

The Saving behaviour of households with social grant recipients in Freedom Park, Soweto

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Abstract: The South African government has re-implemented and expanded the social assistance programme through social grants since 1994. The government offers social grants to alleviate poverty. Despite the social grants expansion and increase in social grant beneficiaries, the poverty headcount ratio at national level has been fluctuating since 1994. Furthermore, the World Bank still ranks South Africa as a poverty stricken developing country. Majority of poverty stricken households in South Africa are located in rural areas as well as townships and informal settlements found in urban areas. Researchers and government officials suggest that perhaps the national poverty headcount ratio could decrease if social grant recipients and their households participate in monetary saving activities. The question that arises from these researchers' suggestion is do informal settlement households with social grant recipients save? This study aims to answer the question with the use of Freedom Park, a Soweto informal settlement, as a case study. The study uses quantitative research approach to answer the research question. A face-to-face questionnaire is utilized as a research instrument.

Keywords: Social grants, poor households, income, remittances, expenditure, savings, stokvels, burial societies.

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1. Introduction

The South African poverty rate is considered as one of the highest in the world, even amongst developing countries (Leibbrandt, Woolard, Finn & Argent, 2010:9). In 1994, the South African government and policymakers have sought for possible socio-economic policies to eradicate poverty. One such a policy involves offering social grants to the poor (ODI, 2006:1). Initially, the democratic country offered social grants to pensioners, people with disabilities, war veterans and foster children (Patel, Hochfeld, Moodley, & Mutwali, 2012:12). However, due to the stubbornly high poverty rate, the government introduced the child support grant in 1998 (Lund, 2011:5; Williams, 2007:1).

Despite the expansion of the social grants through offering child support grants, the South African poverty is still considered to be high (Leibbrandt et al., 2010:9). Researchers, (Armstrong, Lekezwa and Siebrits, 2008:2; Devereux, 2002:657) and public servants, such as the minister of Finance, Mr Pravin Gordon, urge poor households to save (MoneyWeb, 2013:1). Suggestions and urges of Armstrong et al. (2008:2), Devereux (2002:657) and Minister of Finance are based on the argument that savings would enable poor households to invest in opportunities that have the potential to eradicate the household members' poverty. There are critics of the suggestion that the poor should save. For instance, Dupas and Robinsona (2013:1138) emphasizes that poor households, including those that receive social grants cannot save. The emphasis is that the poor are too poor to save. Therefore, implying that the poor tend to consume their entire income, leading to no excess income for savings. Clearly, researchers do not concur on whether poor households can and do save or not.

Prina (2015:17) and Karlan, Ratan and Zinman (2014:36) argue that poor households can and do save using several saving instruments. Prina (2015:17) mentions that poor households utilize informal saving instruments. Ellis, Lemma and Rud (2010:12) argue that poor households make use of semi-formal saving instruments and Bachas, Gertler, Higgins and Seira (2016:5) presents that poor households, similar to rich households make use of formal saving instruments found within formal financial institutions. Both Bachas et al. (2016:5) and Campbell, Martínez-Jerez and Tufano, (2012:24) critic that formal financial institutions have regulations, terms and conditions that disables the poor from making use of the institutions' formal saving instruments. Given the different views and arguments of saving instruments used by poor households, a research question arises. The research question is 'do informal settlement households with social grant recipients save?'

In answering the research question, this research paper identifies poor households as households with social grant recipients. Poor households within South Africa are commonly found in rural areas and certain regions within urban areas (Shapurjee and Charlton, 2013:654). The urban poor often reside in townships¹ and informal settlements². According to Basardien, Parker, Bayat, Friedrich and Apples (2014:45) informal settlement households are severely poor compared to township households. As a result, the focus area of this research was Freedom Park, an area within Soweto that has informal settlements.

The remainder of this paper is structured as follows. Section two discusses the literature of saving instruments, with emphasis of the availability and accessibility of the saving instruments by poor households. Section three explains the methodology approach that is adopted in this research. Section four presents and discusses the findings of this research and section five concludes.

2. Savings instruments availability and accessibility

Besides the constant surfacing argument between researchers on whether poor households save or not, another argument is on savings instruments used by poor households Bachas et al. (2016:5), Ellis et al. (2010:12) and Prina (2015:17). Bachas et al. (2016:5) mention that poor households could save in formal saving instruments that are offered by formal financial institutions, such as commercial or retail banks. Jain (2015:55) emphasizes that there is an existence of banks that have poor households as their niche market, the banks provide saving instruments for poor households. In South Africa, a bank that is classified as targeting poor households is Capitec (Makhaya & Nhundu, 2015:30).

Although Makhaya and Nhundu (2015:30) mention that there is an existence of banks that cater for the poor, the researchers do not take into account that similar to other formal financial institutions, the niche market banks have regulations, terms and conditions that often restrict the poor from saving within the institutions (Kishor, 2013:1). For instance, formal financial regulations, terms and conditions require a potential bank account owner to deposit a minimum fee, provide proof of employment and proof of residence (Allen, Demirguc-Kunt, Klapper & Pería, 2016:13). Typically, the poor reside in areas that cannot

¹ During the apartheid era, the then government manufactured racial fragmentation that can be summed as brutal socio-economic engineering whereby black were placed in areas termed townships. The townships received the least if any sufficient local economic development projects (see Bonner & Nieftogodien, 2012)

² Out of the townships, areas with severe squalid standards of living comprising of overcrowded and dilapidating shacks emerged within townships, these areas are informal settlements (see Rogerson & Mthombeni, 2015)

necessarily meet the required proof of residence Demirgüç-Kunt and Klapper (2013:282). For instance, informal settlement dwellers do not receive water and electricity bills that could be used as proof of residence. Moreover, the poor are often not employed in the formal sector where by letters of employment and income statements are issued (Demirgüç-Kunt and Klapper, 2013:282). Given the above mentioned arguments, it is therefore important to mention that the availability of formal financial institutions and their formal saving instruments do not imply that the poor could easily access the offered formal saving instruments. As such, one could mention that the argument on poor households' saving instruments is often based on the residence of the poor households in question and their form of employment.

In 2012, 54.04 per cent of South Africans were unbanked, that is the unbanked population did not have a formal financial institution instrument (FinMark, 2013:1). In 2012 the Department of Social Development (DSD) and the South African Social Security Agency (SASSA) introduced a SASSA master card disbursement system (South Africa info, 2013:1). The system allows social grant beneficiaries to withdraw their monthly social grant income at Automatic Teller Machines (ATMs) of commercial South African banks. As a result of the master card disbursement system, the population percentage of the unbanked has decreased to 13 per cent in 2015 (FinMark, 2015:1). However, it cannot be said that the introduction of the master card disbursement system has led to an increase in the use of formal saving institutions by the poor.

