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A COMPARATIVE ANALYSIS OF INCOME- AND ASSET-BASED POVERTY MEASURES OF HOUSEHOLDS IN A TOWNSHIP IN SOUTH AFRICA

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—Abstract —

Poverty alleviation is an essential goal for policy-makers. As a result, the development of an accurate measure of poverty is a key step to conceptualise the poverty phenomenon. Several measures for evaluating poverty exist but most of these measures cannot be generalised as they tend to be area- and community-specific. This study compared the use of the income- and asset-based measures to determine the poverty status of households in a South African Township. A quantitative research approach, utilising a survey questionnaire, was adopted to collect data from 364 households in year 2015. The income-based poverty was measured using the Household Subsistence Level (HSL); while Principal Component Analysis (PCA) was applied to determine the asset-based poverty status. The Analysis of Variance (ANOVA) was used to assess whether there is a significant difference between the results of these two measures of poverty. A binary logistic regression model was used subsequently to determine to what extent a set of demographic variables influence the poverty status. Results revealed that the levels of poverty status tend to be high when the income-based poverty is used but the difference between the results of the two measures of poverty was found to be not statistically significant. The key determinants of asset-based poverty status in the selected Township include the marital status of the household head, the household size and receipt of a social grant. This study concludes that, in the absence of the income, the asset index can be used as measurement of poverty in low income areas.

Key Words: Poverty status, Poverty measures, Asset Index, Socio-economic status

JEL Classification: D63, J11, R20

1. INTRODUCTION

The world is currently faced with challenges of unequal society due to inequality in the distribution of wealth. This is manifested by increasing poverty levels and the widening gap between the rich and poor. The challenges of poverty and social inequality have resulted in social exclusion where certain members of society are excluded from accessing adequate resources and services (Gordon *et al.*, 2000). These challenges not only affect individuals but also affect the development of the relevant society as a whole. Historically, poverty and inequality have jointly existed in both developed and developing countries, and poverty alleviation is among the essential goals for policy-makers in any nation. Despite efforts in addressing the challenges of poverty and social inequality, approximately 50 percent of the population in Sub-Saharan African (SSA) countries lives below the poverty line (World Bank, 2017). Although large incidences of poverty are found in rural areas, SSA countries have experience increase in poverty in urban areas due to increasing urbanisation (Alkire *et al*., 2014; Saghir & Santoro, 2018).

Central to the problem of poverty is the unequal distribution of resources which deprives a large proportion of the World's population of access to basic needs. The inequality in the distribution of wealth, income, and ability to access resources are all classified as socio-economic status (SES) (Scott, 2002). SES is a theoretical construct covering individual, household, and/or community access to material resources and services (Scott, 2002). It is commonly conceptualised as a combination of economic, social, and work status, measured by income or wealth, education and occupation (Cowan *et al.*, 2012). As a result, socio-economic factors are essential determinants of human functioning within societies and can be used to identify poverty status (American Psychological Association, APA, 2007). In the context of this study, SES refers to a household's ability to acquire certain assets and the degree of that ability is used to measure a given household poverty status.

Over and above, the use of the asset-based SES, previous studies (Grobler & Sekhampu, 2012, Barnes & Lord, 2013; Dunga & Sekatane, 2014, Sekhampu, 2013, Sekhampu & Muzindutsi, 2014) have used level of income to determine a household's poverty status. The shortcoming of this method is that level of income is more reflective of the short-term household's wealth and, consequently, does not disclose households' deprivation from other basic necessities such as existing infrastructure, source of water and sanitation facilities or the ownership of durable assets and others (Alkire, & Santos, 2014). Considering that the economic wellbeing of a household also depends on its real and financial asset holdings (Brandolini *et al*., 2010), income may not be the most useful measure of poverty associated with the holistic wellbeing of the household. Additionally, income cannot capture the level of poverty adequately in cases where there is absence of a regular income. A suitable example is in the rural setting, where a household's economic status tends to be determined by the accumulation of assets, such as livestock and land.

