

Printed by: Xerox: Ivyline Technologies (Pty) Ltd

North-West University

Vaal Triangle Campus

November 2015

ISBN 978-1-86822-668-9

INAUGURAL LECTURE

Urban food insecurity: A case for conditional cash grants?

by

PROF WYNAND GROBLER

Professor in the School of Economic Sciences

In the Faculty of Economic Sciences and Information Technology

at the

Vaal Triangle Campus of the North-West University

12 November 2015

Table of Contents

Abstract.....	1
1. Introduction.....	1
2. Understanding food insecurity and the measurement of food insecurity.....	3
3. Global food insecurity.....	5
4. Food insecurity in Africa.....	6
5. Food insecurity in South Africa.....	7
6. Urbanisation and food insecurity in South African urban areas.....	8
7. Social security in South Africa.....	10
8. Food insecurity in a typical low-income neighbourhood in South Africa.....	12
8.1 Food insecurity status in a typical low-income neighbourhood.....	12
8.2 Determinants of urban food insecurity.....	12
8.3 Social grants and household dietary diversity in a low-income neighbourhood....	16
8.4 Perceptions of the causes of poverty and food insecurity.....	21
8.5 Food-insecure household coping strategies in a low-income neighbourhood.....	27
9. International experience of social-security grants.....	29
10. Summary and conclusion.....	32
11. Recommendations for social security in South Africa.....	33
References.....	34

Urban food insecurity: A case for conditional cash grants

Wynand CJ Grobler

Inaugural Speech: 12 November 2015

Abstract

Food security, as a concept, can be traced back to the mid-1970s when the UN World Food Conference set up the Committee on World Food Security in 1975. In the early-1980s, the Committee on World Food Security expanded the debate around food security and adopted a multi-dimensional concept of food security, which included not only the availability of food but also access to food and stability around food security. In addition to the Rome Declaration, mayors and city leaders from all over the world signed the Barcelona Declaration in 1999, which stated the importance of ensuring access to food by low-income constituencies in developing countries as a main objective of local development policies and programmes. Despite this, 794.6 million people around the world, with 232.5 million in Africa and 220.0 million in sub-Saharan Africa remained undernourished in 2014. Several studies in the 1990s predicted that the focus on poverty, including food security, would shift to urban areas, as poor households in urban areas may experience the ever increasing economic and demographic challenges associated with urbanisation. In South Africa, it is predicted that the urban population will increase from 30.8 million in 2010 to 38.1 million in 2030, which has led to food insecurity becoming recognised as an increasingly urban phenomenon. In order to combat the negative consequences of poverty and food insecurity, the importance of social-protection policies in the development policy agendas of many countries has grown, given that such policies tackle the issues of poverty and food vulnerability directly at the household level. In this regard, social-security programmes in South Africa have expanded since 1994 to the extent that the number of people receiving social grants increased from 2.4 million in 1989 to 16.7 million in 2015. However, there is still no consensus amongst scholars as to whether these social transfers should be conditional or unconditional. The on-going evidence of unacceptable levels of food insecurity in South African urban areas gives rise to the following questions, namely are social grants adequate to reduce food insecurity, and are unconditional social grants the most suitable solution for addressing the problem in the context of increasing levels of urbanisation?

1. Introduction

Food Security, as a concept, can be traced back to the mid-1970s when the UN World Food Conference set up the Committee on World Food Security in 1975. In the early 1980s, the Committee on World Food Security expanded the debate around food security and adopted a multi-dimensional concept of food security, which included not only the availability of food but also **access** to food and stability around food security (FAO, 2003). This development recognises that food availability may not be the only condition for food security as households and the like may not have the financial or productive resources necessary to acquire food. Against this background, heads of state at the 1996 World Food Summit signed the Rome Declaration on World Food Security, re-affirming:

“The right of everyone to have **access** to safe and nutritious food, consistent with the right to adequate food, and the fundamental right of everyone to be free from hunger” (FAO, 1996)

In addition to the Rome Declaration, mayors and city leaders from all over the world signed the Barcelona Declaration in 1999 stating:

“Recognize the importance to ensure access to food by low-income constituencies in developing countries as a main objective of local development policies and programs” (FAO, 1999)

Despite this, 794.6 million people around the world, with 232.5 million in Africa and 220.0 million in sub-Saharan Africa remained undernourished in 2014 (FAO, 2015). In sub-Saharan Africa, this figure represented approximately 23.2 percent of the total population in 2014 (FAO, 2015). The significant percentage of individuals who remain undernourished in sub-Saharan Africa provides a clear indication that food security is a critical problem in the region. The United States Agency for International Development (USAID) reported in a 2010 study that more than 45 percent of households in sub-Saharan Africa may be classified as being moderately or severely food insecure (Deitchler *et al.*, 2010). In this regard, South Africa is no exception. Even though the percentage of South African households vulnerable to hunger declined from 23.8 percent in 2002 to 11.5 percent in 2011, an estimated 21.1 percent of South Africans still experience difficulty in accessing food (Stats SA, 2011). While South Africa may be viewed as being relatively food secure on the national level, recent studies indicate that at the household level there is significant levels of severe food insecurity (Grobler & Dunga, 2015; Grobler, 2014; Grobler, 2013; Manyamba *et al.*, 2012; Kirkland, Kemp, Hunter & Twine, 2011; Oldewage-Theron, Dicks & Napier, 2006).

Several studies in the 1990s predicted that the focus on poverty, including food security, would shift to urban areas, as poor households in urban areas may experience the ever increasing economic and demographic challenges associated with urbanisation (De Haan, 1997; Moser, 1996; UNICEF, 1994). In South Africa, food insecurity is recognised as being an increasingly urban phenomenon (Battersby, 2011, Hampwaye, 2008; May & Rogerson, 1995). In this regard, the urban population in South Africa is predicted to grow from 30.8 million in 2010 to 38.1 million in 2030 (UNHABITAT, 2015). This predicted rapid rate of urbanisation is expected to create several challenges for policy makers, given that rapid urbanisation gives rise to demographic and economic challenges, which typically lead to increased levels of food insecurity (Ravallion, 2002). Using the Household Food Insecurity Access Scale (HFIAS), a recent study of poor communities in 11 cities in nine different countries in Southern Africa showed that more than 60 percent of households were severely food insecure (Frayne *et al.*, 2010). The absence of safety nets found in rural areas such as agricultural land, means that many food-insecure households in urban areas will need to rely increasingly on government social-security programmes.

The importance of social-protection policies in the development policy agendas of many countries has grown, given that such policies tackle poverty and food vulnerability directly at the household level (Committee on World Food Security, 2012). In this regard, the UK Institute of Development Studies (Devereux & Sabates-Wheeler, 2004) defines social protection as:

“ ..all initiatives that: (1) provide income(cash) or consumption(food) transfers to the poor; (2) protect the vulnerability against livelihood risks; (3) enhance the social status and rights of the excluded and marginalized.”

In South Africa, social-security programmes have expanded since 1994 to the extent that the number of people receiving social grants increased from 2.4 million in 1989 to 16.7 million in 2015. These social grants include the old age grant, war veteran’s grant, disability grant, grant in aid, child support grant, foster child grant and care dependency grant (Department of Social Development, 2015).

Despite this significant expansion in social-security programmes, there is still no consensus amongst scholars as to whether these social transfers should be conditional or unconditional (Bailey, 2013; Baird, *et al.*, 2010; Gitter, 2010; Gentilini, 2007). In the case of unconditional grants, no conditions are imposed for receiving a grant from government. In contrast, the

receipt of a conditional grant requires compliance to certain specified conditions. For example, a conditional grant may require compulsory health checks for a child in the case of a child support grant. In this context Gitter (2010) indicates:

“One reason cash or food transfers can be insufficient to improve nutrition is that households may not have a complete understanding of how best to allocate their households food budget...”

Maluccio and Flores (2005) found that the conditional grant in Nicaragua resulted in substantial increases in food expenditure at the household level.

Evidence of unacceptable levels of food insecurity in urban areas in South Africa gives rise the following questions, namely are social grants adequate to reduce food insecurity, and are unconditional social grants the most suitable solution for addressing the problem in the context of increasing levels of urbanisation?

In the next section, the concept of food insecurity is discussed.

2. Understanding food insecurity and the measurement of food insecurity

The focus on food security during the early 1970s was directed at the volume and stability of food supply and, in this regard, food security was defined during the 1974 World Food Summit as:

“**Availability** at all times of adequate world food supplies of basic foodstuffs to sustain a steady expansion of food consumption and to offset fluctuations in production and prices”

Almost a decade later in 1983, the Food and Agricultural Organisation (FAO, 1983) re-appraised the definition to include **access** to food:

“Ensuring that all people at all times have both physical and **economic access** to all basic food that they need”

In 1996, The World Food Summit (FAO, 1996) adopted the following definition of food security:

“Food security, at the individual, household, national, regional and global levels is achieved when all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life”

In 2001, the FAO (2001) altered the definition to:

“Food security is a situation that exist when all people, at all times, have physical, social, and economic access to sufficient, safe and nutritious food that meet their dietary needs and food preferences for an active and healthy life”

As such, three dimensions for food security exist, namely food availability (availability of sufficient quantities of appropriate food), food access (adequate income or other resources to buy food) and food utilisation (adequate quality of food) (USAID, 1992). Moser (1998) and Tawodzera (2011) add a fourth dimension, namely vulnerability to food insecurity. This includes unemployment and household size as factors that may increase the vulnerability of a household to be food insecure.

When the concept of nutrition is taken into account, Anderson (1990) defines food insecurity as:

“When the availability of nutritional adequate and safe foods or the **ability to acquire** acceptable foods in socially acceptable ways is limited or uncertain”

The measurement of food insecurity presents several challenges and the assessment methodologies applied differ and include both qualitative and quantitative studies (Migotto *et al.*, 2006). A number of studies have provided salient insights into the experience of households with regard to food insecurity. These experiences include feelings of anxiety over food shortages, perceptions that food is of an insufficient quantity, perceptions that food is of an insufficient quality, and negative feelings surrounding socially-unacceptable means of obtaining food (Radimer, Olson, Greene, Cambell & Habicht, 1992; Radimer, Olson & Campbell, 1990).

In order to measure food insecurity, Migotto *et al.* (2006) identify five general types of methodologies, namely measures of undernourishment, measures of food intake, measures of nutritional status, measures of food access in terms of income, and measures of hunger vulnerability. In this regard, the Funded Food and Nutritional Technical Assistance (FANTA) project established by the United States Agency for International Development (USAID) developed the HFIAS, which has been validated cross-culturally (Deitchler, Ballard, Swindale & Coates, 2010).

The HFIAS is a nine-question food-insecurity scale that includes questions measuring anxiety about food supply, quality of food consumed, quantity of food consumed, and experiences of sleep hungry or going all day and night without eating (Deitchler, Ballard, Swindale & Coates, 2010). The nine questions included in the HFIAS are shown in Table 1.

Table 1: Household Food Insecurity Access Scale

No	Occurrence questions
1	In the past four weeks did you worry that your household would not have enough food?
2	In the past four weeks, were you or any household member not able to eat the kinds of food you preferred because of a lack of resources?
3	In the past four weeks, did you or any household member have to eat a limited variety of foods due to a lack of resources?
4	In the past four weeks, did you or any household member have to eat some foods that you really did not want to eat because of a lack of resources to obtain other types of food?
5	In the past four weeks, did you or any household member have to eat a smaller meal than you felt you needed because there was not enough food?
6	In the past four weeks, did you or any member have to eat fewer meals in a day because there was not enough food?
7	In the past four weeks, was there ever no food to eat of any kind in your household because of lack of resources to get food?
8	In the past four weeks, did you or any household member go to sleep at night hungry because there was not enough food?
9	In the past four weeks, did you or any household member go a whole day and night without eating anything because there was not enough food?

Source: USAID (1992)

The HFIAS score calculated is a continuous measure of the degree of food insecurity (access) in the household in the past four weeks (30 days), adding up to a maximum score of 27 for a household that has severe food insecurity to a minimum score of zero for a household that is food secure. Households are then classified into categories, starting with food-secure households (Category 1), mildly food-insecure households (Category 2), moderately food-insecure households (Category 3) and severely food-insecure households (Category 4).