Empirical evidence by Ellis et al. (2010:3) indicates that poor households who have access and availability constraints of saving within formal financial institutions have alternative saving options such as semi-formal and informal saving instruments. Ellis et al. (2010:3) classify semi-formal saving instruments as saving instruments offered by organisations that are neither banks, insurance companies, government nor employers. In South Africa, other African countries and developing countries, such as Brazil, examples of semi-formal saving instrument are burial societies and Rotating Savings and Credit Associations (ROSCAs) (Matuku & Kaseke, 2014:506). In South Africa, ROSCAs are referred to as stokvels.

Unlike formal financial instruments that have regulations, terms and conditions that do not take into account whether a potential saver is poor or rich, the semi-formal saving instruments enable members of burial societies and stokvels to set regulations, terms and conditions that suit the members and their socio-economic characteristics (Mashigo, 2007:11;

Mutesasira, Sempangi, Hulme, Rutherford & Wright, 1998:10). The customised regulations, terms and conditions create accessibility to the burial societies and stokvels.

In terms of availability, burial societies and stokvel members habitually have a common bond that enables the semi-formal instrument to be easily available to the poor households. The findings of Mashigo (2007:11) and Mutesasira et al. (1998:10) present that semi-formal saving instruments' members have at least one common bond of geographical location, ethnicity, work place, family relations or friendships.

Besides the semi-formal saving instruments, such as burial societies and stokvels, poor households tend to save within informal saving instruments (Karlan & Morduch, 2010:1). Ellis et al. (2010:12&28) categorises in-kind savings and saving in the house, also referred to as the hoarding of cash, as informal saving instruments. If a household has excess income, the income could be hoarded at home (Ellis et al., 2010:28; Paxton and Young, 2009:6). A household could decide to consider its animals, jewellery, food, etc., as savings, thus in-kind savings (Aportela, 1999:8; Musona & Coetzee, 2001:13; Wright & Mutesasira, 2001:10). Given the above mentioned instances, the availability and accessibility of an informal saving instrument relies on the household possessing and owning the product it intends to save.

3. Methodology and Approach

This section would introduce a methodology framework for the savings behaviour of informal settlement households with social grant recipients. Firstly, this research paper acknowledges the common savings function that was developed by Keynes (1936:20). The savings function of Keynes (1936:20) is based on his emphasis that an individual or household could save when it has excess income after consumption. Moreover, Keynes (1936:20) savings function stipulates that savings have a positive relationship with income and an inverse relationship with consumption. The savings function is as follows:

$$s = y - c$$

(1)

Where, s is savings, y is income and c is consumption.

It is worth mentioning that the saving function does not acknowledge that there are other variables besides income and consumption that influence an individual or household savings. The studies of Chakrabarty and Hildenbrand (2009:649), Esson (2003:13), Neves et al. (2009:13&17), Osondu, Obike, and Ogbonna (2015:54), Paxton (2009:228), Skidmore

(2001:18), and Ting and Kollamparambil (2015:282) reveal that indeed besides income and consumption, there are other saving independent variables of poor households. A recent study of Ting and Kollamparambil (2015:282) make use of the following function to determine household savings:

$$\ln C/Y = \alpha + \beta LCH + \gamma \text{Demographics} + \delta \text{Cohorts} + \theta \text{Macro} + \epsilon \quad (2)$$

Where $\ln C/Y$ is “the log of household consumption to income ratio, LCH is a vector of age, age squared, income, wealth and grants, Demographics includes the household size, education, gender, marital status, location and ethnicity control, Cohorts are the dummies for the cohorts and Macro includes the interest rate and global financial crisis dummy” Ting and Kollamparambil (2015:282). Similar to the households’ savings function of Ting and Kollamparambil (2015:282) is that of Osondu et al. (2015:54). A savings function of poor households utilised by Osondu et al. (2015:54) is presented below.

$$Y = b_0 + b_1x_1 + b_2x_2 + b_3x_3 + b_4x_4 + b_5x_5 + b_6x_6 + b_7x_7 + b_8x_8 + b_9x_9 + b_{10}x_{10} + e \quad (3)$$

Where Y is amount saved, x_1 is age of the respondents, x_2 is household size, x_3 is education level, x_4 is primary Occupation (Farming=1, otherwise=2), x_5 is farm size, x_6 is farming experience (years), x_7 is membership of farmers association (Yes=1, No=0), x_8 is access to credit, x_9 is disposable income/expenditure patterns and e is error term.

It is vital to mention that Ting and Kollamparambil (2015:282) focuses on the retirement savings of South African households. The study of Osondu et al. (2015:54) is based on the savings of small holder arable crop farmers in Umuahia, Nigeria. Both studies of Osondu et al. (2015:54) and Ting and Kollamparambil (2015:282) have common empirical findings that indicate that consumption, income, age, household size and education are some of the independent variables of household savings. However, the studies do not have some of the saving determinant variables mentioned by Chakrabarty and Hildenbrand (2009:649), Esson (2003:13), Neves et al. (2009:13&17), Paxton (2009:228) and Skidmore (2001:18), variables such as social grant income and income pooling. Although Ting and Kollamparambil (2015:282) acknowledge that social grant income is often the main income of poor households in South Africa, the researchers do not distinguish the social grant income from other forms of income. Moreover, Osondu et al. (2015:54) and Ting and Kollamparambil (2015:282) do not mention and measure the effect of income pooling on household savings.

The savings function of this research takes into account the savings determinants of poor households within developing countries as argued and empirically tested by Chakrabarty and Hildenbrand (2009:649), Esson (2003:13), Neves et al. (2009:13&17), Osondu et al. (2015:54), Paxton (2009:228), Skidmore (2001:18), and Ting and Kollamparambil (2015:282). A drawn savings function is presented below.

$$s = \alpha + \beta_1 y_i - \beta_2 c_i + \beta_3 G_i - \beta_4 HHS_i + B_5 Age + \beta_6 Age_i^2 + \beta_7 sy_i + \beta_8 Pool_i + E_i \quad (4)$$

Where; α is the intercept, i indexes households, s is aggregate household savings, y is income (including remittances and excluding social grant income), c is household consumption, G is the gender of household financial handler, HHS is household size, Age is the age of household financial handlers, Age^2 is the squared age of household financial handlers, sy is social grant income, $Pool$ is the pooling of aggregate income or not and E is a random error term. The error term represents unobserved random errors or disturbances. Age is squared to measure the nonlinearity of age on household savings.

Equation 4 is a linear regression, whereby s is a dependent variable. The variation of s is expected to be influenced by the variation of income (y), consumption (c), gender (G) and age of household financial handler, household size (HHS), social grant income (sy) and income pooling ($Pool$). Hence, the influential variables are termed independent variables.