Various methods have emerged to supplement/compare the income measurement of poverty. One of these measures is the asset-based index which categorises individuals into SES based on the assets they own. There is a continuing debate on whether the asset-based measures of poverty can substitute the common income measure of poverty. Studies (Attanasio & Székely, 1999; Bourguignon & Chakravarty, 2003; Bourguignon, 2006) found that both measures can substitute and complement each other, while Brandolini *et al*. (2010) suggest that these measures produce different outcomes. This debate can be extended to the South African low income areas, such as townships, where some certain households do not have regular incomes to be used in assessing income based-poverty status. The primary aim of this study is to compare the use of the income- and asset-based measures of poverty in the evaluation of the poverty status of households in a South African Township.

2. LITERATURE REVIEW

Various measures of SES exist and the selection of the best measure depends on the interest of the researcher. According to Dudala *et al*. (2014), numerous experts have suggested different scales to measure the poverty and SES in both urban and rural areas. SES can be measured through comparing per capita monthly income of the family. The tool used to measure such is known as Prasad's economic

status scale. Hauser & Warren (1996) explain that SES can possibly be indicated by educational accomplishment, occupation, social classification, income level and by wealth or possession of assets, such as home appliances, houses, cars, boats and livestock. This means that there is a close link between SES and poverty and SES is often used as a measure of poverty. As a result, studies (Vyas & Kumaranayake, 2006; Habyarimana *et al.,* 2015) have used asset-based SES to measure poverty status.

In addition to the asset index, monetary factors, such as income or expenditures can also be used as indicators of SES. The household income is a direct measure of the capability of people to purchase goods and services (Cowan *et al.,* 2012), meaning that it captures one's capability to acquire desired resources. Consequently, high income is often linked with high SES. The income has therefore been used as a direct measure of SES and linked to absolute poverty (World Bank 2005, Cowan *et al.,* 2012). However, it is necessary to note that the use of income as a measure of poverty or SES has been criticised due to its inability to capture the accumulation of durable assets, households' living standards, and other housing characteristics (Vyas & Kumaranayake, 2006). This implies that earning income does not always translate into acquiring the basic goods and services. For example, a household that earns sufficient income may be categorised as non-poor based on its income but if such income is spent on non-basic products (such as alcohol and tobacco), such categorisation would be misleading as the earned income is not used to improve households' living standards. Consequently, income only captures the short-term inflow of financial funds but it does not show whether those funds are spent on basic necessities or not. In this instance, income has been supplemented by other indicators in order to measure poverty in multidimensional form (Alkire & Santos, 2014).

Regarding household poverty, researchers and policy-makers are not only interested in the measurement of poverty but also in other factors that can influence poverty. Factors such as level of education, occupational status, marital status and gender of the household head and other demographic variables such household size and social grants are accepted as the key determinants of poverty status. Education is the preferred legacy any government can provide for its citizens, especially for the younger generation. Literacy and schooling are fundamental indicators of quality of life in their own right, as well as being key

determinants of poor people's ability to take advantage of income-earning opportunities and acquiring assets that can improve their SES (Suryadarma & Suryahadi, 2009). In this context, studies (Barnes & Lord, 2013, Connelly *et al.*, 2014) on the link between households SES and level of education, have established that high levels of poverty are associated with low education attainment. However, Sadeghi *et al*. (2001) noted that higher levels of education were not always needed in rural areas where only a few well-educated people live. This indicates that the link between education and SES or poverty may differ across different geographical areas.