Respondents are requested to answer Yes or No to the nine questions, and indicate how often this happened using the following responses, namely rarely (once or twice in the past four weeks), sometimes (three to ten times in the past four weeks) or often (more than ten times in the past four weeks). There are four types of indicators that can then be calculated, namely household food insecurity access-related conditions (a yes answer to Question 7 and a Response 3 to Question 7), household food insecurity access domains (a yes to Questions 2, 3 and 4), food insecurity access scale score (sum of the frequency-of-occurrence during the past four weeks for the nine food insecurity-related conditions, 0 to 27, where 27 indicates the highest level of insecurity), and household food insecurity access prevalence (HFIAP) (the HFIAP indicator categorises households into four levels, namely food secure, mildly food insecure, moderately food insecure, and severely food insecure).

In the next section, global food insecurity is discussed.

3. Global food insecurity

Despite the Millennium Development Goals that were supposed to be reached by 2015, there are still unacceptable levels of food insecurity in the world. When undernourishment, which is the extreme of food insecurity, is considered there were still 795 million people in the world who were undernourished in 2014 (FAO, 2015). However, as indicated in Table 2 and Figure 1, this represents an improvement from 1990 when 1 billion people were deemed undernourished globally.

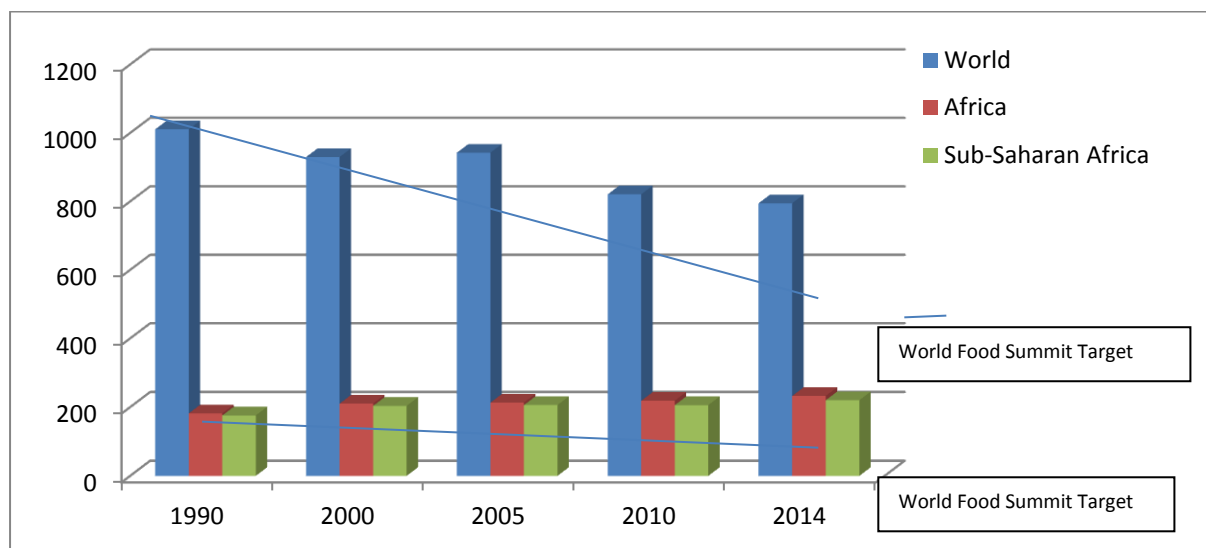
This represents a significant decrease in the number of people suffering from undernourishment between 1990 and 2014, especially considering that the world population grew by 1.9 billion people during that period (FAO, 2015). In contrast, the number of people classified as undernourished in Africa grew from 181.7 million in 1990 to 232.2 million in 2014 (FAO, 2015). Whilst the number of undernourished people in sub-Saharan Africa increased from 175.7 million in 1990 to 220.0 million in 2015, there was only a marginal increase in the number of undernourished people in Southern Africa from 3.1 million in 1990 to 3.2 million in 2014 (FAO, 2015).

Table 2: Number of undernourished people in the world (millions)

	1990	2000	2005	2010	2014
World	1010.6	929.6	942.3	820.7	794.6
Africa	181.7	210.2	213.0	218.5	232.5
Sub-Saharan Africa	175.7	203.6	206.0	205.7	220.0
Southern Africa	3.1	3.7	3.5	3.6	3.2

Source: FAO (2015)

Figure 1: Number of undernourished people in the world (millions)



Source: FAO (2015)

In 1996, during the World Food Summit, representatives of 182 governments pledged:

“to eradicate hunger in all countries, with an immediate view to reducing the number of undernourished people to half their present level no later than 2015”(FAO, 2015).

In addition to the pledge made at the World Food Summit in 1996, the Millennium Development Goals set in 2000, which were accepted by 189 countries, pledged to “half the proportion of hunger people in the world by 2015”(Millennium Development Goal 1) (United Nations, 2000).

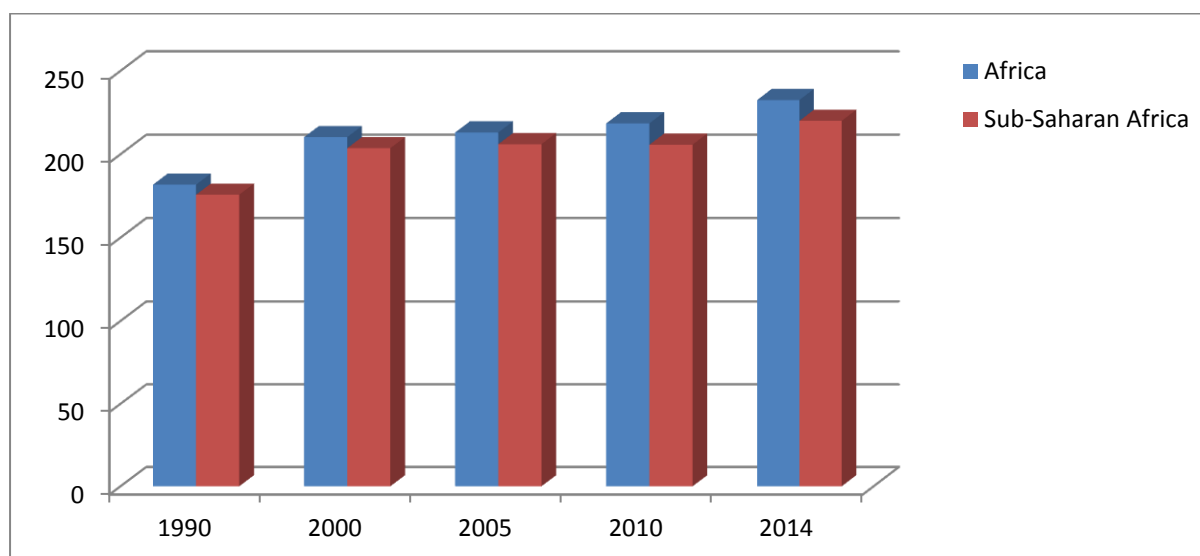
Whilst significant progress has been made in terms of the proportion of undernourished people in the world as a percentage of the total population, the World Food Summit target has not been achieved. Promisingly though, the Millennium Development Goals were almost met given that the percentage of undernourished people in the world decreased from 23.3 percent to 12.9 percent (FAO, 2015). When the spotlight is focused on Africa, the picture becomes more alarming with the number of undernourished people falling significantly short of the World Food Summit target and the Millennium Development Goals. In the following section, food insecurity in Africa is discussed.

4. Food insecurity in Africa

Undernourishment in Africa increased from 181.7 million individuals in 1990 to 232.5 million in 2014. Similarly, undernourishment in sub-Sahara Africa increased from 175.7 million individuals in 1990 to 220 million in 2014 (FAO, 2015). That being said, the number of people in sub-Sahara Africa who live on less than USD1.25 a day declined by 23 percent during the period 1993 to 2011 (World Bank, 2015).

Figure 2 shows the increase in the number of undernourished people in Africa and sub-Sahara Africa from 1990 to 2014.

Figure 2: Undernourishment in Africa (millions)



Source: FAO (2015)

As is evident from Figure 2, there was only a marginal increase from 3.1 million in 1990 to 3.2 million in 2014 in the number of undernourished people in Southern Africa (FAO, 2015). In the next section, food insecurity in South Africa is discussed.

5. Food insecurity in South Africa

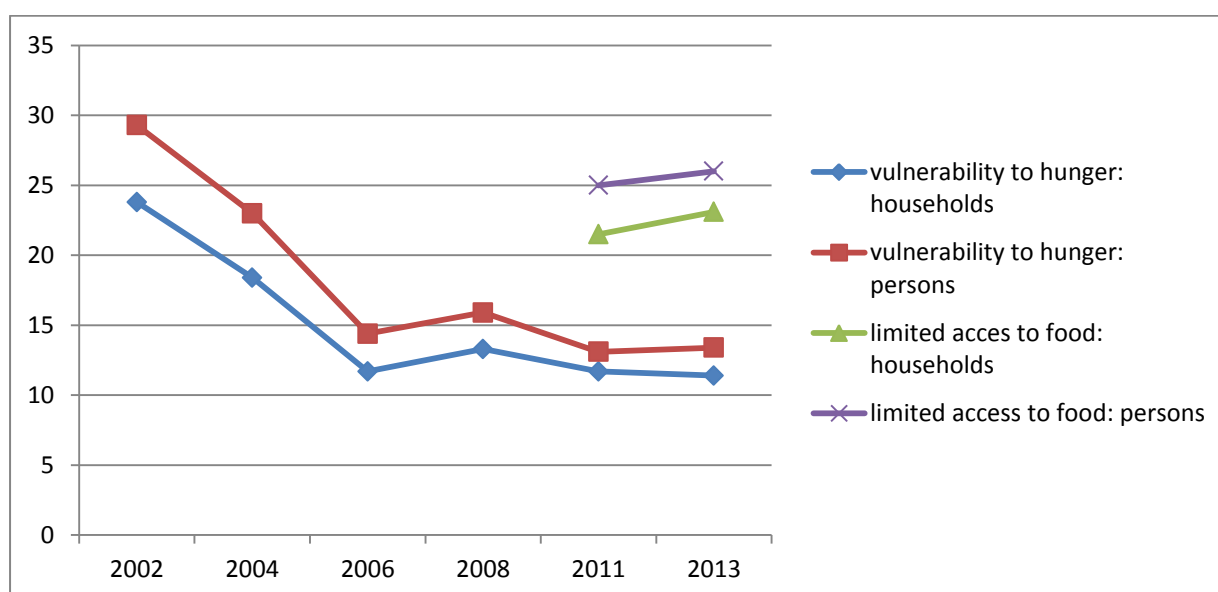
Food security may be considered at the national level, the community level or the household level (Anderson, 1990). Food security at the national level refers to a state where a country is able to manufacture, import, retain and sustain the food needed to support its population with minimum per capita nutritional standards. At the community level, food security is defined as the condition whereby a community has access to a safe, culturally-acceptable, nutritionally-adequate diet through a sustainable system that maximises community sustainability. Food security at the household level refers to the availability of and access to food in an individual's home (Du Toit *et al.*, 2011). For the purpose of this research, the focus is on food security at the household level.

In South Africa, the percentage of people vulnerable to hunger decreased from 29.3 percent in 2002 to 13.4 percent in 2013, while the percentage of households vulnerable to hunger decreased from 29.3 percent in 2002 to 13.4 percent in 2013 (Stats SA, 2015). Disturbingly though, the percentage of households with limited access to food increased from 21.5 percent in 2011 to 23.1 percent in 2013, and the percentage of persons with limited access to food increased from 25.0 percent in 2011 to 26.0 percent in 2013 (Stats SA, 2015). Table 3 and Figure 3 show the percentage of persons and households vulnerable to hunger from 2002 to 2013.