Although equation 4 is similar to the household saving function utilised by Chakrabarty and Hildenbrand (2009:649), Esson (2003:13), Neves et al. (2009:13&17), Paxton (2009:228), Skidmore (2001:18), and Ting and Kollamparambil (2015:282), the function does not explicitly mention that household consumption has three categories. The three categories are necessity, normal and luxury consumption. All three categories have different elasticity levels whereby households are price sensitive. Necessity goods are perfectly inelastic, normal goods are elastic and luxury goods are perfectly elastic (Parpiev & Yusupov, 2011:27). In the household saving function, presented as equation 4, household consumption does not take the elasticity of consumption into consideration. As such, in addition to the usual household saving function used by researchers, this study has three different consumption variables. Equation 4 has been expanded to include the various consumption categories. Therefore, the saving function of poor households in this study is as follows:

$$s = \alpha + \beta_1 y_i - \beta_2 cN_i - \beta_3 cNr_i - \beta_4 cL_i + \beta_5 Dgender_i - \beta_6 Dhhs_i + B_7 Age_i + \beta_8 Age_i^2 + \beta_9 sy_i + \beta_{10} Dpool_i + E_i \quad (5)$$

Where, cN is the consumption of necessity goods, cNr is the consumption of normal goods and cL is the consumption of luxury goods. Despite the elasticity and inelasticity of the consumption categories, this study assumes that all the consumption categories will have an inverse relationship with household savings. The assumption of this study is based on the argument of Keynes (1936:20) that consumption has an inverse relationship with savings. Hence, equation 5 assumes negative coefficients for all consumption categories. Equation 5 also acknowledges that household size, gender and income pooling are dummies. That is, a household financial handler is either male or female and a household either pools income or does not pool income. Moreover, a household either has one member, or two members, and so on.

With the exception of household consumption categories, the household saving function of this study is similar to that of Esson (2003:13), Nwibo and Mbam (2013:61), Neves et al. (2009:13&17), Osondu et al., (2015:54), Paxton (2009:228), Shitu (2012:174), Skidmore (2001:20) and Ting and Kollamparambil (2015:282). Having a household saving function that is similar to other studies allows the results of this study to be compared to previous studies.

4. Research findings

The aim of this section is to analyse the results on the data collected from households with social grant recipients in Freedom Park, Soweto. Kochhar and Cohn (2011:3) argue that the demographic characteristics of a research population can provide better understanding of the socio-economic circumstances of particular groups within a study.

4.1. Descriptive statistics

The descriptive statistics of the surveyed households are presented in Table 1 below. These descriptive statistics comprise of socio-economic structure analysis of the surveyed households. The socio-economic structure analysis is divided into two groups. The groups are households that save and households that do not save.

Table 1: Socio-economic structure analysis

Variable	Savers					Non-savers				
	Households (% households)	Mean	Max	Min	SD	Households (% households)	Mean	Max	Min	SD
Youth household financial handlers (16 to 24 years)	10 (4.65)	23.2	24 years old	19 years old	1.55	13 (6.05)	20.9	23 years old	16 years old	2.26
Young adults household financial handlers (25 to 35 years)	47 (21.86)	30.5	35 years old	25 years old	2.93	18 (8.37)	29.6	35 years old	25 years old	3.52
Adults household financial handlers (36 to 59 years)	66 (30.70)	44.6	59 years old	36 years old	6.33	22 (10.23)	44.8	58 years old	36 years old	6.56
Grandparents household financial handlers (60 years and above)	27 (12.56)	68.2	89 years old	60 years old	8.77	12 (5.58)	69	83 years old	61 years old	6.86
Male	14 (6.51)	-	-	-	-	5 (2.33)	-	2.33%	-	-
Female	136 (63.26)	-	-	-	-	60 (27.91)	-	27.91%	-	-
African	149 (69.30)	-	69.3%	-	-	61 (28.37)	-	28.37%	-	-
Coloured	1 (0.47)	-	0.47%	-	-	4 (1.86)	-	1.86%	-	-
Household size (no. household members)	150 (69.77)	4.8	14	1	2.20	65 (30.23)	4	12	1	2.31
No. Child support grant received in a household	138 (64.19)	2.3	8	1	1.24	56 (26.05)	1.9	5	1	1.15
No. Old age grant received in a household	51 (23.72)	1.6	5	1	0.97	23 (10.70)	1.7	5	1	1.1
No. Disability grant received in a household	9 (4.19)	1.4	3	1	0.83	1 (0.47)	0	3	-	-
No. Foster child grant received in a household	1 (0.47)	-	2	-	-	1 (0.47)	-	1	-	-
Receive remittances (ZAR)	34 (15.81)	547.9	2500	150	488.23	8 (3.72)	761.1	1950	100	488.23

Other income (ZAR)	88 (40.93)	2335.3	8200	100	1707.04	22 (10.23)	1927.3	13000	260	2578.33
Pool income (ZAR)	138 (63.26)	3267.1	12450	320	2139.29	77 (35.81)	2628.2	13320	320	2508.26
<i>Piece</i> (ad-hoc) jobs	19 (8.84)	-	-	-	-	3 (1.40)	-	-	-	-
Land lord/lady	20 (9.30)	-	-	-	-	4 (1.86)	-	-	-	-
Traders	16 (7.44)	-	-	-	-	5 (2.33)	-	-	-	-
Blue collar worker	18 (8.37)	-	-	-	-	5 (2.33)	-	-	-	-
Domestic worker	14 (6.51)	-	-	-	-	8 (3.72)	-	-	-	-
Other labour market activities	36 (16.74)	-	-	-	-	16 (7.44)	-	-	-	-
Necessity goods (ZAR)	132 (61.40)	772.1	3200	100	474.98	55 (25.58)	100	3000	760.80	484.16
Normal goods (ZAR)	71 (33.02)	949.0	5270	20	847.82	63 (29.30)	80	6733	1201.20	1208.41
Luxury goods (ZAR)	24 (11.16)	153	650	5	154.69	13 (6.05)	24 (11.16)	600	186	194.91

Note: Sample size for this research was 215 households out of an area with 1 164 households, whereby the number of households that have social grant recipients is unknown.

In this study the demographic characteristics of the respondents who are the households' financial handlers are analysed as they have a direct influence on the households' income, consumption and savings behaviour. The demographic characteristics consist of the age, gender and ethnicity of household financial handlers, and the household size. Literature on the life-cycle hypothesis indicates that age is one of the main factors that influence expenditure and saving patterns (Beckmann, 2013:9; Modigliani, 1966:163; Sarantis & Stewart, 2001:24). The age of the household financial handlers is presented in four categories, namely, youth, young adults, adults and grandparents. Youth are between the age of 16 and 24 years, young adults are between 25 and 34 years, adults are between 35 and 59 years, and grandparents are 60 years and above.

The categories are used to take into account the life-cycle hypothesis of savings by household financial handlers of which argues that individuals within the working age of 16 to 59 save, while those outside the working age do not save (Modigliani, 1966:163). The age of the surveyed household financial handlers ranges between 16 and 89. The majority of the respondents are adults between the ages 36 and 59 at 66 (30.70 per cent). Similar findings were reported by DeNavas-Walt and Proctor (2014:13) in their study of income and poverty in the United States where by 62 per cent of the household financial handlers were between the

age of 36 and 59 years, thus adults. In this study, the average age of adult financial handlers that save is 44.6 with a standard deviation of 6.33. The statistics are similar to those of the adult financial handlers who do not save, the non-savers have an average age of 44.8 with a standard deviation of 6.56.