Employment is another factor that is linked with poverty status. Employment status is considered to be one of the main pillars in dealing with poverty as it shows a reliable and powerful characteristic of persons or households by showing an impression of its temporal stability and substantial correlation with other social and economic variables (Dunga & Sekatane, 2014). Employment status has a strong bearing on living conditions and poverty outcomes since earnings from paid work comprise the largest source of income for most households (Ray *et al.*, 2014). However, the relationship between employment status and poverty is not direct. This is because employment status describes an individual characteristic, while poverty is mostly inclusive and is considered from the household perspective (Ray *et al.*, 2014). Henceforth, a household with and employed head can still be categorised as poor, if the employment does not provide sufficient income for the entire household. This may be the case in low-income areas such the South African townships, where individuals are employed in low-paying jobs. Dunga & Sekatane (2014) investigated the relationship between employment status and poverty status of the household in the township setting and found a significant relationship between the two variables. Their findings showed that households with employed members have a better chance of escaping poverty and enhancing their SES. However, Sekhampu & Muzindutsi (2014) found that employment status decreases poverty in female-headed households but not in male-headed households, while Sekhampu (2013) found no relationship between the two variables. These studies tested the effect of the household head's employment status on income-based poverty and it is not clear whether similar findings can be obtained when asset-based poverty is considered.

Another variable that that has been found to determine a household poverty status is the size of household. A large household size is associated with low SES and high level of poverty. This implies that a high number of children and their participation in household production are likely to obstruct investment in their human capital (such as education and health), maintaining the low-income status of the household, and thereby creating a poverty-fertility trap (Anyanwu, 2014). Studies (Sekhampu, 2013; Sekhampu & Muzindutsi, 2014; Meyer & Nishimwe-Niyimbanira, 2016) have found a significant link between household size and poverty status, where an increase in household size leads to an increase in poverty status. However, Kamuzora (2001) found evidence of low levels of poverty among households with a large household size min areas where household members have access to land and live by subsistence farming. As a result, if members of a household are productive, increase in household size may lead to a decrease in poverty or improvement of household SES.

In favour of fighting against poverty and inequality, the South African government has implemented a broad pro-poor policy framework, which comprises an enlarged share of government spending going towards social services in the form of social grants (Grobler & Sekhampu, 2012). The social grants system has been at the centre focus of government determinations to advance the socio-economic status of the less-fortunate and vulnerable groups in South Africa. It has been pointed out that social grants in South Africa contribute significantly towards reducing poverty and promoting social development amongst the poor (Grobler & Sekhampu, 2012). In this context, it should be tested whether social grant have contributed to accumulation of assets and so contributing to reduction of asset-based poverty.

Other factors that affect household poverty status are gender, age and marital status of the household head. Gender of the household head has been linked to poverty status, where female-headed households are poor compared to their male-headed counterparts (Sekhamphu & Muzindutsi 2014). Sadeghi *et al.* (2001) and Sekhampu (2013) found that poverty is related to the age of the household head among farmers in rural areas and this was confirmed by Barnes & Lord (2013) who found that young individuals are likely to have high levels of poverty. However, Sekhamphu & Muzindutsi (2014) found that the age affects poverty status in female-headed households but not in their male-headed counterparts.

Considering that these studies used income-based poverty status, it may be necessary to test whether the established determinants of poverty do not change when poverty status is measured by asset index.

3. METHODOLOGY

3.1 Research instrument and Data collection

This study used data collected from the ow-income South African township of Bophelong situated in the Gauteng province. A survey questionnaire was administered to 400 households during April 2015. The field workers collected detailed information from the household head or a spouse on income and assets owned by each household and demographic characteristics of the household members including age, gender, level of education and employment status. The survey questionnaire was designed and necessary adjustments were made before its distribution. After the data collection, 364 questionnaires were deemed acceptable, indicating a response rate of 91 percent. The participants' asset-based socio-economic status was a key interest in this study. Resultantly, the information on the possession of durable goods such as television, refrigerator, radio, shower, air-conditioner, microwave, dishwasher, washing machine, landline telephone, computer, satellite dish, car, motorcycle and an additional house or land were collected. All these variables were coded into dichotomous variables (owning the particular asset or not) and accorded a value of zero or one.