Table 3: Percentage persons and households vulnerable to hunger and limited access to food (2002-2013)

		2002	2004	2006	2008	2011	2013
Vulnerability to hunger	Households	23.8	18.4	11.7	13.3	11.7	11.4
	Persons	29.3	23.0	14.4	15.9	13.1	13.4
Limited access to food	Households					21.5	23.1
	Persons					25.0	26.0

Source: Stats SA (2015)

Figure 3: Percentage persons and households vulnerable to hunger and with limited access to food


Source: Stats SA (2015)

6. Urbanisation and food insecurity in South African urban areas

Several researchers have recognised the challenge of food insecurity in urban households (Mudimu, 1997; Mbiba, 1995; Atkinson, 1994; Drakakis-Smith 1994; Briggs, 1991). A recent baseline survey of poor communities in 11 cities across nine different countries in Southern Africa using the HFIAS revealed that in some cities in Southern Africa over 60 percent of households were severely food insecure (Frayne *et al.*, 2010). In low-income developing countries, it was found that food insecurity in urban areas was either the same or higher than in rural areas in 12 out of the 18 samples taken (Ahmed *et al.*, 2007).

A recent study of three areas in Johannesburg (Joubert Park, Alexandra and Orange Farm) showed that 56 percent of households are food insecure, with 27 percent being severely food insecure (Rudolph *et al.*, 2012). The findings of a similar study of low-income areas in Cape Town (Ocean view, Philippi and Kayelitsha) indicate that 80 percent of households can be considered as moderately to severely food insecure, while only 15 percent of households can be considered as food secure (Battersby, 2011). Table 4 outlines the results of the studies of Rudolph *et al.* (2012) and Battersby (2011).

Table 4: Food insecurity in Johannesburg and Cape Town low-income areas (percentage)

	Households in Johannesburg (Joubert Park, Alexandra and Orange Farm) (%)	Households in Cape Town (Ocean view, Philippi and Kayelitsha) (%)
Food secure	44.0	15.0
Mildly food insecure	14.0	5.0
Moderately food insecure	15.0	12.0
Severely food insecure	27.0	68.0

Source: Adapted from Rudolph *et al.*, (2012) & Battersby (2011)

In a study by Battersby (2011), food insecurity is identified as being an increasingly urban problem, something which is compounded by the lack of focused policies addressing food insecurity in urban settings. This suggests that food insecurity may pose new challenges to urban planners. The potential of urban poverty was already recognised in the 1990s, with several studies suggesting that poverty, specifically food insecurity, would probably shift to urban areas (De Haan, 1997; Moser, 1996; UNICEF, 1994). Generally, urban food insecurity is expected to be more prevalent in low-income areas (Mello *et al.*, 2010; Nord & Parker, 2010; Furness *et al.*, 2004). Research indicates that food availability may not be the only condition for food security though, especially if households lack the financial or productivity resources necessary to acquire food (Adato & Basset, 2012; Miller, Tsoka & Reichert, 2011; Migotto, Gero & Kathleen, 2006).

In South Africa, the urban population increased from 19.15 million in 1990 to 30.86 million in 2010, and forecasts suggest that this figure will increase to 38.20 million by 2030 (UNHABITAT, 2014). Table 5 and Figure 4 show the total actual and forecasted population urbanised in South Africa from 1990.

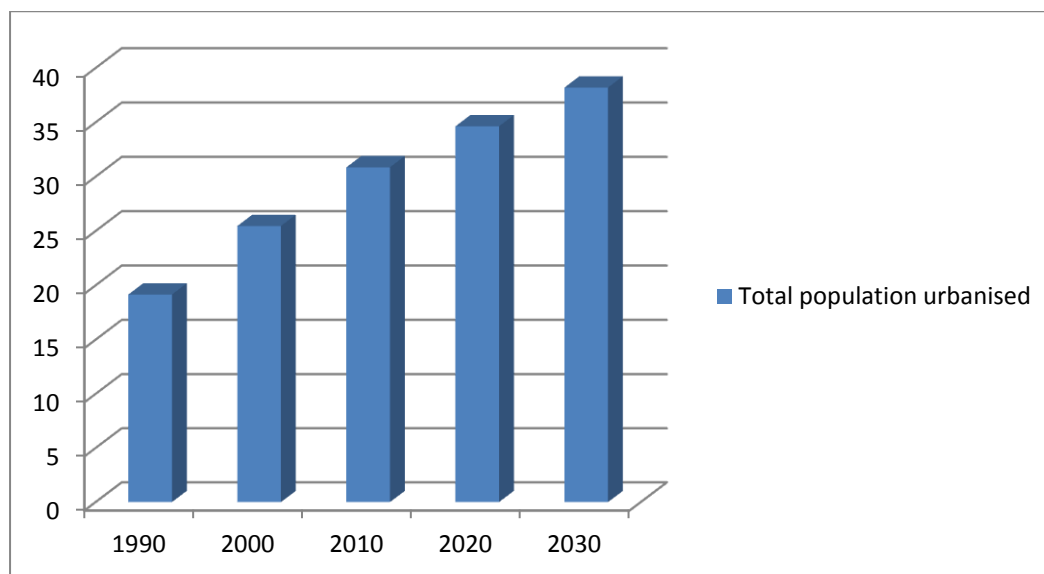
Table 5: Actual and forecasted population urbanised in South Africa (1990 to 2030)

	1990	2000	2010	2020	2030
Total population urbanised (millions)	19.15	25.46	30.86	34.63	38.20
Percentage of population urbanised	52.0	56.8	61.5	65.9	69.8

Source: UNHABITAT (2014)

This suggests that in the future, more South Africans will reside in urban areas, which, together with existing poverty in urban settings, will bring about new challenges for policy makers. The next section discusses social security in South Africa.

Figure 4: Actual and forecasted population urbanised in South Africa: Millions (1990-2030)



Source: UNHABITAT (2014)

7. Social security in South Africa

Section 27 of the South African Constitution declares that “everyone has the right to sufficient food” and that the State must within the constraints of its available resources take reasonable legislative and other measures to achieve this basic right. Against this background, the South African Government developed the Integrated Food Security Strategy (IFSS) in 2002. In 2011, the National Planning Commission identified food security as a “key shaping force” for South Africa (NPC, 2011). In August 2014, the National Policy on Food and Nutrition Security for South Africa was adopted (Government Gazette, 2014). According to this National Plan, food-assistance networks, nutrition education, local economic development, market participation and food nutrition risk management are at the core of the policy to alleviate food insecurity.

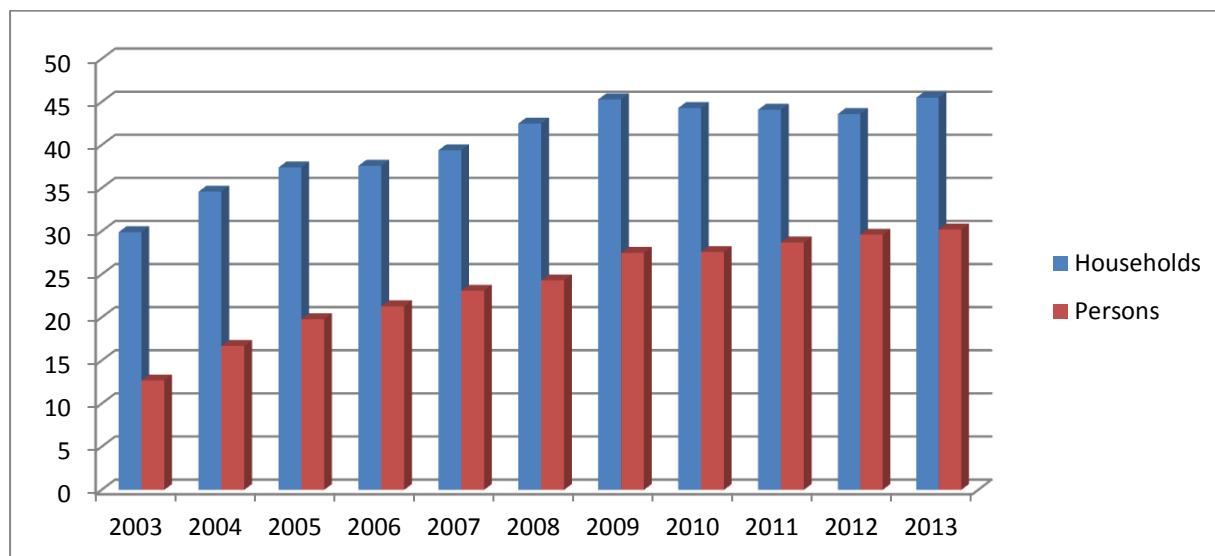
These initiatives, along with South Africa’s expansion of its social-security programmes after 1994, has resulted in the number of people receiving social grants increasing from 2.4 million in 1989 to 16.7 million people in 2014. The distribution of these social grants in 2014 was 18.56 percent for the old age grant, 0.001 percent for the war veteran’s grant, 6.59 percent for the disability grant, 0.71 percent for the grant in aid, 70.27 percent for the child-support grant, 3.09 percent for the foster child grant and 0.76 percent for the care-dependency grant (Department of Social Development, 2015). Table 6 and Figure 5 show the number of persons and households who benefited from social grants in South Africa from 2003 to 2013.

Table 6: Percentage of households and persons in South Africa who benefited from social grants (2003 to 2013)

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Households	29.9	34.6	37.4	37.6	39.4	42.5	45.3	44.3	44.1	43.6	45.5
Persons	12.7	16.7	19.8	21.3	23.1	24.3	27.5	27.6	28.7	29.6	30.2

Source: Stats SA (2015)

Figure 5: Percentage of households and persons in South Africa who benefited from social grants (2003 to 2013)

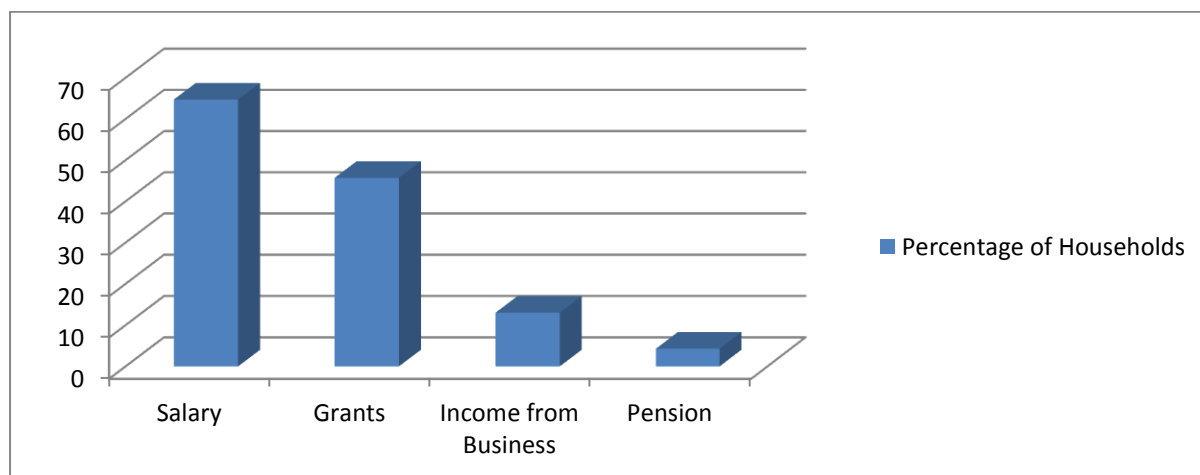


Source: Stats SA (2015)

Researchers concluded that cash transfers improve food security by improving food access and by providing households with the necessary income to purchase food (Reilly *et al.*, 1999). The literature indicates an increased spending on food by grant recipients (Fiszbein *et al.*, 2008; Gertler, 2005; Maluccio & Flores, 2005). This is confirmed by other studies (Lagarde, Haines & Palmer, 2008; Dufflo, 2000; Miller, Tsoka & Reichert, 2007) that found that social grants have a positive influence on food security.

In line with these findings, there are a number of studies that have found that social grants also have a positive influence on food security at the household level (Lagarde *et al.*, 2008; Van der Berg, 2006; Miller *et al.*, 2007; Dufflo, 2000). However, a study by Grobler (2015b) revealed that the existing grant allocations may not be sufficient to alleviate food insecurity significantly. In looking at the source of household income in South Africa, 45.7 percent of households indicate that social grants are the main source of income in their household. Figure 6 shows the sources of income of households in 2013.