In terms of gender, the findings of this study indicate that 19 (8.8 per cent) of the respondents are males and 196 (91.2 per cent) are females as indicated in Table 1. From the 19 male financial handlers, 14 (6.5 per cent) are financial handlers of households who save and five (2.33 per cent) financial handlers of non-saving households. Saving households that have female financial handlers are 136 (63.26 per cent) and 60 (27.91 per cent) non-saving households have female financial handlers. A study of rural farmers' savings in Mexico by Paxton (2009:209) revealed that the majority of the household financial handlers were female. Another study by Buijs (1998:55) also found that the primary caregivers that stay at home and who handle the income and expenditure of the households are usually females while males are expected to be at work.

From the sample of 215 households with social grant recipients 97.7 per cent (210) respondents classify themselves as Africans and 2.30 per cent (five) respondents classify themselves as Coloureds. It is clear that the surveyed households are predominantly African. The sample area is predominantly populated by Africans, hence majority of the research population classified themselves as Africans. Out of the 210 African households, 149 (69.30 per cent) were financial handlers of households that save and 61 (28.37 per cent) were financial handlers of households that do not save. Out of the five household financial handlers that classify themselves as Coloureds, only one (0.47 per cent) household financial handler saves and four (1.86 per cent) household financial handlers do not save. Therefore, in this research, majority of the surveyed poor households do save.

Another factor identified in the theoretical and empirical literature that influence spending and saving patterns is the household size and composition. The household size refers to the number of individuals residing within a household. Case and Deaton (1996:1) and Duflo (2003:4) reported that South African households with social grant recipients consist of a larger number of household members compared to households without social grant recipients. Studies by Paxton (2009:154), and Gutiérrez, Juárez and Rubli (2005:5) also report that Mexican households with social grant recipients have more members than households without social grant recipients.

Within the South African context a large household is one that has more than two members (StatsSA, 2011:88). Generally, in South Africa the size of the wealthier households is two, while that of the poor households is three and above and the average household size on a national level is 3.4 (StatsSA, 2011:7). In this study, households that save have a minimum of one member, maximum of 14 members and an average of 4.8 members. The households that do not save have a minimum of one, maximum of 12 members and an average of 4 members. Therefore, on average majority of the saving and non-saving households are large.

Besides the household composition and demographic characteristics of the financial handlers' other economic variables might also influence the savings behaviour of households with social grant recipients (Case and Deaton, 1996:10; Krige, 2011:69; Neves et al., 2009:20). In Table 1, the economic characteristics consist of the type of social grants received, remittances, income sources, income pooling and consumable goods purchased by the surveyed households.

Poor households have different sources of income, and social grants are only one of the income sources. The data indicate that from the seven common social grants, only four social grants were received by the household sample in Freedom Park. The four social grants were the child support, old age, foster child and disability grants. Given the above mentioned statistics of the received types of social grants by the surveyed households in Table 1, one would conclude that child support grants had the highest maximum number received by a household. As argued by Williams (2007:33) that poor households tend to receive more child support grants than any other type of social grant.

Besides the social grant income, poor households typically receive additional income from various labour market activities whether in the formal, semi-formal or informal economy, as well as remittances from family and friends (Erfe, 2007:22; Krige, 2011:69; Leibbrandt et al., 2011:1). From the 214 responding households, 75 (34.88 per cent) claim that their entire livelihoods are financed by the social grant income. One household did not answer the question on whether the household earns additional income besides the social grant income. The remaining 65 per cent (139) households out of 214 receive other income besides the social grant income. These findings are similar to the findings by Meyer, Mok & Sullivan (2009:43) who found that the majority of households with social grant recipients earn additional income. In this study, other labour market activities, in the semi-formal and informal economy are dominating. From the 139 households, 36 (16.74 per cent) saving

households participate in other labour market activities and 16 (7.44 per cent) non-saving households participate in other labour market activities. The second major income source for households that save is renting, followed by piece (*ad-hoc*) jobs. The second dominating income source for households that do not save is domestic work.

Although, 139 households reported to be receiving other income besides the social grant income and remittances, only 110 household respondents could report the monthly income earned from these sources. For saving households, the minimum income value is R100, maximum is R8 200, and average is R2 335.50. While non-saving households have a minimum of R260, maximum of R13 000 and an average of R1 927.30. Out of the 110 respondents that reported their income, 36 claimed that the monthly income is often uncertain and unpredictable. Bhat and Nengroo (2013:114) mention that informal sector activities often provide unpredictable remuneration and profits.

Only 20 per cent (42) households indicated that they receive remittances. The majority, 80 per cent (173) of the households reported that they do not receive any remittances. The high percentage of households that do not receive remittances are aligned with a claim made by Ezemenari (1997:666) that social grants crowd out remittances once households comprise of social grant beneficiaries.

Literature revealed that extended households often pool resources, especially income, to improve the welfare of the entire household (Case & Deaton, 1998:1340; Neves et al., 2009:17). Table 1 presents that households that save pool a minimum of R320, maximum of R12 450, average of R3 267.10 and have a standard deviation of 2 139.294. Households that do not save pool a minimum of R320, maximum of R13 320, average of R2 628.20 and have a standard deviation of 2 508.264.

Given the relatively low income of the surveyed households, it was interesting to explore on what the households spent their aggregate income on. Case and Deaton (1998:1349); Neves et al. (2009:13) and Paxton (2009:211) claim that poor households make use of their aggregate income to purchase consumable items, particularly necessity and normal goods and services, such as food, clothing, transport, energy and shelter.

Households that save spent a minimum of R100, maximum of R3 200 and average of R772.10 per month on necessity goods and services. The non-savers spent a minimum of R100, maximum of R3 000 and average of R760.80 per month. In terms of normal goods and services, savers spent a minimum of R20, maximum of R5 270 and average of R949 per

month. Households that do not save spent a minimum of R80, maximum of R6 733 and average of R1 201.20 per month on normal goods and services. Thus both the saving and non-saving households tend to purchase necessity goods more than normal goods. Although the surveyed households are poor, 24 saving and non-saving households spent some of their income on luxury goods and services. Households that save spent a minimum of R5, maximum of R650 and average of R153 per month on luxury goods and services. The households that do not save spent a minimum of R24, maximum of R600 and average of R186 per month on luxury goods and services. Thus, the non-saving households spent more than saving households on luxury goods.

A summary of the savings instruments and saving motives used by households that save is provided in Table 2.

