty line of a specific household.

From the three equations above it is clear that the poverty gap can only be reduced by increasing the household income.

Source: Sekatane, 2004

## **ANNEXURE B**

### **HOUSEHOLD SURVEY BY HATLA (2009)**

The data collected by Hatla (2009) was extracted from questionnaires (in Annexure C) that were designed to solicit information from the residents of the township. The household survey was conducted by obtaining maps for Sharpeville township/squatter areas and a sample stratification was designed on account of the geographical distribution and concentration of people in the area. Questionnaires were designed to obtain the desired information. The area was divided into different sections and the questionnaires were apportioned evenly among the inhabited sites.

Plots/sites at which field workers were supposed to complete questionnaires were identified individually from the map before the field workers went out. However, where people could not be obtained for an interview, or where it was impossible to trace the household, a next pre-selected household was interviewed. Information was obtained from the breadwinner or the spouse. In instances when both the spouse and the breadwinner were not available an immediate family member was interviewed, but such a member had to be over the age of 18 years.

## ANNEXURE C

### HATLA'S HOUSEHOLD QUESTIONNAIRE NOVEMBER 2009

*N.B.: The information in this questionnaire will be treated in strict confidence. (November 2009)*

Please note that the Head of the Household should preferably answer this questionnaire.

|             |                            |              |                   |
|-------------|----------------------------|--------------|-------------------|
| SHARPEVILLE | Section: Old / RDP / shack | Date:        | Questionnaire no: |
| Street:     | House number:              | Interviewer: |                   |

#### A: BACKGROUND INFORMATION

##### 1. What is the position of the respondent in the Household? Cross \*

|                   |                 |                        |         |
|-------------------|-----------------|------------------------|---------|
| Head of household | Spouse or child | Extended family member | Boarder |
|-------------------|-----------------|------------------------|---------|

##### 2. How many housing units are on the site?

##### 3. How many people stay permanently on the site?

##### 4. How long have you (respondent) stayed in the Vaal Triangle (years)?

#### B: ENVIRONMENTAL

##### 5. How do you feel about the environment in which you stay? (Mark 2 options) \*

|                             |                                     |                             |                                         |                            |
|-----------------------------|-------------------------------------|-----------------------------|-----------------------------------------|----------------------------|
| 1. It is clean and pleasant | 2. It is littered, untidy and dirty | 3. Indifferent – No opinion | 4. Something should be done to clean it | 5. It can be left as it is |
|-----------------------------|-------------------------------------|-----------------------------|-----------------------------------------|----------------------------|

##### 6. If you feel it should be cleaned up, who should take the initiative and responsibility? (\* More)

|                     |                       |                                        |                                   |                   |
|---------------------|-----------------------|----------------------------------------|-----------------------------------|-------------------|
| 1. The municipality | 2. A street committee | 3. Everyone should be made responsible | 4. A campaign should be organised | 5. Other: explain |
|---------------------|-----------------------|----------------------------------------|-----------------------------------|-------------------|

##### 7. If you would have the money, what would you be prepared to pay monthly to have your environment cleaned up?

##### 8. How do you experience, especially in winter, the smoke levels (air pollution) in your area? \*

|                 |                      |             |                   |                                   |
|-----------------|----------------------|-------------|-------------------|-----------------------------------|
| 1. Not affected | 2. Slightly affected | 3. Affected | 4. Badly affected | 5. Unbearable (Severely Affected) |
|-----------------|----------------------|-------------|-------------------|-----------------------------------|

##### 9. If you are making fire for cooking & heating purposes, would you like to be introduced to technologies that will reduce the smoke levels at your house? \*

|                                                             |                                                |                                            |                                   |                               |
|-------------------------------------------------------------|------------------------------------------------|--------------------------------------------|-----------------------------------|-------------------------------|
| 1. Not making fire: using electricity for cooking & heating | 2. Making coal / wood fire: but not interested | 3. Making coal / wood fire: And interested | 4. Using paraffin: Not interested | 5. Using paraffin: Interested |
|-------------------------------------------------------------|------------------------------------------------|--------------------------------------------|-----------------------------------|-------------------------------|

##### 10. What would you be prepared to pay monthly to have your environment smoke-free?

##### a) What % of the smoke pollution do you think comes from industry? al fires?

##### b) Number of persons in your household whose health is affected by air pollution?

##### c) What are most of them suffering from? \_\_\_\_\_

##### 11. How do you experience, especially in winter, the dust levels in your area? \*

|                 |                      |             |                   |                                   |
|-----------------|----------------------|-------------|-------------------|-----------------------------------|
| 1. Not affected | 2. Slightly affected | 3. Affected | 4. Badly affected | 5. Unbearable (Severely Affected) |
|-----------------|----------------------|-------------|-------------------|-----------------------------------|