Figure 6: Households main source of income in South Africa (2013)



Source: Stats SA (2015)

The next section provides an overview of food insecurity, the determinants of food insecurity, perceptions of poverty by food-insecure households, and spending patterns of food-insecure households in a typical low-income neighbourhood in South Africa.

8. Food insecurity in a typical low-income neighbourhood in South Africa

In this section, food insecurity in typical low-income neighbourhoods within the Emfuleni Municipal area of the Sedibeng Municipality District in southern Gauteng, South Africa is discussed based on the findings of several studies. Food insecurity in these low-income neighbourhoods is discussed with reference to the determinants of food insecurity, perceptions of poverty by food-insecure households, spending patterns of food-insecure households and coping strategies of food-insecure households in the area.

8.1 Food insecurity status in a typical low-income neighbourhood

In a study undertaken in Sharpeville and Bophelong, the HFIAS was administered to a sample of 580 households. The results of the study indicate that 60.86 percent of households are food insecure, with 35.0 percent of these households being severely food insecure. Only 39.14 percent of the households are food secure (Grobler, 2015a). These findings are in line with those of Rudolph *et al.* (2012). Table 7 show the food security status of households in the Bophelong and Sharpeville areas.

Table 7: Food security status of households in Bophelong and Sharpeville

HFIAS category	Number of households	Percentage
Food secure	227	39.14
Mildly food insecure	64	11.03
Moderately food insecure	86	14.83
Severely food insecure	203	35.00
Total	580	100.00

Source: Grobler (2015a)

8.2 Determinants of urban food insecurity

This section discusses the literature on the determinants of food insecurity and the modelling of food insecurity.

Literature on determinants of food-insecurity status and spending patterns

Food security is linked with various socio-economic variables that include the age of the head of the household (Mitiku *et al.*, 2012; Bogale & Shimelis, 2009; Babatunde *et al.*, 2007; Amaza *et al.*, 2006; Obamiro *et al.*, 2003), gender of the head of the household (Joshni & Maharjan, 2011; Knueppel *et al.*, 2009; Horell & Krishnan, 2007; Mutuonotzo, 2006; Amaza *et al.*, 2006), education of the head of the household (Makombe *et al.*, 2010; Idrisa, 2008; Haile *et al.*, 2005), income of household (Davis *et al.*, 1983), household size (Mitiku *et al.*, 2012; Bogale & Shimelis, 2009; Babatunde *et al.*, 2007; Amaza *et al.*, 2006; Mutuonotzo, 2006) and employment status of the head of the household (Hendriks & Maunder, 2006; Du Toit, 2005; Maxwell & Slatter, 2003; Chambers & Conway, 1992).

All of these studies indicate a positive relationship between age, income, employment and education of head of household, and food security. In addition, most of these studies found a

negative relationship between household size and food security. Studies on gender and food security show that female-headed households have a higher probability of being food insecure. The model discussed in the next section is based on the variables identified in the literature as having an influence on food security status at the household level.

The number of poor people living in urban areas is increasing and due to the demographic and economic challenges associated with urbanisation, food insecurity in urban areas is increasing (Ravallion, 2002). Food insecurity has been found to be weakly linked to national food availability (Smith & Haddad, 2000). The access to food and expenditure on food depends on whether households have enough income to purchase at prevailing prices (FAO, 2012; Hoyos & Medvedev, 2009; Kramer-LeBlanc & McMurray, 1998; Behrman & Deolalikar, 1988).

Studies related to expenditure patterns of low-income households traditionally include the Engel relationship of income and expenditure (Agarwals & Drinkwater, 1972; Allen & Bowley, 1955) but more recent studies include other socio-economic determinants of expenditure patterns (Jolly, Awauah, Fialor, Agyemang, Kgochi & Binns, 2008; Lund, 2006; Sampson *et al.*, 2004; Duflo, 2003; Maitra & Ray, 2003; Case & Deaton, 1998). Maitra and Ray (2003) indicate that elderly people allocate income differently when compared to households headed by younger people. Sampson *et al.* (2004) state that, contrary to Engel's Law of spending less on food as income increases, grant recipients spend proportionally more on food than non-grant recipients. Booyesen and Van Der Berg (2005) found that grant income leads to higher expenditure on food and that individuals with a higher level of education spend more on food. Duflo (2003) and Lund (2006) state that female-headed households spend more on food, with significant improvements in the nutritional state of household members. Davis, Moussie, Dinning and Ghristakis (1983) found household size and income to be significant contributors in determining food expenditure. Studies have also found that age, gender, marital status, education and family structure are significantly associated with food expenditure (Meng, Florkowski & Kolvalii, 2012; Jolly, Awauah, Fialor, Agyemang, Kagochi & Binns, 2008).

Determinants of food-insecurity status at the household level

A study of the determinants of urban food insecurity at the household level in a low-income neighbourhood (Grobler, 2015a), using a multiple linear regression model shows that 71.1 percent of the variance in food insecurity of households can be explained by household size, expenditure on food, expenditure on non food items, and the age, marital status, employment status, income and number of years of schooling of the head of the household.

The linear regression model in this study was specified as follows:

$$HFIAS_i = \beta_0 + \beta_1 HouseholdSize_i + \beta_2 AgeHead_i + \beta_3 GenderHead_i + \beta_4 MaritalStatusHead_i + \beta_5 EmployStatusHead_i + \beta_6 Log IncomeHead_i + \beta_7 Log ExpendHousehold_i + \beta_8 Log FoodExp_i + \beta_9 YearsSchooling_i + \varepsilon_i$$

In this study, the HFIAS score were calculated as a continuous variable from 0 to 27 per household. This HFIAS score was treated as the dependent variable, and household size, expenditure on food and other expenditures on non-food items, and the age, marital status, employment status, income, and education of head of household and as the predictor variables.

At the 0.01 level, the model containing all the predictors was significant in explaining food insecurity at the household level (F value = 152.659, $p < 0.01$, $R^2 = 0.711$). The coefficient for household size in the model was positive, meaning that an increase in household size increases the food-insecurity score. Household size was a significant predictor ($t = 4.216$, $p < 0.001$), meaning that it contributes significantly towards explaining food insecurity in the

model. Gender of the head of the household was not significant ($p > 0.1$); however, the negative sign of the standardised coefficient shows that female-headed households increase the probability of being food insecure. The coefficient for marital status was positive and significant at the 0.05 level ($t = 2.930$), meaning that being married increases the score of being food secure (Grobler, 2015a).

Employment status was significant at the 0.01 level ($t = 12.369$, $p < 0.01$). The coefficient is positive, meaning that being employed lowers the score of being food insecure. Household income was a significant negative predictor at the 0.01 level ($t = -7.172$, $p < 0.01$), meaning that higher income lowers the probability of being food insecure. Food expenditure was negative and significant at the 0.01 level ($t = -6.481$, $p < 0.01$), meaning that higher food expenditure will influence food security positively. The number of years schooling of the head of the household was not significant ($p > 0.1$) in predicting food insecurity; however, the negative coefficient ($t = -0.917$) indicates that schooling has a positive influence on food security (Grobler, 2015a). Table 8 shows the findings of the determinants of food insecurity.

Table 8: Determinants of food insecurity

Model	B	Std. error	β	T	Sig.
(Constant)	44.160	2.865		15.415	.000
Size	.440	.104	.105	4.216	.000*
Gender	-.216	.340	-.016	-0.636	.525
MaritalS	1.139	.389	.081	2.930	.004*
EmployS	5.726	.463	-.409	12.369	.000*
HHIncomeLog	-3.155	.440	.382	-7.172	.000*
HHExp Log	1.044	.414	-.126	2.523	.012**
HHFoodExpLog	-3.199	.494	-.245	-6.481	.000*
YearsSHead	-.057	.062	-.029	-0.917	.360
HeadAge	-.018	.494	-.036	-1.227	.220
*Significant at the 0.01 level		F value= 152.659			
**Significant at the 0.05 level		$R^2 = 0.711$			

Source: Grobler (2015a)

A similar study conducted in Bophelong in 2013, Grobler (2013a) found that female-headed households are 18.58 percent more likely to be food insecure. The same study found that households with more members per household have an 8.4 percent higher chance of being food insecure, while those comprising more individuals who are employed have a 15.10 percent lower chance of being food insecure.

Household size, age of the head of the household, marital status, number of employed persons in the household, and total income received per household were statistical significant contributors explaining food insecurity, and may be considered as salient factors contributing to the vulnerability of food-insecure households (Grobler, 2013a).

Another study conducted in Bophelong examined the determinants of food insecurity amongst social grant recipients. For the study, 295 questionnaires were administered, of which 118 were used for the analysis (participants who receive social grants). Using binary

logistic regression, the results of the analysis indicate that the number of members per household has a statistically significant influence at the 0.05 level on food insecurity, where the more members in a household, the greater the probability of being food insecure. In addition, the coefficient for the size of grant income was positive at a 0.10 level, meaning that a higher grant income increases the probability of being food secure. Furthermore, the marginal effect shows that if a household increases by one member, the probability of being food secure decreases by 3.88 percent, *ceteris paribus*. The study also found that if the head of the household finds employment, this increases the probability of being food secure by 15.02 percent, *ceteris paribus* (Grobler, 2013b).

Spending patterns of food-insecure households

There are indications that households with high levels of income spend only a small percentage of their income on food, while those with low levels of income spend a larger percentage of their income on food (Kirkpatrick & Tarasuk, 2003). In a study conducted by Grobler and Dunga (2015a), the relationship between household expenditure patterns and food security was tested by considering household expenditures that limit the amount of money available for the purchase of food. An independent samples t-test was computed to determine whether there were statistically significant differences between the mean expenditures of the food-secure and that of the food-insecure households. The results show that there is a statistically significant difference between the average income of the food-secure and the food-insecure households.

In order to understand why households with an average income above the poverty line are food insecure, the study considered the expenditure pattern differences between the food-secure and the food-insecure households (Grobler & Dunga, 2015a). Table 9 presents the descriptive statistics of the expenditure items in monetary terms.

Table 9: Expenditures patterns in monetary terms by food security categories

Expenditure Item	Food security category	N	Mean	Std. Deviation	Std. Error Mean
Food	Food secure	227	1648.0412	1105.94130	64.83143
	Food insecure	353	1006.5190	1589.04275	93.47310
Housing	Food secure	227	129.6931	264.90590	15.55581
	Food insecure	353	86.9792	205.39137	12.10280
Tobacco	Food secure	227	67.8542	151.84971	8.94783
	Food insecure	353	25.8854	62.71703	3.69564
Alcohol	Food secure	227	246.5536	284.91997	16.76000
	Food insecure	353	126.4634	721.28294	42.57599
Transport	Food secure	227	1096.6436	841.69316	49.51136
	Food insecure	353	257.5261	386.40871	22.80898
Cleaning	Food secure	227	153.8110	253.30599	14.84906
	Food insecure	353	88.6263	125.04546	7.35562
Gambling	Food secure	227	38.6138	302.99596	17.79254
	Food insecure	353	25.1916	99.11169	5.85038

Source: Grobler & Dunga (2015a)

As is evident in Table 10, statistical significant differences exist between food-secure households and food-insecure households concerning expenditure on housing, food, transport and cleaning materials. The results show no statistical significant differences in expenditure on tobacco, alcohol and gambling between food-secure and food-insecure households (Grobler & Dunga, 2015a).

Table 10: Mean differences in expenditure as a proportion of household income between food-secure and food-insecure households

Expenditure category	Sig.	t	Mean Difference	Std Error
Housing	.000*	-3.422	-1.51923	.44400
Food	.001*	-5.149	-17.10383	3.32150
Tobacco	.741	-.331	-.5907	.17834
Alcohol	.344	-.947	-.82487	.87107
Transport	.013**	2.486	3.16866	1.27482
Cleaning Materials	.000*	-4.252	-1.52793	.35938
Gambling	.167	-1.384	-.26583	.19209

* Significant at the 0.01 level, ** Significant at the 0.05 level, *** Significant at the 0.10 level

Source: Grobler & Dunga (2015a)

A study by Larsen and Grobler (2012) estimated a system of demand equations for low-income households and found that if the income of households in Bophelong increased by 10 percent, expenditure on food and energy would increase by approximately 5.4 to 5.8 percent, while expenditure on tobacco, alcohol, gambling, entertainment and telecommunication services would increase by 16.9 percent. This is probably because these expenditures may be seen as 'affordable' luxuries in low-income areas.