Table 2: Saving instruments and saving motives of households that save

Variable	<i>f</i>	Mean	Max	Min	SD
Burial society	129	163.6	846	25	108.93
Stokvel	72	366.6	1500	80	261.77
Bank account	56	298.7	1340	50	256.27
Post office bank account	1	-	500	-	-
Investment account	1	-	30	-	-
Save at home (hoard)	7	381.4	800	100	264.17
Precautionary	119	-	119	-	-
Transactional	61	-	61	-	-
Liquidity	10	-	10	-	-
Housing	15	-	15	-	-
Education	13	-	13	-	-
Bequest	1	-	1	-	-

The results of this study show that out of the 215 households with social grant recipients, 150 households save some of their income but mostly in semi-formal and informal saving instruments. Of the 150 households that save a portion of their income, 56 use bank accounts to save, one uses an investment account, an overwhelming 129 utilise burial societies to save, one saves at the post office, while 72 save in stokvels and seven save at home (or hoard money). A minimum of R25 and a maximum of R846 is saved within a burial society with an average of R163.60. The surveyed households had a minimum of R80, maximum of R1 500 and average of R366.60 saved within a stokvel. Households that save within a bank account save a minimum of R50, maximum of R1 340 and have average savings of R298.70.

The household that saves within a post office account, save R500 and the other household with an investment account saves R30. Households that save at home (or hoard cash) save a minimum of R100, maximum of R800 and an average of R381.40.

Table 5.2 also presents the saving motives of the 150 households with social grant recipients that save a portion of their household income. The saving motives found among the surveyed households are precautionary, transactional, liquidity, housing, education and bequest. One household saves for bequest, 13 households save for education, 15 save for housing, ten save for liquidity, 61 save for transactional and 119 save for precautionary. Saving within a burial society indicates that a household has a precautionary saving motive to cover funeral expenses (Chrétien, 1986:27). As such, it is not surprising to notice the large number of households having precautionary saving as a motive to save. Moreover, literature indicates that poor households that reside in informal settlements, such as Freedom Park, tend to save within burial societies and stokvels (Armstrong et al., 2008:18; Djebbari & Mayrand, 2011:10; Leibbrandt et al., 2010:9). Hence, the second largest utilised saving instrument within this study is stokvels. Literature mentions that often stokvel savings are utilised for transactional purposes during holidays, especially Easter and Christmas holidays (Collins, 2005:9-12; Neves et al., 2009:42). As such, the second largest saving motive found among the 150 households is the transactional saving motive.

Tables 1 and 2 focused on presenting and discussing the descriptive statistics of the surveyed households with social grant recipients. The econometric model utilised in this study for the savings behaviour of households with social grant recipients in Freedom Park is discussed below. Within the sub-section below, analysis of the model specification is made and empirical results are reported and analysed.

4.2. Econometric model

The literature revealed variables that might have an influence on the savings behaviour of poor households (Chakrabarty and Hildenbrand, 2009:649; Esson, 2003:13; Neves et al., 2009:13&17; Osondu et al., 2015:54; Paxton, 2009:228; Skidmore, 2001:18 and Ting and Kollamparambil, 2015:282). The variables are regressed for the savings of the households with social grant recipients to assess which of these variables have an influence on the savings of households with social grant recipients.

4.2.1. Model specification

Nine independent variables were identified in the literature that might have an influence on the savings of poor households. The variables are:

- Age of respondents;
- Gender of respondents;
- Household size;
- Social grant income;
- Other income (profit or earned income including remittances);
- Income pooling;
- Necessity goods expenditure;
- Normal goods expenditure;
- Luxury goods expenditure.

This study uses age as one of the independent variables of household savings. Since Beckmann (2013:9) and Modigliani (1966:163) argue that the age of a household financial handler influences household savings positively, the expected sign of age squared in this study is positive. In this study, the age variable is squared to account for possible non-linearity in the age of the surveyed households' financial handlers.

The descriptive analyses indicated that the majority of the household financial handlers were between the age of 28 and 50, with an average age of 43. According to the life-cycle hypothesis, household financial handlers have positive savings during their working age that is between 16 to 59 years (Modigliani, 1966:163; Ting & Kollamparambil, 2015:282).

Therefore, since majority of the household financial handlers are within the working age, the expected sign is positive.

Gender is one of the independent variables used in this study because the studies of Neves et al. (2009:48-49) and Paxton (2009:225) indicated that the gender of a household financial handler has an influence on household savings. Gender can either be male or female, thus a dummy variable. For gender, a dummy variable will be used namely female because majority of household financial handlers were females. It is expected that the coefficient sign of female will be positive. The expected sign has been drawn from the findings of Mexican poor rural household savings studied by Paxton (2009:228), whereby females had a positive influence on savings.

The empirical results and arguments of Chakrabarty and Hildenbrand (2009:649), Keynes (1936:20) and Skidmore (2001:18) indicate that household size has an inverse relationship with household savings. However, Van der Merwe (2000:729) argues that household size, particularly large household size, has a positive relationship with household savings. Unlike Chakrabarty and Hildenbrand (2009:649) and Skidmore (2001:18), Van der Merwe merely argues without providing empirical results for his arguments. Therefore, in this study, the expected sign of household size towards household savings is negative. It is expected that large households, with more than two members, save less compared to small households with one or two members. The descriptive analyses of the study report that majority of the surveyed households are large, therefore, the expected coefficient sign is negative.

Chakrabarty and Hildenbrand (2009:649), Esson (2003:13), Neves et al. (2009:13&17), Paxton (2009:228), Skidmore (2001:18) and Ting and Kollamparambil (2015:282) state that all income acquired from labour market activities, remittances, social grants and borrowed income have a positive impact on households savings. Therefore, the social grant income and other income used in the model of this study are expected to have a positive sign.

According to literature, households that pool income are presumed to have the ability to save (Burger et al., 2010:3; Case & Deaton, 1998:1340; Esson, 2003:13; Maltsoğlu & Taniguchi, 2004:14; Meyer et al., 2009:43; Woolard, 2002:2; Van der Merwe, 2000:729). Therefore, the expected sign of income pooling as a dummy variable in this study is positive. The literature also emphasise that expenditure has an inverse relationship with saving (Neves et al., 2009:13&17; Nwibo and Mbam, 2013:61; Osondu et al., 2015:54; Paxton, 2009:228; Shitu, 2012:174; Walden, 2012:239). As a result, necessity, normal and luxury goods expenditure as

independent variables in this study are expected to have a negative sign. Table 3 summarises the expected signs.

Table 3: Expected coefficient signs of the variables used in this study

Variable	Measurement	Expected sign
Age	Years	+Continuous
Age ²	Years	+ non-linear continuous
Gender	Female (dummy)	+ Categorical
Household size	Household with 2 and more members (dummy)	- Categorical
Social grant	ZAR	+ Continuous
Other income, including remittances	ZAR	+ Continuous
Pool income	Households that pool income (dummy)	+ Categorical
Necessity goods expenditure	ZAR	- Continuous
Normal goods expenditure	ZAR	- Continuous
Luxury goods expenditure	ZAR	- Continuous

Based on the expected coefficient signs of the independent variables, the linear saving function as outlined in equation 5 is as follows:

$$s = \alpha + \beta_1 y_i - \beta_2 cN_i - \beta_3 cNr_i - \beta_4 cL_i + \beta_5 Dgender_i - \beta_6 Dhhs_i + \beta_7 Age_i + \beta_8 Age_i^2 + \beta_9 sy_i + \beta_{10} Dpool_i + E_i \quad (5)$$

Empirical results are generally used to determine whether the expected signs were met, whether the independent variables influence the savings behaviour of households with social

grant recipients and whether their influence is statistically significant after running a regression model. A series of regression models are applied using Stata software package.