##### 12. What would you be prepared to pay monthly to have your environment dust free?

##### 13. Especially in the spring & summer some people are using amplifiers to make loud music.

How are you affected by this in your area? \*

|                                      |                                              |                                                     |                                      |                                                       |
|--------------------------------------|----------------------------------------------|-----------------------------------------------------|--------------------------------------|-------------------------------------------------------|
| 1. Not affected (quiet in the area). | 2. I hear it but I don't care (accepting it) | 3. I hear it and it is affecting me (don't like it) | 4. I hear it and I am badly affected | 5. I hear it and it is unbearable (severely affected) |
|--------------------------------------|----------------------------------------------|-----------------------------------------------------|--------------------------------------|-------------------------------------------------------|

**14. If you feel that something should be done in your area to reduce the noise levels, who should be responsible and what should be done? (Mark \* more than one option)**

|                                                                          |                                                                    |                                                                            |                                                                               |                                                                                 |
|--------------------------------------------------------------------------|--------------------------------------------------------------------|----------------------------------------------------------------------------|-------------------------------------------------------------------------------|---------------------------------------------------------------------------------|
| 1. The municipality should control & restrict people to play loud music. | 2. The police should control & restrict people to play loud music. | 3. A street committee should control & restrict people to play loud music. | 4. People who disturb the neighbourhood with noise should be fined / punished | 5. The instruments of those who disturb the neighbourhood should be confiscated |
|--------------------------------------------------------------------------|--------------------------------------------------------------------|----------------------------------------------------------------------------|-------------------------------------------------------------------------------|---------------------------------------------------------------------------------|

**15. If you would have the money, what would you be prepared to pay monthly to have your environment quiet?**

**16. Has any person in your household been a victim of crime in the last 12 months?**

Yes No

**17. What kind of crime? (Can mark \* more than one option)**

|            |            |         |           |              |          |
|------------|------------|---------|-----------|--------------|----------|
| 1. Assault | 2. Robbery | 3. Rape | 4. Murder | 5. Abduction | 6. Other |
|------------|------------|---------|-----------|--------------|----------|

### **C: CONSUMPTION**

**18. How much of the following items does your household buy per week/per month & about how much does your household spend on these items per week/per month?**

| Product           | Kilograms / litres per week | Kilograms / litres per month | Rand per week | Rand per month | Town ✓ | Township ✓ |
|-------------------|-----------------------------|------------------------------|---------------|----------------|--------|------------|
| 1. Maize Meal     |                             |                              |               |                |        |            |
| 2. Bread          |                             |                              |               |                |        |            |
| 3. Meat / chicken |                             |                              |               |                |        |            |
| 4. Vegetables     |                             |                              |               |                |        |            |
| 5. Milk           |                             |                              |               |                |        |            |
| 6. Washing powder |                             |                              |               |                |        |            |
| 7. Coal           |                             |                              |               |                |        |            |
| 8. Paraffin       |                             |                              |               |                |        |            |

**19. How does your household spend their income monthly?**

| Item                                              | Rand per month | Name of shop | Town | T/ship |    |
|---------------------------------------------------|----------------|--------------|------|--------|----|
| Housing (Rent/Bond)                               |                |              |      |        | 1  |
| Water                                             |                |              |      |        | 2  |
| Electricity                                       |                |              |      |        | 3  |
| Other energy (coal, paraffin etc)                 |                |              |      |        | 4  |
| Food                                              |                |              |      |        | 5  |
| Cleaning materials                                |                |              |      |        | 6  |
| Cigarettes & Tobacco                              |                |              |      |        | 7  |
| Beer, wine & spirits                              |                |              |      |        | 8  |
| Transport:<br>Taxi.....<br>Car.....<br>Other..... |                | Total        |      |        | 9  |
| Clothing                                          |                |              |      |        | 10 |
| School                                            |                |              |      |        | 11 |
| Entertainment                                     |                |              |      |        | 12 |
| Medical Expenses                                  |                |              |      |        | 13 |
| Insurance                                         |                |              |      |        | 14 |
| GAMBLING: Lotto.....                              |                |              |      |        | 15 |
| Horseracing.....                                  |                |              |      |        | 16 |
| Other (casino etc).....                           |                |              |      |        | 17 |
| Savings                                           |                |              |      |        | 18 |
| Licenses (e.g. TV, Vehicle)                       |                |              |      |        | 19 |
| Rates and taxes                                   |                |              |      |        | 20 |
| Housekeeping Services (e.g. Garden)               |                |              |      |        | 21 |
| Telephone.....                                    |                |              |      |        | 22 |
| Cell.....                                         |                |              |      |        | 23 |
| Car Repayment                                     |                |              |      |        | 24 |
| Loan repayments                                   |                |              |      |        | 25 |
| Furniture                                         |                |              |      |        | 26 |
| Other: Specify                                    |                |              |      |        | 27 |