3.2 Poverty measurement

Poverty was measured using asset- and income-based measures. The Principal Component Analysis (PCA) was used to create an asset index based on participants' information on the ownership of durable assets. The PCA is a multivariate numerical technique used to decrease the amount of variables without misplacing excessive data in the process (Anyanwu, 2014). The PCA method attains this by creating a fewer number of variables that explain most of the variation in the original variables. PCA generates a number of components that are completely uncorrelated and the subsequent component explains additional but less variation than the previous component (Habyarimana *et al.*, 2015).

After the application of the PCA, factor scores were obtained and cut-off points were established to distinguish households into broad socio-economic categories. The approaches used can either be arbitrarily defined (based on the assumption

that SES is uniformly distributed), or data-driven. Commonly used cut-off points involve the grouping of the lowest 40 percent of households into 'poor', secondly the highest 20 percent as 'rich' and the rest as the 'middle' group (Filmer & Pritchett, 2001). Using this method, households were classified into SES based on the factor score generated from the PCA. These factor scores show the household with the most score and the least scores, meaning that the households that obtained the highest score (from the possession of most weighted assets) were likely to be in the high SES and those with lowest score due to owning less weighted assets fall into either low/middle SES.

For income-based poverty status, a number of poverty lines have been developed to identify the thresholds for poverty status (Budlender *et al.*, 2015). In the South African context, Statistics South Africa (Stats SA) uses three poverty lines to measure absolute poverty. These poverty lines are the food poverty line (FPL), the Lower-bound poverty line (LBPL) and the upper-bound poverty line (UBPL) (Stats SA, 2017). The FPL is the monetary value below which individuals are not able to afford enough food for the minimum daily energy requirement for adequate health. The LBPL and UBPL add non-food components to the FPL. The individuals at the LBPL cannot afford both food and non-food items; while those at the UBPL can afford to purchase adequate food and non-food items (Stats SA, 2017). According to Stats SA (2017), the inflation-adjusted measure of each of these three poverty lines per person per month in 2015 was R441, R641 and R992 for the FPL, LBPL and UBPL, respectively. To measure the household poverty, this study used the household **subsistence level** (HSL), which indicates the level of a household income required to attain a minimum **subsistence level** (World Bank, 2005). This is the poverty status based on LBPL and for the household, it was calculated using information on household size and total household income based on the 215 Stats SA poverty line. After generating both poverty status, the analysis of variance test ANOVA was used to test if there is a statistically significant difference between asset-based poverty status and the income-based status.

3. 3 Logistic regression model

To identify the determinants of the asset-based household poverty status in Bophelong Township, a binary logistic regression was used to analyse whether demographic factors such as age of household head, size of household, gender,

educational level, receiving a social grant, employment status and the marital status of the household head were associated with the asset-based poverty status. The estimated logistic regression model is as follows:

$$PS_i = \beta_0 + \beta_1 Gen_i + \beta_2 Size_i + \beta_3 Age_i + \beta_4 MS_i + \beta_5 Ed_i + \beta_6 ES_i + \beta_7 SG_i + u_t$$

Where PS_i is the probability that a household is poor (1 for poor and 0 otherwise), Gen is the gender of the household head (male = 0 and female =1), $Size$ is the household size in 3 categories ("1-3"=1, "4-6"=2, "7+"=3), Age is the age of the household head (in years), MS is the marital status of the household head (not married = 0 and married = 1); Ed is the education level (classified in 6 categories), ES is the employment status (unemployment = 0 and employment = 1), SG is the social grant (receiving grant = 1 and no grant = 0), β_1 ... β_7 are the coefficients to be estimated, β_0 and u_t are the constant and the error term, respectively, and i refer to a specific household.