4.2.2. Empirical results

The independent variables along with household savings as dependent variable are regressed and their results are presented in a Table 4. Having various regression models and presenting the results in a table is an analysis reporting method used by various researchers such as Esson (2003:13), Neves et al. (2009:48-49), Paxton (2009:225) and Seguíno and Floro (2003:159-160). The regression models ran in this study are normal OLS, robust OLS, probit and tobit regressions.

Table 4: Normal OLS (Model 1) and Robust OLS (Model 2) regression models

	Normal OLS	Robust OLS	Probit	Tobit
Constant	0.67 (-0.43)	0.20 (-1.30)	0.06* (-1.86)	0.54 (-0.62)
Age	0.95 (0.06)	0.08* (1.73)	0.06* (1.87)	0.89 (0.14)
Age ²	0.87 (0.16)	0.13 (-1.53)	0.15 (-1.44)	0.91 (0.12)
Gender female	0.38 (0.88)	0.15 (1.47)	-	0.36 (0.93)
Household size (Maximum of 2 members)	0.43 (0.80)	0.78 (0.28)	0.51 (-0.66)	0.30 (1.05)
Household size (Minimum of 3 members)	0.35 (0.94)	0.97 (-0.04)	0.40 (-0.84)	0.24 (1.18)
Social grants	0.03**	0.01***	0.49	0.02**

	(2.19)	(2.67)	(0.69)	(2.31)
Other income	0.00*** (3.43)	0.02** (2.48)	0.07* (1.84)	0.00*** (3.68)
Pool income (pool)	0.98 (0.02)	0.23 (-1.20)	0.03** (2.13)	0.96 (-0.05)
Necessity	0.48 (-0.71)	0.51 (-0.65)	0.27 (1.11)	0.46 (-0.74)
Normal	0.16 (1.41)	0.81 (-0.24)	0.64 (-0.47)	0.12 (1.59)
Luxury	0.64 (-0.47)	0.66 (0.44)	0.02** (-2.30)	0.53 (-0.63)
Summary of models	Normal OLS	Robust OLS	Probit	Tobit
R ² /Pseudo R ²	0.20	-	0.15	0.02
Adj R ² / Chi ²	0.10	-	21.13	23.68
Observations	102	102	131	102
df	90	90	-	-
Probability	0.03**	0.04**	0.02**	0.01***
VIF	1.25	-	1.18	1.02

Note: The dependent variable (constant) is savings. The t-statistics and z-statistics are in parentheses. All the regression models include gender, household size and pool income as dummies. *, **, *** denote significance at 10 per cent, 5 per cent and 1 per cent levels, respectively.

Three of the four models, normal OLS, Robust OLS, and probit are statistically significant at 5 per cent level, with probability values (p-values) of 0.03, 0.04 and 0.02, respectively. The tobit model is statistically significant at 0.01. Such results imply that indeed the independent

variables have an influence on household savings. Therefore, the results of this study concur with the theoretical literature that the age, gender, household size, social grant income, other income, income pooling and expenditure have an influence on household savings (Chakrabarty & Hildenbrand, 2009:649; Erfe, 2007:22; Gough, 2011:30; Keynes, 1936:20; Paxton, 2009:211; Sarantis & Stewart, 2001:24).

Another result of this study that concurs with the theoretical literature is the variation of the household savings being explained by the independent variables. The adjusted R-squared or chi-squared is utilised as an indicator of how much the normal OLS, probit and tobit models explain the variation in household savings. The normal OLS model present that 10 per cent of the variation in household savings is explained by the model. The Probit and tobit models, respectively explain 21.13 per cent and 23.68 per cent of the variation in household savings. The results are in accord with the argument of Kochhar and Cohn (2011:10); Meyer et al. (2009:43) and Sharma (2010:565) that the independent variables have an influence on household savings.

However, despite the overall models' explanation of the variation in household savings, some of the independent variables within the models are statistically significant while others are not. Independent variables that are significant in the normal OLS regression are social grant and other income. Social grant is statistically significant at 5 per cent level. Other income is statistically significant at 1 per cent level. Independent variables that are statistically significant in the robust OLS regression model are age, social grant and other income. Age is statistically significant at 10 per cent level. Social grant is statistically significant at 1 per cent level and other income is statistically significant at 5 per cent level. The probit regression model has three independent variables that are statistically significant and the tobit regression model does not have a statistically significant independent variable. In the probit regression model, age, pool income and luxury goods expenditure are statistically at 10 per cent level, 5 per cent level and 5 per cent level, respectively.

Similar to the above mentioned significant and insignificant independent variables, the empirical evidence of Esson (2003:13) also portrayed that some of the independent variables of savings were statistically insignificant. The empirical results of a Mexican study on the savings behaviour of poor households by Paxton (2009:210) revealed that within the study's model, some of the independent variables were statistically insignificant although the overall model was significant. It is therefore common for models to be statistically significant with a

few of the independent variables being statistically significant. As such, an outcome of insignificant variables does not dispute that the models of this study are statistically significant.

All the signs of the significant variables match the positive expected sign; such results are seen in the sign of the t-statistics and z-statistics. The positive signs imply that an independent variable has a positive effect on savings, in this study. While a negative sign of an independent variable's t-statistic or z-statistic imply that the variable has a negative effect on household savings, in this study. Sarantis and Stewart (2001:24) claim that usually the age of a household financial handler, as an independent variable, influences household savings positively. According to the t-statistic and z-statistic of this study, indeed the age of the respondents have a positive sign. The study of Paxton (2009:210-211) revealed that poor household that are female headed have positive savings. Similar to Paxton (2009:210-211), all four models in this study indicate that female household financial handlers contribute positively to the household savings.

The expected sign of the household size, as presented in Table 4 is negative, however, the econometric models' results mention otherwise. The sign of household size varies from model to model. The normal OLS and tobit results indicate that household size have a positive effect on household savings. However, the probit results are in concurrence with the negative effect expectations while the robust OLS results vary among household sizes. Having contradictory results of household savings is often experienced. For instance, the studies of poor households in the Eastern Cape by Neves et al. (2009:48-49) and Western Cape by Esson (2003:13) had several independent variables with unexpected coefficient signs.

Social grant, other income and income pooling are expected to have a positive effect on household savings. As expected, the models had positive t-statistic and z-statistic of the variables, except for the income pool in the robust OLS and tobit models. The expenditure variables had varying signs. Similar to the household size findings, Esson (2003:13), Neves et al. (2009:48-49) and Paxton (2009:211) had contradictory results in terms of expenditure as an independent variable of household savings.