# D: EMPLOYMENT & EDUCATION STATUS

## 20. How does your household spend their income monthly?

|                                                                      |   |   |   |   |   |   |   |   |
|----------------------------------------------------------------------|---|---|---|---|---|---|---|---|
| 1. Number of people in the household                                 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 2. Composition of members<br>(Code list 2)                           |   |   |   |   |   |   |   |   |
| 3. Age of each member in years                                       |   |   |   |   |   |   |   |   |
| 4. Sex (Male = 1; female = 2)                                        |   |   |   |   |   |   |   |   |
| 5. Marital Status (code list 5)                                      |   |   |   |   |   |   |   |   |
| 6. Qualifications (still at school)<br>(Code list 6)                 |   |   |   |   |   |   |   |   |
| 7. Qualifications (not at school)<br>(Code list 7)                   |   |   |   |   |   |   |   |   |
| 8. Employment Status<br>(Code list 8)                                |   |   |   |   |   |   |   |   |
| 9. Sector of employment<br>(Code list 9)                             |   |   |   |   |   |   |   |   |
| 10. Has your salary increased as a<br>result of minimum wages? (10)  |   |   |   |   |   |   |   |   |
| 11. Can employer afford increases<br>because of minimum wages?       |   |   |   |   |   |   |   |   |
| 12. Working hours been reduced<br>because of minimum wages?          |   |   |   |   |   |   |   |   |
| 13. (10 – 17 for <b>unemployed</b> only)<br>Skills of the unemployed |   |   |   |   |   |   |   |   |
| 14. Duration of unemployment in<br>years                             |   |   |   |   |   |   |   |   |
| 15. Dismissed because employer could<br>not afford minimum wage      |   |   |   |   |   |   |   |   |
| 16. Willingness & type of Skills<br>Training required (code list 13) |   |   |   |   |   |   |   |   |
| 17. What is the Unemployed doing<br>presently                        |   |   |   |   |   |   |   |   |
| 18. Do you have matric exemption?                                    |   |   |   |   |   |   |   |   |
| 19. If persons would like to study<br>further: preferences           |   |   |   |   |   |   |   |   |
| 20. Preferences to start self-sustaining<br>activities               |   |   |   |   |   |   |   |   |
| 21. Minimum wage required to take a<br>job                           |   |   |   |   |   |   |   |   |
| 22. <b>Income:</b> Wages/salaries per month<br>(Take home pay)       |   |   |   |   |   |   |   |   |
| 23. Pension/Remittance                                               |   |   |   |   |   |   |   |   |
| 24. Child Grant from Government                                      |   |   |   |   |   |   |   |   |
| 25. Other Grants from Government                                     |   |   |   |   |   |   |   |   |
| 26. Help (family/relatives/etc)<br>Also help in kind                 |   |   |   |   |   |   |   |   |
| 27. Informal activities (e.g. SMME)                                  |   |   |   |   |   |   |   |   |
| 28. Subsidies (e.g. Housing)                                         |   |   |   |   |   |   |   |   |
| 29. Interest/dividends                                               |   |   |   |   |   |   |   |   |
| 30. Other (Specify)                                                  |   |   |   |   |   |   |   |   |

## 21. Does someone in your household have a vegetable garden?.....

22. Would someone in your household be interested in receiving assistance to start a food garden in your yard? 

|     |    |
|-----|----|
| Yes | No |
|-----|----|
23. Would someone in your household like to be involved in a community food garden project? 

|     |    |
|-----|----|
| Yes | No |
|-----|----|
24. Would someone in your household be interested in farming? 

|     |    |
|-----|----|
| Yes | No |
|-----|----|
25. Do you know small farmers in the area? If so, give the address: 

|     |    |
|-----|----|
| Yes | No |
|-----|----|

  
\_\_\_\_\_
26. Does someone in your household own a sewing machine? 

|     |    |
|-----|----|
| Yes | No |
|-----|----|
27. Do you know a clothing manufacturing business in your township? If so, give the address: 

|     |    |
|-----|----|
| Yes | No |
|-----|----|

  
\_\_\_\_\_
28. Do you know any small scale welding / metal work firm in the township? If so, give the address: 

|     |    |
|-----|----|
| Yes | No |
|-----|----|

  
\_\_\_\_\_
29. Has any member of your household operated a SMME / still operating one? If so, what kind of SMME? 

|     |    |
|-----|----|
| Yes | No |
|-----|----|

  
\_\_\_\_\_
30. Taking into account your skills (or that of your household members), would you or someone in your household (unemployed persons) be interested in starting your own business or rather work together with others in a cooperative? 

|              |             |
|--------------|-------------|
| Own business | Cooperative |
|--------------|-------------|
31. What kind of business would you like to start?\_\_\_\_\_
32. If you would like to start your own business, what kind of support do you think you will need?  
\_\_\_\_\_
33. Do you know somebody with a catering business in your township? If so, give the address: 

|     |    |
|-----|----|
| Yes | No |
|-----|----|

  
\_\_\_\_\_
34. Do you think you will get a job if you are better trained? 

|     |    |
|-----|----|
| Yes | No |
|-----|----|

**THANK YOU FOR YOUR COOPERATION!**

Source: Hatla, 2010