8.3 Social grants and household dietary diversity in a low-income neighbourhood

Literature on social grants and household dietary diversity

Ruel (2002) defines dietary diversity as "the number of different foods or food groups consumed over a given reference period". In this context, dietary diversity implies access and availability, as well as utilisation of food (Hillbruner & Egar, 2008; Steyn *et al.*, 2006).

Concerning socio-economic household characteristics, researchers suggest that a positive relationship exists between household income and dietary diversity (Rashid *et al.*, 2006; Regmi, 2001; Theil & Finke, 1983). With regard to household size and the age, education, gender and employment status of the head of household, previous studies suggest positive correlations with dietary diversity (Taruvunga *et al.*, 2013; Thorne-Lyman *et al.*, 2009; Thiele & Weiss, 2003).

Social security improves food security by improving food access and by providing households with the necessary income to purchase food (Reilly *et al.*, 1999). Research on the influence of cash transfers on food security found that grant recipients increased their spending on food (Fiszbein *et al.*, 2008; Gertler, 2005; Maluccio & Flores, 2005). Research shows that social security has a positive impact on food security (Lagarde, Haines & Palmer, 2008; Miller, Tsoka & Reichert, 2007; Booysen & Van Der Berg, 2005; Dufflo, 2000). Despite these findings, questions arise as to whether social grants substantially lower food insecurity.

Studies have linked household dietary diversity to improved nutrient intake in developing countries (Steyn *et al.*, 2006; Savy *et al.*, 2005; Arimond & Ruel, 2004). A positive link exists between dietary diverse food intake and food security. As households become more food secure they consume healthier foods (Thorne-Lyman *et al.*, 2010). Higher household food security is associated with a more diverse dietary intake. Hoddinott (2002) views nutrient

adequacy as an outcome of food security. Therefore, dietary diversity may be seen as a predictor of a household's food security status (Thorne-Lyman *et al.*, 2010).

Research indicates that food insecurity is most likely to occur in low-income areas (Mello *et al.*, 2010; Nord & Parker, 2010; Furness *et al.*, 2004)

Food insecurity includes the challenges faced by individuals and households with quantity of food intake, quality of food intake, uncertainty about quantity of food availability and experiences such as anxiety about food access (Kendall *et al.*, 1996). Limited access to food, normally leads to reduced expenditure on more expensive higher quality foods that have a higher nutritional value (Dachner *et al.*, 2010; Bloem *et al.*, 2005). Poor dietary quality intake is a significant contributor to undernourishment (Steyn *et al.*, 2006). Therefore, the outcome of food insecurity at the household level is first, limited food intake and secondly, a reduction in the quality of food intake (Rose, 1997; Kendall *et al.*, 1996). Lower-quality food intake is associated with increased health risks such as obesity and certain chronic diseases (Bronte-Tinkew *et al.*, 2007; Hampton, 2007; Alaimo *et al.*, 2001; Blackburn *et al.*, 1989).

The measurement of dietary diversity has gained increased attention from researchers (Arimond & Ruel, 2004; Ruel *et al.*, 2004; Hodinott, 2002; Ruel *et al.*, 2002). Dietary diversity is measured by summing the number of food groups consumed over a specific reference period, for example 24 hours (Vakili *et al.*, 2013; Ruel, 2002).

With regard to socio-economic household characteristics, researchers suggest that a positive relationship exists between household income and dietary diversity (Rashid *et al.*, 2006; Regmi, 2001; Theil & Finke, 1983). Concerning household size and the age, education, gender and employment status of the head of household, previous studies suggest that these are positively related to dietary diversity (Taruvunga *et al.*, 2013; Thorne-Lyman *et al.*, 2009; Thiele & Weiss, 2003). A study by Rogers (1996) found that female-headed households spend more on higher quality food. Several studies show a positive relationship between level of education and higher dietary diversity (Smith *et al.*, 2003; Smith & Haddad, 2000). The literature, however, focuses more on rural household dietary diversity than on dietary diversity in urban households. The next section discusses the background of the study area.

Influence of social grants on food security and household dietary diversity

In 2015, a study (Grobler, 2015b) designed to measure the influence of social grants on households with regard to food security and dietary diversity was conducted in two low-income areas in South Africa, namely Bophelong and Sharpeville. The sample were divided into households that receive no social grants, households that receive social grants that make up less than 50 percent of household total income and households that receive social grants that make up more than 50 percent of total household income. The three groups were analysed with regard to household food security and dietary diversity. In order to compare the groups, one-way independent ANOVA tests was used. *Post Hoc* multiple comparisons were then done using the Tukey HSD, and R-E-G-W-Q tests to determine whether statistically significant differences exist between the groups with regards to their food security and dietary diversity status.

The Household Dietary Diversity Scale of the Food and Agricultural Organisation (FAO, 2007), was used to determine the Household Dietary Diversity Score (HDDS) of households. Households indicated the food groups consumed in the past 24 hours. The scale measures responses on a continuum from 0 to 12, where 12 indicates complete dietary diversity and 0 indicates no dietary diversity. In the next section, the interpretation of the findings is discussed.

The sample comprised 365 households that indicated not receiving grants (Non-Grant Group), 111 households that indicated receiving social grants that made up less than 50 percent of the total household income (<50% group) and 104 households that indicated receiving social grants that made up more than 50 percent of the total household income (>50% group). The mean HFIAS score of the Non-Grant group was 3.93, which is almost food secure. The mean HFIAS score of the < 50 percent group are 9.84, which is food insecure. The > 50 percent group's food insecurity score were considerably higher at 13.34, which is probably an indication of the level of poverty of that group of households. Table 11 shows the descriptive statistics of the study with regard to food-security scores of social grant recipients and non-grant recipients.

Table 11: Descriptive statistics of food-security scores of social grant recipient households and non- recipient households

	N	Mean	Std. Deviation	Std. Error	95 % Confidence Interval for Mean	
					Lower Bound	Upper Bound
No Grant	365	3.9370	5.71040	.29890	3.3492	4.5248
Grant <50%	111	9.8468	6.84530	.64973	8.5592	11.1345
Grant > 50%	104	13.3462	5.07759	.49790	12.3587	14.3336
Total	580	6.7552	6.97358	.28956	6.1865	7.3239

Source: Grobler (2015b)

The results of the one-way ANOVA test are shown in Table 12. The Tukey HSD test was done as well as Games-Howell since the sample size between groups was not the same. There was a statistically significant difference in the food security levels between the groups at the 0.01 level (p-value, 0.000). The F value of 124.28 was significant at the 0.01 level. The effect size using Cohen's guidelines was calculated. The effect size between the different groups was of practical significance at 0.86 and 0.51.

Table 12: One-way ANOVA test of food security

	Grant Category(I)	Grant Category(J)	Mean Difference(I-J)	Std. Error
Tukey HSD	No Grant	Grant<50%	-5.90986*	.63302
		Grant>50%	-9.40917*	.64915
	Grant<50%	No Grant	5.90986*	.63302
		Grant>50%	-3.49931*	.79700
	Grant>50%	No Grant	9.40917*	.64915
		Grant<50%	3.49931*	.79700
Games-Howell	No Grant	Grant<50%	-5.90986*	.71518
		Grant>50%	-9.40917*	.58073
	Grant<50%	No Grant	5.90986*	.71518
		Grant>50%	-3.49931*	.81856
	Grant>50%	No Grant	9.40917*	.58073
		Grant<50%	3.49931*	.81856

Effect Size between No grants and <50% Group = 0.86

Effect Size between Grants<50% and Grants>50% Group =0.51

Effect Size, small =.01, moderate = 0.06, large = 0.14

F value 124.283, sig < 0.01

Source: Grobler (2015b)

Table 13 shows the descriptive statistics of the dietary diversity scores for the grant recipients and the non-grant recipients. The mean HDDS of the non-grant group was 9.58, indicating a high level of dietary diversity. The mean HDDS of the < 50 percent group was 7.54, indicating a lower level of dietary diversity compared to the group who receive no

grants from Government. The > 50 group's mean HDDS was the lowest of all groups, indicating that the more a household relies on social grants, the lower their dietary diversity.

Table 13: Descriptive statistics of dietary diversity scores of grant recipient and non-grant recipient households

	N	Mean	Std. Deviation	Std. Error	95 % Confidence Interval for Mean	
					Lower Bound	Upper Bound
No Grant	365	9.5808	2.32217	.12155	9.3418	9.8198
Grant <50%	111	7.5405	2.64501	.25105	7.0430	8.0381
Grant >50%	104	6.1538	1.94472	.19070	5.7756	5.5320
	580	8.5759	2.69960	.11209	8.3557	8.7960

Source: Grobler (2015b)

The results of the one-way ANOVA test with regard to dietary diversity are shown in Table 14. The Tukey HSD test and the Games-Howell test show that at the 0.01 significance level, statistically significant differences occurred between the groups (all p-values < 0.01) with regard to the level of dietary diversity. The F value of 101.43 was significant at the 0.01 level. The effect size between the different groups was also of practical significance at 0.77 and 0.52 (Grobler, 2015b).

Table 14: One-way ANOVA test of dietary diversity

	Grant Category(I)	Grant Category(J)	Mean Difference(I-J)	Std. Error
Tukey HSD	No Grant	Grant<50%	2.04028*	.25213
		Grant>50%	3.42698*	.25855
	Grant<50%	No Grant	-2.04028*	.25213
		Grant>50%	1.38669*	.31744
	Grant>50%	No Grant	-3.42698*	.25855
		Grant<50%	-1.38669*	.31744
Games-Howell	No Grant	Grant<50%	2.04028*	.27893
		Grant>50%	3.42698*	.22614
	Grant<50%	No Grant	-2.04028*	.27893
		Grant>50%	1.38669*	.31527
	Grant>50%	No Grant	-3.42698*	.22614
		Grant<50%	-1.38669*	.31527

Effect Size between No grants and <50% Group = 0.77

Effect Size between Grants<50% and Grants>50% Group =0.52

Effect Size, small =.01, moderate = 0.06, large = 0.14

F value 101.437, sig < 0.001

Source: Grobler (2015b)

The results presented Tables 12 and 14 indicate that the more households rely on social grants, the higher their food insecurity and the lower their dietary diversity. This suggests that although social grants alleviate food insecurity and increase dietary diversity, they may not be sufficient to create food-secure households or to increase dietary diversity in those households (Grobler, 2015b). The implication of this is that while social grants alleviate food

insecurity and increase dietary diversity, they not sufficient to ensure food security at the household level in low-income neighbourhoods. This may also be an indication that social grants are not always used for the purchase of food, a situation which may mitigate the effectiveness of social grants as a tool for creating food-secure households. Policy makers need to design social security in such a way that spending on food is prioritised.

Socio-economic determinants of household dietary diversity

In the Grobler (2015b) study, a linear multiple-regression model was used to determine which socio-economic variables predict dietary diversity at the household level. The HDDS was calculated as a continuous variable from 0 to 12 per household, and this score was treated as the dependent variable. Household size, the age of the head of the household, marital status, employment status, income and education of head of household were estimated as predictor variables. The linear regression model was specified as follows:

$$HDDS_i = \beta_0 + \beta_1 HHSize_i + \beta_2 AgeH_i + \beta_3 GenderH_i + \beta_4 MaritalS_i + \beta_5 EmployS_i + \beta_6 Log IncomeH_i + \beta_7 YearsSH_i + \epsilon_i$$

Table 15 shows the results from the linear multiple-regression model. The model was significant at the 0.01 level in explaining dietary diversity of households (F value = 123.24, $p < 0.01$, Durbin-Watson statistic at 1.752, R^2 value of 0.601), indicating that 60.1 percent of the variance in dietary diversity of households can be explained by household size, the age of the head of the household, marital status, number of years of schooling, employment status and income of the head of the household (Grobler, 2015b).