Despite the contradictory signs of some of the independent variables' t-statistic and z-statistic, it is important to mention the signs of the statistically significant independent variables. The signs of the statistically significant independent variables match the expected

signs outlined in Table 4. Such an outcome enables the researcher to find the utilised models and significant independent variables reliable.

5. Concluding remarks

This paper contributes to analyzing the savings behaviour of poor households and determining whether the poor save or not. The paper uses 215 households with social grant recipients and the focus area is informal settlements of Freedom Park in Soweto.

Firstly, the study discusses savings instruments availability and accessibility for poor households. Although formal saving instruments could be available within some poor regions poor households might not have sufficient access to utilize services and products offered by formal saving institutions, such as commercial banks. Due to the inability to access formal saving instruments, the poor tend to resort to alternative saving instruments that are discussed in the paper.

Data analyses reveal that the surveyed households with social grant recipients in Freedom Park save. However, out of the 215 households, 150 save and 65 do not save. The analysis concur with literature that the poor tend to utilize the semi-formal and informal saving instruments. Policy recommendations impacting on the semi-formal and informal saving instruments are as follows:

- The saving instruments could be regulated to reduce loss of savings and ensure protection of savers.
- Competitive interest rates could be introduced to ensure that savers earn rates that take into account inflation rate.

The above mentioned recommendations envision poor household savers to increase their wealth in the long term. Other researchers in pursuit of understanding methods to increase the poor's wealth and the savings behaviour of poor households could conduct research on the savings behaviour of households with social grant recipients in other informal settlements, townships and rural areas. Further in depth qualitative research on households with social grant recipients in informal settlements of Freedom Park could increase knowledge and understanding of the households.

Bibliography

Allen, F., Demirguc-Kunt, A., Klapper, L. and Pería, M.S.M., 2016. The foundations of financial inclusion: Understanding ownership and use of formal accounts. *Journal of Financial Intermediation*.

Aportela, F. 1999. Effects of financial access on savings by low-income people. Cambridge: Massachusetts Institute of Technology, mimeo.

Armstrong, P., Lekezwa, B., & Siebrits, K. 2008. *Poverty in South Africa: A profile based on recent household surveys*. Matieland: Stellenbosch Economic Working Paper No. 4(08). Stellenbosch: University of Stellenbosch.

Bachas, P., Gertler, P., Higgins, S. and Seira, E., 2016. Banking on Trust: How Debit Cards Enable the Poor to Save More.

Basardien, F., Parker, H., Bayat, M., Friedrich, C. and Apples, S., 2014. Entrepreneurial orientation of SPAZA shop entrepreneurs: Evidence from a study of South African and Somali owned SPAZA shop entrepreneurs in Khayelitsha. *Singaporean Journal of Business Economics and Management Studies*, 2(1):10-45.

Beckmann, E. 2013. Financial Literacy and Household Savings in Romania. *Numeracy*. 6(2): 9.

Bhat, G.M. & Nengroo, A.H. 2013. Urban Informal Sector: A Case Study of Street Vendors in Kashmir. *International Journal of Management & Business studies*. 3(1): 112-115.

Buijs, G. 1998. Savings and loan clubs: Risky ventures or good business practice? A study of the importance of rotating savings and credit associations for poor women. *Development Southern Africa*. 15(1): 55.

Campbell, D., Martínez-Jerez, F.A. and Tufano, P., 2012. Bouncing out of the banking system: An empirical analysis of involuntary bank account closures. *Journal of Banking & Finance*, 36(4), 1224-1235.

Case, A. & Deaton, A. 1996. Large cash transfers to the elderly in South Africa. Working paper No. 5572, Cambridge: National Bureau for Economic Research.

Chakrabarty, M. & Hildenbrand, W. 2009. Engel's Law Reconsidered. Bonn Econ Discussion Paper No. 22, Bonn: University of Bonn, Germany.

Chrétien, M. 1986. *Contractual savings schemes for housing: International comparisons and applications to developing countries*. Water Supply and Urban Development Department, Operations Policy Staff, the World Bank.

Collins, D. 2005. *Financial instruments of the poor: Initial findings from the financial diaries study*. Working paper No. 130, Cape Town: Centre for Social Science Research, University of Cape Town.

Demirgüç-Kunt, A. and Klapper, L., 2013. Measuring financial inclusion: Explaining variation in use of financial services across and within countries. *Brookings Papers on Economic Activity*, 2013(1): 279-340.

DeNavas-Walt, C. & Proctor, B.D. 2014. *Income and Poverty in the United States: 2013*. United States Census Bureau, Current Population Reports, P60-249, United States Government Printing Office, Washington DC, September 2014.

Devereux, S. 2002. Can social safety nets reduce chronic poverty? *Development Policy Review*. 20(5): 657-675.

Djebbari, H. & Mayrand, H. 2011. Cash Transfers and Children's Living Arrangements in South Africa. *Université Laval. Pas publié*.

Duflo, E., 2003. Grandmothers and granddaughters: old-age pensions and intrahousehold allocation in South Africa. *The World Bank Economic Review*, 17(1), pp.1-25.

Dupas, P. and Robinson, J., 2013. Why don't the poor save more? Evidence from health savings experiments. *The American Economic Review*, 103(4), 1138-1171.

Ellis, K. Lemma, A. & Rud, J. 2010. *Investing the impact of access to financial services on household investment*. London: Overseas Development Institute.

Erfe, J. 2007. *Determining the motivations for internal remittances in Uttar Pradesh and Bihar*. California: Stanford University.

Esson, R. 2003. *Savings and savers: An analysis of saving behaviour among Cape Town's poor*. Working paper No. 59, Cape Town: Centre for Social Science Research, University of Cape Town.

- Ezemenari, K., 1997. The link between public and private interhousehold transfers: Implications for the design of safety net programs in developing countries. *American Journal of Agricultural Economics*. 79(2): 666-671.
- FinMark. 2013. Results of FinScope South Africa 2013. Available at: <http://www.finmark.org.za/results-of-finscope-south-africa-2013/> (Accessed: 31 August 2016).
- FinMark. 2015. FinScope South Africa Consumer Survey Launch Presentation. Available at: <http://www.finmark.org.za/finscope-south-africa-2015-consumer-survey-launch-presentation/> (Accessed: 31 August 2016).
- Gough, J.M. 2011. Determinants of the U.S. Household Saving Rate: An Econometric Analysis. *Issues in Political Economy*. 20(1): 28-44.
- Gutiérrez, E., Juárez, L. & Rubli, A. 2005. Should cash transfers be targeted to women? Unpublished paper. Yale University, New Haven.
- Jain, C.S., 2015. A Study of Banking Sector's Initiatives Towards Financial Inclusion in India. *Journal of Commerce and Management Thought*, 6(1): 55.
- Karlan, D. & Morduch, J. 2010. *Access to finance: ideas and evidence. The economics of saving*. Handbook of Development Economics vol. 5, Amsterdam: North-Holland.
- Karlan, D., Ratan, A.L. and Zinman, J., 2014. Savings by and for the Poor: A Research Review and Agenda. *Review of Income and Wealth*, 60(1), 36-78.
- Keynes, J.M. 1936. *The General Theory of Employment, Interest, and Money*. Harvest/HBJ Book, New York and London.
- Kishor, N.R. 2013. Micro Insurance in India-Protecting the Poor. *Journal of Business Management and Social Sciences Research*. 2(3): 39 - 44.
- Krige, P. 2011. Power, identity and agency at work in the popular economies of Soweto and Black Johannesburg in perspective. Unpublished doctoral thesis, University of the Witwatersrand, Johannesburg.
- Kochhar, R. & Cohn, D. 2011. *Fighting poverty in a tough economy, Americans move in with their relatives*. Washington: Pew Research Centre, Social & Demographic Trends.