In the model, the coefficient for household size was negative and significant ($t = -1.747$, $p < 0.1$), meaning that an increase in household size decreases household dietary diversity and contributes significantly towards explaining food insecurity in the model at the 0.1 level. Gender of the head of the household was significant ($p < 0.1$), and the coefficient of the predictor shows that female-headed households' dietary diversity is higher than that of male-headed households ($t = 1.663$, $p < 0.1$). The coefficient for marital status was negative and significant ($t = -3.079$, $p < 0.01$), meaning that being married increases the probability of dietary diversity at the household level and that marital status contributes significantly to explaining food insecurity in the model at the 0.01 level. Employment status was significant at the 0.01 level ($t = -10.655$, $p < 0.001$), with a negative coefficient (0 = employed, 1 = unemployed), meaning that being employed increases dietary diversity at the household level. Household income was a significant and positive predictor at the 0.01 level ($t = 10.913$, $p < 0.001$), meaning that higher income increases dietary diversity at the household level. The number of years of schooling of the head of the household was not significant ($p > 0.1$) in predicting dietary diversity; however, the positive coefficient ($t = 0.394$) indicates that schooling has a positive influence on dietary diversity.

This study estimated the determinants of household dietary diversity in urban areas using socio-economic data gathered from 580 households in two low-income urban areas in South Africa. The results show the critical role that employment status and income plays in creating food security and ensuring dietary diversity in urban areas at the household level. The results show that marital status has a positive influence on dietary diversity at the household level. In line with similar studies, the results show that female-headed households tend to be higher in dietary diversity than male-headed households. Policy initiatives in urban areas should be directed towards employment creation, as well as skills development to unlock the potential of households to increase income. Social-security programmes should be directed towards food expenditure to ensure a higher level of dietary diversity at the household level. Government should reconsider policies in South Africa directed towards food security. Government should consider conditional cash grants directed at food expenditure. As the results show, income is a major contributor towards food security and higher dietary diversity at the household level in urban low-income areas.

Table 15: Determinants of household dietary diversity

Model	B	Std. error	β	t	Sig.
(Constant)	-2.007	1.084		-1.851	.065
HHSize	-.082	.047	-.050	-1.747	.081***
AgeHead	.005	.007	.026	.785	.433
GenderH	.259	.156	.048	1.663	.097***
MaritalS	-.533	.173	-.097	-3.079	.002**
EmployS	-2.185	.205	-.401	-10.655	.000*
YearsSH	.011	.027	.014	.394	.693
IncomeH	1.357	.124	.425	10.913	.000*

*Significant at the 0.01 level
 **Significant at the 0.05 level
 ***Significant at the 0.1 level
 Durbin Watson = 1.752

F value significant at 0.01 level
 F value = 123.240
 $R^2 = .601$

Source: Grobler (2015b)

8.4 Perceptions of the causes of poverty and food insecurity

Literature on perceptions of the causes of poverty

The first attempt at analysing perceptions of poverty may be traced back to the work of Feagan (1972). Studies on the perceptions of poverty postulate that the perceived reasons for poverty may be attributed to the individual (Schiller, 1989; Ryan, 1976), to society or social functioning (Goldsmith & Blakely, 2010; Jennings, 1999), or to fate (Campbell, 2001).

Studies (Kluegel, 1987; Kluegel & Smith, 1986) have found that female-headed households, unemployment status and low income are positively correlated with identifying structural reasons for poverty. In contrast, other studies (Wegener & Liebig, 1995; Kluegel & Smith, 1986) have found that people who experience upward social mobility identify individualistic reasons for their improved poverty status.

Several studies over the last decade highlight that in order to develop suitable poverty-alleviation strategies, policy developers need to realise that poverty may differ from place to place, and society to society (Small, 2010; Diamond, 2007; Hulme & Shepard, 2003). Davids and Gouws (2011) suggest that an understanding of the perceptions of the causes of poverty may be important in understanding poverty in its full context.

Researchers (Kluegel & Smith, 1986; Robinson & Bell, 1978) indicate that higher levels of education are associated with poverty being attributed to structural reasons. Robinson and Bell (1978) posit that while younger individuals blame structural reasons for poverty, older people, who tend to be more conservative in their outlook on life, tend to attribute poverty to individualistic reasons.

Food-secure and food-insecure households' perceptions of poverty

A study (Grobler, 2015c) designed to measure perceptions of poverty amongst food-secure and food-insecure households was conducted in Bophelong and Sharpeville. In this study, Chi square tests show that statistically significant differences exist between the food-secure and food-insecure households with regard to their perceptions of the individual and structural

causes of poverty. There was no statistically significant difference between the food-secure and food-insecure households concerning perception of the fatalistic causes of poverty.

Table 16 indicates that the majority of food-secure households (62.5 percent) agree with the statement 'they lack the ability to manage money', compared to food-insecure households (65.6 percent) who disagree with this statement (Sig. 0.000; $p < 0.005$). Food-secure households mostly agree (60.1 percent) with the statement 'they waste their money on inappropriate items', whereas food-insecure households (67.9 percent) mostly disagree with this statement (Sig. 0.000; $p < 0.05$). On the statement, 'they do not actively seek to improve their lives', 60.7 percent of food-secure households agree with the statement, whereas 68.2 percent of food-insecure households disagree with the statement (Sig. 0.000; $p < 0.05$). This indicates that food-insecure households do not perceive poverty as being caused by the individual, while food-secure households feel that individuals are to blame for their poverty situation. On the structural causes of poverty, food-secure households mostly disagree (66.9%) with the statement 'they are exploited by rich people', compared to 55.4 percent of food-insecure households who agree with this statement (Sig. 0.000; $p < 0.05$). Food-secure households mostly disagree (60.5%) with the statement 'the society lacks social justice', whereas food-insecure households mostly agree (53%) with the statement (Sig. 0.005; $p < 0.01$).

Most of the food-secure households (60.7%) feel that the distribution of wealth in society is even, whereas 52.5 percent of food-insecure households disagree with this statement (Sig. 0.009; $p < 0.01$). On the statement "they lack opportunities due to the fact that they live in poor families", 64.2 percent of food-secure households disagree with the statement, whereas 55.6 percent of food-insecure households agree with this statement (Sig. 0.000; $p < 0.01$). This indicates that food-insecure households blame structural causes, or society for poverty. The implication of this is that food-insecure households may feel that Government should provide social security and that they themselves are not responsible at all for their food insecurity situation.

On the fatalistic causes, 55.1 percent of food-insecure households agree with the statement 'they have bad fate, compared to 53.9 percent of food-secure households who disagree with this statement (Sig. 0.020; $p < 0.05$). There was no statistically significant difference between the groups with regard to the statement 'they have encountered misfortunes (Sig. 0.516; $p > 0.10$). Most food-secure households (52.7%) feel that 'they are not motivated because of welfare', compared to food-insecure households who feel that they are motivated because of welfare (53.1%). There was no statistically significant difference between the groups with regard to this statement. The results suggest that food-insecure households blame society and to a lesser extent fatalistic causes for their poverty status. In contrast, food-secure households feel that the individuals in food-insecure households are to be blamed for their situation. The implication of this is that policies to eradicate food insecurity and poverty in general should take note of food-insecure households' perception that they are not responsible for their situation, and that it is the sole responsibility of society/Government to solve their food insecurity situation. This indicates that poverty should also be addressed at the psychological level and not only in monetary terms (Grobler, 2015c).

These findings are in line with those of previous studies (Davids & Gouws, 2011; Campbell, 2001), which indicate that food-secure households feel that individuals are responsible for their food insecurity status and poverty status in general. From a policy perspective, the problem of food security may be attributed to socio-economic factors; however, when formulating policy, they should also bear in mind food-insecure households' perceptions of the causes of poverty.

Table 16: Perceptions on poverty: Food-secure and food-insecure households

Reasons why people are poor	Food-insecure households		Food-secure households		Chi Square
	Disagree	Agree	Disagree	Agree	
They lack the ability to manage money	65.6	37.5	34.4	62.5	.000
They waste their money on inappropriate items	67.9	39.9	32.1	60.1	.000
They do not actively seek to improve their lives	68.2	39.3	31.8	60.7	.000
They are exploited by rich people	33.1	55.4	66.9	44.6	.000
The society lacks social justice	39.5	53.0	60.5	47.0	.005
Distribution of wealth in the society is uneven	39.3	52.5	60.7	47.5	.009
They lack opportunities due to the fact that they live in poor families	35.8	55.6	64.2	44.4	.000
They live in places where there are not many opportunities	47.9	51.0	52.1	49.0	.282
They have bad fate	46.1	55.1	53.9	44.9	.020
They lack luck	46.8	54.9	53.2	45.1	.033
They have encountered misfortunes	50.0	50.2	50.0	49.8	.516
They are not motivated because of welfare	47.3	53.1	52.7	46.9	.097
They are born inferior	47.1	53.4	52.9	46.6	.080

Source: Grobler (2015c)

Modelling the relationship between household characteristics and perceptions of the causes of poverty

A study by Grobler and Dunga (2015b) analysed the perceptions of poverty by calculating indexes for individualistic, structural and fatalistic causes. This was based on a similar study by Davids and Gouws (2011). The perceptions of poverty were adopted from an existing scale (Feagin, 1972) that comprises items on individualistic perceptions, structural perceptions and fatal perceptions of the causes of poverty. Heads of households were asked to indicate whether they agree or disagree with each statement on a Likert-type scale from 1 to 5, where 1 was strongly disagree and 5 was strongly agree. As such, the index implies that a higher score indicates strong agreement with the statement and a lower score indicates strong disagreement with the statement. Ordinary least squares regression was used as the perceptions were constructed into an index measured on a scale of measure as a continuous variable, where a lower score indicated strongly disagree and a higher score strongly agree. The three regressions that were run in this study are based on the three main perceptions of the poverty, namely structural, individualistic and fatal and the results are presented in Tables 9, 10 and 11. A linear regression model was then constructed with the individualistic index as the dependent variable, the structural index as dependent variable and fatalistic index as the dependent variable.

The linear regression model was formulated as follows:

$$\begin{aligned} Index_i = & \beta_0 + \beta_1(HH\ Age)_i + \beta_2(HH\ years\ of\ Sch)_i + \beta_3(Grant < 50\%)_i \\ & + \beta_4(Grant > 50\%)_i + \beta_5(HH\ Gender)_i + \beta_6(HH\ Marital\ Status)_i \\ & + \beta_7(Food\ Insecurity)_i + \varepsilon_i \end{aligned}$$

HH Age was the age of the head of household measured in years, HH years of Sch was the household head's years of schooling, which was used as a measure of education level. Grant < 50 percent was a dummy variable that was constructed from the categorisation of how much money a household received from social grants. Therefore, two dummy variables were created - the first one for those receiving less than 50 percent of their income from grants and the second one for those receiving more than 50 percent of their income from grants (Grant > 50%). The other three variables were categorical variables and dummy variables were created for each. For gender, the dummy variable was defined as 1 for female and 0 for male, meaning that the coefficient represented the females. For marital status, the categories were further aggregated into two, namely living together (that included married, cohabitating, and the like) and not living together with a partner (that included single, divorced, separated, widowed, and the like). The dummy variable was therefore defined as 1 for not living with a partner and 0 for those living with a partner. The last one was food security and insecurity, which was also a categorical variable and was defined as 1 for food-insecure households and 0 for the food-secure households. The parameter β_0 is the constant or intercept, while β_{1-7} are coefficients for the corresponding independent variables, as explained. In the regression analysis, food insecurity, measured using the HFIAS, was used as an independent variable.

The number of people in the sample that were not receiving any type of grant from Government was 63 percent. The households that had more than 50 percent of their income coming from grants made up 18 percent of the remaining 37 percent and those receiving less than 50 percent of their income from grants made up 19 percent of that 37 percent. This categorisation is used in the regression analysis to analyse their responses to the perceptions of the causes of poverty. The inclusion of this categorisation in the analysis is crucial in determining whether those on grants are complacent in that they feel entitled and they blame their circumstances on society and fate, or whether they feel that they have some responsibility for their situation. The results of the regression model on the individualistic, structural and fatalistic perceptions of the causes of poverty are presented in Table 17.

The individualistic index regression analysis results are reported in Table 17. The results agree with the theory and indicate that individuals in the disadvantaged categories do not feel that they are to blame for their situation, whilst those in the less disadvantaged categories feel that the poor have some responsibility for their situation. Age of the head of household was statistically significant at the 0.01 level with a p-value of 0.000, and positive ($\beta = 0.207$), which means that the older the head of the household, the higher the score on the index; that is, older people appear more likely to blame the victims of poverty than their younger counterparts. This may be because younger heads of households are poorer and, hence, do not want to blame themselves for their situation. It may also be an indication that older people are more likely to take responsibility and feel that there is some responsibility that should go to the victims of poverty (Appelbaum, 2001; Bullock, 1999). Years of schooling of the head of the household was also statistically significant at the 0.01 level (p-value < 0.01) and positive ($\beta = 0.265$), implying that the more educated a person is, the more likely they are to agree with the conservative position that the poor are to blame for their circumstances. This is an expected outcome as the educated may not be poor themselves and, hence, agreeing with this statement is easy as they are pointing the finger at someone else and not themselves, and may feel justified to live a better life.

Table 17: Regression results: Individualistic, structural and fatalistic perception of poverty

Variable	Individualistic			Structural			Fatalistic		
	β	t	Sig.	β	t	Sig.	β	t	Sig.
(Constant)		6.11 1	.000*		11.197	.000*		6.27 8	.000*
Head age	.207	4.43 8	.000*	.083	1.646	.100	.036	.709	.479
Years school of head	.265	5.51 6	.000*	.129	2.470	.014**	.214	4.12 3	.000*
Receive< 50% of income from grant	-.041	-9.57	.339	.090	1.904	.057***	-.015	-.316	.752
Receive> 50% of income from grant	-.091	- 1.85 0	.065***	.098	1.830	.068***	.133	2.50 5	.013**
Gender	-.074	- 1.80 6	.071***	-.073	-1.628	.104	-.042	-.941	.347
Marital status	.017	.406	.685	.075	1.609	.108	.001	.027	.978
Food insecurity	-.218	- 4.74 1	.000*	.124	2.477	.014**	.165	3.31 8	.001**

* Significant at the 0.01 level

** Significant at the 0.05 level

*** Significant at the 0.10 level

Source: Grobler & Dunga (2015b)

The coefficient for the category that receives less than 50 percent of their income from grants was not statistically significant (p-value = 0.339). The most important result is on the coefficient of those receiving grants more than 50 percent of their income. This is basically a measure of poverty, where it is assumed that those receiving less than 50 percent of their income from grants, though in a poorer situation than those not receiving any grant, may be closer to the poverty line, whilst those receiving more than 50 percent of their income from grants are more likely to be deeper and way below the poverty line. It is also an indication of dependence on Government and a continual dependency can only be justifiable if those benefiting feel they deserve the help or that Government owes them the assistance. The coefficient on both of these two groups was negative ($\beta_3 = -0.041$, $\beta_4 = -0.091$), meaning that they do not agree with the perception of poverty that puts the blame squarely on the poor themselves. Therefore, they feel that being poor is not their fault. It is interesting to note that those that are more dependent on Government; that is, those that receive more than 50 percent of their income from grants, have a lower score meaning they strongly disagree with the individualistic perception of poverty.

The results of the grant recipients ties in well with the food-insecure group who are also likely to be poor and reliant on Government. The coefficient on food insecurity ($\beta = -0.218$) indicates that the food-insecure households also strongly disagree with the individualistic perception of poverty. This is an important outcome as it indicates that with the belief that

they are not to blame for their situation, the poor may be inclined to be dependent on Government and if not careful may prove Lewis's (1963) culture of poverty theory as their children may be taught to believe that whatever they do, society will always put them at a disadvantage (Lewis, 1963).

Gender was also statistically significant at 0.10 level (p -value < 0.10) and negative ($\beta = -0.074$), meaning that females are more likely than males to disagree with the individualistic perception of poverty (dummy define as 1 for females and 0 for males). This may be expected given that, in most cases, female-headed households are more likely to be vulnerable and fall into poverty vis-vis male-headed households and, hence, females would not want to agree that it is their own fault. People usually point to fate in situations that are beyond their control. Issues like death and accidents are mostly attributed to fate. Fatalistic perceptions of poverty are in the same line of thinking that poverty is beyond an individual or society's control.

The results on structural perceptions on poverty in Table 17 indicate that the age of the head of the household was not statistically significant (p value = 0.10). However, the positive coefficient ($\beta = 0.083$) may imply that the older that individuals get, the more they tends to agree with the perception that poverty is mainly caused by the economic structures that exist in society. This may be because older people have had experiences that may have led to such conclusions. The years of schooling of the head of households was statistically significant at the 0.05 level (p -value = 0.014). The coefficient of 0.129 suggests that the higher the years of schooling, the higher the score on structural perceptions, with a unit change in years schooling leading to a 0.129 change in the index score. The fact that the coefficient is positive means that the more educated people are, the more likely they are to agree with the structural causes of poverty.

Those that received less than 50 percent of their income from grants agreed more than those that were not receiving any grant ($\beta = 0.090$), and those that received more than 50 percent of their income from grants agreed even more ($\beta = 0.098$) than both those without grant and those with less than 50 percent of their income from grants. The grant categories were all statistically significant at the 0.10 level (p value = 0.057 and 0.068). Gender and marital status were not statistically significant (p -value = 0.104 and 0.108).

The coefficient on food insecurity was statistically significant at the 0.05 level (p -value < 0.05). The food-insecure households were more likely to agree with the structural perception of poverty than the food-secure households ($\beta = 0.124$). This means that they also feel that the structures of society are not balanced for everybody to excel. This implies that being food insecure or being poor is a result of society and usually this leads to dependency on Government to provide for these households. This position is also held by the liberal theories of poverty that argue for governments' intervention based on the premise that those in difficult circumstances are there due to governments' failure to correct the imbalances that exist in society.

The conservative theories of poverty largely point to poor people being inadequate. These theories argue that some poor people are lazy and do not work hard enough to change their economic circumstances. This is the basis for the individualistic perceptions of causes of poverty. The results in Table 17 indicate that households receiving less than 50 percent of their income from grants disagree with the fatalistic perceptions ($\beta = -0.015$) and it is not statistically significant (p -value = 0.752). While those who receive more than 50 percent of their income disagree with the individualistic perception, they agree with the fatalistic perception and the coefficient ($\beta = 0.133$) is statistically significant at the 0.05 level (p -value < 0.05). For example, the food-insecure households feel that besides the structures of the society being at fault, there is also fate at play.

The food-insecure households strongly agree ($\beta = 0.165$) with the idea that poverty may be due to fate, and the coefficient is statistically significant at the 0.01 level (p -value < 0.01). These are households that are most likely in poverty and as they disagreed with the individualistic perception of poverty, they would rather point to fate and society as a better explanation of their circumstances. This is a confirmation of what is expected by people who look to government or society to help in their situation. The research has found that as expected, households that are on grants and that are food insecure believe that it is not their fault that they find themselves in such situations. As such, they strongly disagree with the individualistic perceptions of the causes of poverty. However, they agree with the structural and the fatalistic perceptions of the causes of poverty. It is also important to note that female heads of households were more likely to disagree with the individualistic perception of the causes of poverty. The educated people agreed with both fate and individualistic perceptions. These results are important as they shed light on how different categories of people perceive the causes of poverty.

8.5 Food-insecure household coping strategies in a low-income neighbourhood

Literature on coping strategies

Snell and Staring (2001) define coping strategies as all strategically-selected acts that individuals and households in a poor socio-economic position use to restrict their expenses or to earn extra income to enable them to pay for basic necessities and not fall too far behind society's level of welfare. Strategically-selected coping acts can be divided into coping strategies (mechanisms used to deal with a short-term insufficiency of food) and adaptive strategies (long-term changes in the way in which households and individuals acquire sufficient food or income) (Davies, 1993). Davies (1993) distinguishes between income-soothing and consumption-soothing strategies. Income-soothing strategies involve attempting to reduce food insecurity through income diversification, while consumption-soothing strategies involve attempting to limit the food consumption of a household. Coping strategies as a measure/indicator of household food security has been used by other researchers (Christaensen & Boisvert, 2000; Maxwell, Ahiadeke, Levin, Armar-Klemesu, Zakariah & Lamptey, 1999). A number of household-level strategies for dealing with insufficient food have been identified. These include short-term dietary changes, reducing or rationing food consumption, altering household food consumption, altering intra-household distribution of food, increased use of credit, increased reliance on wild food, alteration of crop and livestock production patterns, and sale of assets (Davies, 1993; Frankenberg, 1992; Corbett, 1988).

The study reported on here was based on the coping strategies proposed by Maxwell and Caldwell (2008). A similar study done by Mjonono, Ngidi and Hendriks (2009), on which parts of this study are based, indicates that households did indeed employ coping strategies to mitigate food shortages in rural areas in South Africa. This study, however, investigated food insecurity in an urban area. Maxwell and Caldwell (2008) distinguish between immediate and short-term alteration of consumption patterns and longer-term alterations of income earning or food-production patterns. Research indicates that short-term consumption strategies may be an accurate indicator of acute food insecurity and may also be seen as a predictor of how households perceive the future in terms of the food insecurity of the household (Coates, Frongillo, Rogers, Webb, Wilde & Houser, 2006; Christaensen & Boisvert, 2000; Maxwell *et al.*, 1999).

Coping strategies of food-insecure households

A quantitative research study by Grobler (2014) analysed the coping strategies used by food-insecure households in 2014. The Coping Strategy Index (CSI), proposed by Maxwell and Caldwell (2008) and adapted for South African urban areas, was used to identify the coping strategies used by food-insecure households in a low-income urban neighbourhood.

The CSI calculation includes four distinct steps, namely identify the different coping strategy behaviours, determine the frequency of strategies used, determine the severity and weighting of strategies used, and scoring/combining of the frequencies and severity. The frequency measure ranges from never (0) to every day (7), and the severity measure from most severe (4) to least severe (1). Higher CSI raw scores indicate a greater level of food insecurity in a household. Spearman's correlation coefficient was used to calculate the correlation between the HFIAS score/CSI score and the coping strategies used by the different households. In other words, which coping strategies are used when the HFIAS score or CSI score increase for an individual household? Households in the sample mostly sourced their food from purchases. Only 15.2 percent of the households indicated that they maintain a food garden. The coping strategies indicated by most of the households in the sample included relying on less expensive commodities, followed by buying only necessities, sticking to a budget (dietary change strategies), limiting portions, and skipping meals (rationing strategies). This is in line with the findings of a study conducted by Oldewage-Theron *et al.* (2006) in an urban area. Only 18 households or 6.1 percent of the households in the sample sent household members out to beg for food. The CSI raw score, HFIAS score and income level correlations with coping strategies used by households are shown in Table 18.