Leibbrandt, M., Woolard, I., Finn, A. and Argent, J., 2010. Trends in South African income distribution and poverty since the fall of apartheid. Working paper No. 101, Paris: Organisation for Economic Co-operation and Development Social, Employment and Migration, Organisation for Economic Co-operation and Development Publishing.

Lund, F. 2011. A step in the wrong direction: linking the South Africa Child Support Grant to school attendance. *Journal of Poverty & Social Justice*. 19(1): 5-14.

Makhaya, G. and Nhundu, N., 2015. Competition, Barriers to Entry and Inclusive Growth-Capitec Case Study.

Maltsoglou, I. & Taniguchi, K. 2004. Poverty, Livestock & Household Typologies in Nepal. Working paper No. 13, Washington: Pro-poor Livestock Policy Initiative.

Mashigo, P. 2007. Transforming the South African credit market through group lending mechanisms. *Journal of Case Research in Business and Economics*. 1(1): 1 – 16.

Matuku, S. and Kaseke, E., 2014. The role of stokvels in improving people's lives: The case in orange farm, Johannesburg, South Africa. *Social Work*,50(4): 504-515.

Meyer, B. D., & Sullivan, J. X. 2003. Measuring the well-being of the poor using income and consumption. Working paper no. 9760, Cambridge: National Bureau of Economic Research.

Meyer, B.D., Mok, W.K. and Sullivan, J.X., 2009. *The under-reporting of transfers in household surveys: its nature and consequences* (No. w15181). National Bureau of Economic Research.

Modigliani, F. 1966. The Life Cycle Hypothesis of Saving, the Demand for Wealth and the Supply of Capital. *Social Research*. 33(1): 160-217.

Moneyweb. 2013. Budget speech 2012. Available at: <http://www.moneyweb.co.za/moneyweb-2012-budget/budget-speech-2012?sn=2009+Detail> (Accessed: 23 January 2013).

Musona, D. & Coetzee, G. 2001. *Dropout among selected Zambian microfinance institutions: Causes and potential impact on product design*. MicroSave, Africa Research Report, Nairobi.

Mutesasira, L., Sempangi, H., Hulme, D., Rutherford, S., & Wright, G.A.N. 1998. *Use and impact of savings services among the poor in Uganda*. MicroSave, Africa Research Report, Nairobi.

- Neves, D., Samson, M., van Niekerk, I., Hlatshwayo, S. & du Toit, A. 2009. *The use and effectiveness of social grants in South Africa*. Cape Town: Economic Policy Research Institute.
- Nwibo, S.U. & Mbam, B.N. 2013. *Determinants of Savings and Investment Capacities of Farming Households in Udi Local Government Area of Enugu State, Nigeria*. *Research Journal of Finance and Accounting*, 4(15): 59-68.
- Osondu, C.K., Obike, K.C. and Ogbonna, S.I. 2015. *Savings, income and investment patterns and its determinants among small holder arable crop farmers in Umuahia capital territory, Abia state Nigeria*. *European Journal of Business and Innovation Research*, 3(1): 51-70.
- Parpiev, Z. & Yusupov, K. 2011. Testing household economies of scale in uzbekistan. *Eurasian Journal of Business and Economics*. 4(7): 25-51.
- Patel, L., Hochfeld, T., Moodley, J. and Mutwali, R., 2012. The gender dynamics and impact of the child support grant in Doornkop, Soweto.
- Paxton, J. 2009. Subsistence savings strategies of male- and female-headed households: evidence from Mexico. *Eastern Economic Journal*. 35(2): 209 - 231.
- Paxton, J. & Young, L. 2009. Liquidity profiles of poor Mexican households: The role of economic shocks and banking. Unpublished research paper, Ohio University, Ohio.
- Prina, S., 2015. Banking the poor via savings accounts: Evidence from a field experiment. *Journal of Development Economics*, 115, 16-31.
- Sarantis, N. & Stewart, C. 2001. Saving behavior in OECD countries: evidence from panel cointegration tests. *The Manchester School Supplement*. 69(1): 22 - 41.
- Seguino, S. & Floro, M. S. 2003. Does gender have any effect on aggregate saving? An empirical analysis. *International Review of Applied Economics*. 17(2): 147-166.
- Shapurjee, Y. and Charlton, S., 2013. Transforming South Africa's low-income housing projects through backyard dwellings: Intersections with households and the state in Alexandra, Johannesburg. *Journal of Housing and the Built Environment*, 28(4), 653-666.
- Sharma, K. 2010. The impact of remittances on economic insecurity. *Journal of Human Development and Capabilities*. 11(4): 555 - 577.

- Shitu, G.A., 2012. Rural Households' Income and Savings Pattern in South-Western Nigeria. *Agricultural Journal*, 7(3): 172-176.
- Skidmore, M. 2001. *Risk, natural disasters, and household savings in a life cycle model*. Japan and the World Economy 13(1): 15-34.
- South Africa info. 2013. Biometric grant cards beating fraud. Available at: <http://www.southafrica.info/about/social/grants-220813.htm#.V8cSJE2F6M8> (Accessed: 31 August 2016).
- StatsSA. 2011. Census 2011: Profile of older persons in South Africa, Report 03-01-60 Available from: <http://www.statssa.gov.za/publications/Report-03-01-60/Report-03-01-602011.pdf> (Accessed: 14 May 2015).
- Ting, L. & Kollamparambil, U. 2015. *Nature and determinants of household retirement savings behaviour in South Africa*. Development Southern Africa, 32(6): 675-696.
- van der Merwe, T. 2000. The case for social security in South Africa: an economic perspective. *Development Southern Africa*. 17(5): 718 - 735.
- Walden, M. 2012. Will Households Change Their Saving Behaviour After the “Great Recession”? The Role of Human Capital. *Journal of Consumer Policy*. 35(2): 237 - 254.
- Williams, M.J. 2007. *The social and economic impacts of South Africa's child support grant*. Working paper no. 40, Cape Town: Economic Policy Research Institute.
- Woolard, I. 2002. *An Overview of Poverty and Inequality in South Africa*. Working Paper prepared for DFID South Africa, July 2002.
- Wright, G.A.N. & Mutesasira, L. 2001. *The relative risks to the savings of poor people*. MicroSave, Africa Research Report, Nairobi.