Table 18: Coping Strategy Index/Household Food Insecurity Access Scale score correlations with survival strategies used by households

Correlations with survival strategies						
		Mean	Std Deviation	Correlation with CSI Score	Correlation with income	Correlation with HFIAS Score
1	Rely on less expensive commodities.	1.9153	2.23065	0.784**	-0.273**	0.330**
2	Purchased food on credit	0.7017	1.26404	0.515**	-0.211**	0.323**
3	Skip meals	0.6203	1.23921	0.617**	-0.232**	0.326**
4	Limited portion size at meal times	1.1288	1.89441	0.818**	-0.292**	0.383**
5	Buy necessities	1.6881	1.97201	0.731**	-0.104	0.228**
6	Stick to budget	1.1051	1.60329	0.566**	-0.024	0.091
7	Maintain a food garden	0.3898	0.93708	0.120*	0.078	-0.071
8	Borrowed food, or rely on help from a friend or relative	0.6949	1.16430	0.447**	-0.141*	0.352**
9	Sent household members to eat elsewhere	0.2068	0.70563	0.337**	-0.076	0.200**
10	Restricted consumption of adults in order for small children to eat	0.5424	1.46527	0.746**	-0.224**	0.286**
11	Sent households members to beg	0.1424	0.49494	0.120	-0.023	0.119*
12	Gathered wild vegetables	0.2508	0.79846	0.456**	-0.082	0.130*

* Significant at the 0.05 level
 * Significant at the 0.01 level
 2-tailed

Source: Grobler (2014)

The results in the study indicate that as the CSI and HFIAS scores increase, households rely more on consumption-coping strategies (rationing strategies and dietary change strategies). This is in line with a similar study on rural food insecurity by Mjonono (2009) on coping strategies in South Africa. Weaker correlations were found in the case of the HFIAS score, which may be attributed to the fact that the HFIAS relies more on perceptions with regard to household food insecurity. Spearman's correlation coefficient showed that food-insecurity coping strategies were significantly correlated with the CSI raw score, as well as the HFIAS scores. The findings of the study suggest that as CSI scores/HFIAS scores of households increase, households in this urban area rely more on consumption-soothing strategies (rationing and dietary change) such as relying on less expensive food, skipping meals, limiting portions sizes at meal times, and restricting the food consumption of adults in order to provide more food for smaller children.

Strong positive correlations were found between the CSI and relying on less expensive food ($r = 0.784$, $p < 0.01$), buying only necessities ($r = 0.731$, $p < 0.01$), limiting portions at meal times ($r = 0.818$, $p < 0.01$), restricting food consumption by adults ($r = 0.746$, $p < 0.01$), skipping meals ($r = 0.617$, $p < 0.01$), sticking to a budget ($r = 0.566$, $p < 0.01$) and purchasing food on credit ($r = 0.515$, $p < 0.01$) as coping strategies. A weak positive correlation (at the 0.05 level of significance) was found between the CSI and maintaining a food garden ($r = 0.120$, $p < 0.05$), while no significant correlation were found between the CSI and sending family members out to beg.

A positive correlation between the HFIAS score and relying on less expensive food ($r = 0.330$, $p < 0.001$), purchasing food on credit ($r = 0.323$, $p < 0.01$), skipping meals ($r = 0.326$, $p < 0.01$) and limiting portions at meal times ($r = 0.383$, $p < 0.01$) as coping strategies was found. Non-statistically significant correlations were found between the HFIAS score and maintaining a food garden and sticking to budget. A weak negative correlation was found between the level of income of households and the coping strategies of buying less expensive food ($r = -0.211$, $p < 0.01$), purchasing food on credit ($r = -0.211$, $p < 0.01$), skipping meals ($r = -0.232$, $p < 0.01$), limiting portions ($r = -0.292$, $p < 0.01$) and restricting food consumption by adults ($r = -0.224$, $p < 0.01$). This is an indication that as a household's income increases, they rely less on these coping strategies.

The positive correlations between consumption-soothing strategies and the CSI and HFIAS scores are an indication that food-insecure households in urban areas restrict consumption with negative health consequences. This underlies the argument that food-insecure households, to a large extent, depend on sufficient income, especially in urban areas. In the next section, the international experience on social grants is discussed. This discussion considers both conditional and unconditional cash grants.

9. International experience of social-security grants

It is well recognised in the literature that social-security programmes alleviate income poverty and food insecurity (Fiscbein *et al.*, 2008; Booysen & Van der Berg, 2005; Maluccio & Flores, 2005). In this regard, studies (Lagarde, Haines & Palmer, 2008; Miller, Tsoka & Reichert, 2007; Dufflo, 2000) indicate that social grants positively influence food security. Statistics on food insecurity at the national level show that the percentage of people vulnerable to hunger decreased from 29.3 percent in 2002 to 13.4 percent in 2013, while the percentage of households vulnerable to hunger decreased from 29.3 percent in 2002 to 13.4 percent in 2013 (Stats SA, 2015). This must be seen against the figures on social-grant allocations. Social grants in South Africa increased from 2.4 million in 1989 to 16.7 million people in 2015, of which 70.27 percent were child-support grants. However, Grobler (2015b) found that social grants may not be enough to secure food access at the household level. Together with this, questions arise concerning the efficiency and sustainability of the social-security programmes in South Africa. Should social grants be distributed with some form of condition attached?

The next section looks at the international experience with regard to conditional and unconditional grants.

Conditional cash grants

The popularity of conditional cash-transfer programmes has increased since 1997. In 1997, only three countries globally distributed cash grants to their poorer citizens with conditions attached compared to 29 countries in 2009. Conditional cash grants entail subjecting the receipt of grants to certain conditions concerning the behaviour of recipient households (Fiszbein & Schady, 2009). The main argument concerning conditional or unconditional cash transfers is that no government wants grant recipients to become dependent on the social-security programme (Ferro, Kassouf & Levison, 2010).

According to the literature, there are three main arguments for conditioning a cash transfer. First, contrary to the rational behaviour assumption in micro economics, behavioural economists suggest that people do not always act in a rational way. Secondly, conditioning cash transfers that are based on good behaviour increase the public support for social-security programmes. Thirdly, conditional cash grants may lead to positive externalities (spin-offs to society in terms of better education, which benefits all in society) (Fiszbein & Schady, 2009).

Fiszbein and Schady (2009) argue that passively providing information on nutrition to recipients may not be enough, since they may not know that they need the information. Therefore, stipulating a condition that makes information sessions compulsory may be a better option. In this regard, they advocate that a social contract between government and grant recipients in order to ensure that recipients understand their co-responsibility.

While food insecurity may not necessarily be the explicit objective of conditional cash grants, incremental increases in income lead to higher consumption of food (Committee on World Food Security, 2012). Making cash transfers conditional is controversial, as scholars point to human rights, additional costs and the like (Freeland, 2007; Molyneux, 2007; Caldes *et al.*, 2006).

Table 19 lists the countries that have implemented conditional cash grants in the last decade. As is evident from Table 19, most programmes are of a limited nature and are combined with other interventions, such as nutritional- and life-skills training. Table 19 provides some evidence of the success of conditional cash grants in increasing food consumption at the household level.

Table 19: Countries who implemented conditional cash grants

Country	Duration	Benefits	Conditions	Food consumption
Kenya	5 years	Money	Health Checks/Growth monitoring of Children/Vitamin supplements/Awareness sessions for adults	
Nigeria	No Max.	Money/Compulsory Saving	Evidence of antenatal care/School attendance for children/Training in Life and Vocational skills	
Philippines	5 Years	Money/ Nutrition and family planning sessions	School attendance of child/Health checks	

Argentina	No Max.	Training and Community development/ Money	Bi-monthly medical check ups/ School attendance	
Bolivia	No Max.	Money	School attendance of child	
Brazil	6 Months	Money/ Training for employment/ Life skills training/ Social worker services	Monitoring of growth of child/ Nutritional education seminars	Evidence of positive influence on food consumption
Chile	5 Years	Money/ Psychological support/ access to other social programmes	Commitment signed to participate in Health, Education, Employment, Housing, Family life, and Legal documentation activities/ Regular meeting with social worker	
Colombia	No Max.	Money/Health and Nutrition education	Growth control and development check-ups/ School attendance of child	Evidence of positive influence on food consumption
Ecuador	No Max.	Money/	Growth control and development check-ups/ School attendance of child	Evidence of positive influence on food consumption
El Salvador	3 Years	Money/ Basic health and nutrition services/ Co-Responsibility seminars	Contract signed to admit co-responsibility/ School enrolment	
Honduras	No Max.	Vouchers/Nutrition assistance	Health centre visits/ School attendance of child	Evidence of positive influence on food consumption
Mexico	No Max.	Money	Health and Nutrition lectures/ School attendance of child/ Medical check-ups	Evidence of positive influence on food consumption
Nicaragua	1 Year	Money/ Occupational training/	School attendance of child/ Medical check-ups	Evidence of positive influence on food consumption
India	Child 18 exit	Money	Marriage delay: girls must be unmarried at age 18/ Child development monitoring	

Source: Adapted from Fiszbein & Schady (2009)

10. Summary and conclusion

Despite the Food and Agricultural Organisation's shift in focus to access to food since 2003, millions of people around the world are still undernourished and in sub-Saharan Africa, food insecurity is a critical challenge. In this regard, South Africa is no exception. Substantial increases in social grant allocations to individuals and households have resulted in a considerable decrease in the number of people vulnerable to hunger since 2002.

Increasing levels of urbanisation are expected in the next decade, and the focus will probably shift to urban food insecurity and the question of how to increase access to food against the background of increasing levels of unemployment. South African studies in Johannesburg, Cape Town and Emfuleni show that in low-income areas, significant levels of food insecurity exist. Against the background of increased urbanisation, food insecurity will probably increase in severity, unless Government undertakes proper intervention measures by in terms of policy.

Research in a typical low-income neighbourhood shows that employment status, income of households, food expenditure of households, household size and education of the head of the household significantly predict the food-security status of households. Improving food security in urban areas, therefore, needs a policy that will significantly impact on heads of households to find employment and to increase their ability to earn more income, or to spend their limited income in the best possible way. As such, households should prioritise spending to ensure food security on the household level. Social security should also be directed towards prioritised expenditure on food. In this regard, education concerning household income budgeting and nutrition may be beneficial to soften the effect of limited income and the like.

Urbanisation and resultant effects of unemployment, poverty and, ultimately, food insecurity, remain a challenge to policymakers. It is evident that social grants alone do not solve problems with regard to food insecurity, as low overall income, unemployment and increased density remain challenges to policymakers. Closing the income gap between the rich and poor should be seen as a key objective to ensure an even distribution of income, to improve food security and reduce poverty. From a policy perspective, the problem of food security may be attributed to socio-economic factors such as family size, low-educational levels, gender of the head of the household, and low-income levels. The lack of sufficient income (employment) is a significant predictor of food security. It may be important for policy makers to understand the impact of different socio-economic factors on food security. There may be an urgent need for the development of a more comprehensive food-security strategy, focusing on urban as well as rural areas in South Africa.

Considering the spending patterns of households in a typical low-income neighbourhood, it is evident that food-insecure households are spending an average of R126.46 on alcohol, which is a substantial amount considering that it is almost half of the child-support grant. Another interesting result is the spending gambling, where results show that there is no mean difference between the two categories; that is, the food-insecure households are spending almost the same amount of money of gambling as the food-secure households. This shows that the amount of money going to this non-essential item is equal for those that do not have enough money and those who are struggling to put food on the table. Spending of food-insecure households on non-essential items indicates that income is not prioritised towards essentials like food in a household.

Social grants may not be enough to solve food insecurity, as food-insecurity scores do not decrease as households receive more grants. Grant recipients' dietary diversity is also lower than non-grant recipients, which shows that grants do not ensure increased dietart diversity. However, in the absence of any grant, dietary diversity would be lower.

Food-insecure households or poor households may feel that Government should provide social security, and that they themselves are not responsible at all for their food insecurity situation. If those that are on government grants feel entitled to the grants, it may lead to laziness and promote dependence. However, if they consider the grants as a privilege and not an entitlement, it may lead to responsible spending of the grant money and even efforts to get out of poverty and fend for themselves.

Results on coping strategies show that households in urban areas opt for rationing of food and making dietary changes. This is a critical issue as it is associated with negative health consequences. Owing to the lack of available land in urban settings, urban food insecurity may pose a bigger challenge to policy makers than rural food insecurity. The solution to this may be a comprehensive food-insecurity strategy framework by Government with a focus on urban areas.

11. Recommendations for social security in South Africa

Considering the challenges faced with food insecurity at the household level in South Africa, specifically in urban areas may need a different approach. Social security, in its current form, may not be sustainable and efficient enough to solve the food-insecurity problem from an access point of view.

The South African Government should consider a system of conditional grants suitable for South Africa, perhaps conditions like in other countries. In this regard, policy should be coordinated and complemented with services provided by social workers. Compulsory seminars may also assist the needy in planning their household budget to ensure improved dietary diversity and food security.

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