4. EMPIRICAL ANALYSIS OF RESULTS

4.1 Descriptive information of the participants

Descriptive statistics show that only 24 percent of the total sample size was employed. This indicate that unemployment was high in the Bophelong Township. The average total income per household was R3134.74 and the major source of income was found to be social grants, where 77 percent of the surveyed households receive a form of social grant. This confirms the assumption made by the current study that Bophelong is a low-income township. A quarter of the participants were married (25%). On average, each household had around 4-6 members living in the same household. Moreover, the average population sample had obtained between grade 4-7 educational levels. On average 64 percent of the households were headed by females and the average age of the household head was 56 years.

4.2 PCA scores and SES

The results of the PCA showed that 2 components can be returned. The eigenvalues and scree plot show that the cut-off point is on 2 components. The 2 components explain 58 percent of the total variations in the original variables with the first component explaining approximately 36 percent of the total variations in the original variables. Each component except the first component describes a

diminishing proportion of variance. Table 1 reports the component scores of each asset and the total percentage of people who owned a particular asset in the 3 SES categories, namely poor, middle and richest households. It shows which asset weighted more, and which ones weighted less. The assets with more weight are likely to have a positive impact on the household's socioeconomic status. The estimated coefficients rise with the increasing quality of each asset, and greater numbers (either positive or negative) mean that the addtional variable/asset provides more "information" on the household's wealth. For example, a household with variables such as car, additional house, satellite dish (the highest component score) is likely to fall in the upper wealth category. This is because these assets were owned by few people.

Table 1: Classification into wealth categories

Variable	Component score	Poorest 40%	Middle 40%	Richest 20%
Refrigerator	0.127	91.0	100	100
TV	0.110	92.0	100.0	100.0
Radio	0.134	46.0	73.2	85.7
Bath/shower in house	0.162	42.0	92.8	95.9
air-condition	0.055	5.0	5.2	10.2
Microwave	0.149	40.0	85.6	95.9
Kitchen appliances	0.103	10.0	16.5	46.9
Dishwasher	0.049	0.0	0.0	4.1
Washing machine	0.132	33.0	72.2	85.7
Cellphone	0.108	79.0	96.9	100.0
Landline	0.128	0.0	4.1	16.3
Computer(desktop/lap top)	0.165	1.0	4.1	40.8
Satellite dish	0.190	3.0	32.0	77.6
A car in working condition	0.168	0.0	1.0	40.8
Motorcycle/scooter	0.179	0.0	0.0	12.2
Own a house other than the one you live in	0.135	2.0	16.5	36.7

The score of the first component was used to class households in their SESs. Results revealed that the first 40 percent of the poorest were classified as poor because of their least ownership of the most weighted assets. Refrigerators, television screens and cell phones were found to be common assets owned by all households, but assets such as a car in a working condition, an additional house and a motorcycle were owned by the richest people and by few of the middle SES.

Variables such as landline, dishwasher and a car in working condition were not owned by poor and only 2 percent of the poorest had owed a house other than the one they were living in. It is evident that most of the richest households owned all assets considered in this study but the ownership of a dishwasher was shown to be low (4%). This is acceptable as a dishwasher may not be a common asset among communities of low income areas.

4.3 Poverty status

The asset-based poverty status was created by grouping the households based on the assets they possessed. Households with less weighted assets were classified under low poverty status, while those who owned highly-rated assets were classified as being non-poor. The percentages of the asset-index poverty status among the participants showed that majority of the households (58.1%) fell in the non-poor category. This shows that more than half of the participants were better off in terms of the asset ownership. Results also showed that 41.9 percent of the households were poor, suggesting that these households lacked the most and highly weighted assets which categorised them worse-off compared to the non-poor.

When LBPL was used to measure household income-based poverty, 44.2 percent of the participants were categorised as poor, while the remaining 55.8 percent were categorised as non-poor. Although the poverty rate was found to be high when the income measure is considered, the ANOVA and comparison of means tests show that there was no statistically significant difference between means and variances of the asset-based and the income-based poverty status. This suggests that the asset-based index can be used to capture the level of poverty, especially in the absence of income. As there is no difference between the two measures of poverty and the focus of this study was on the asset-based index, the subsequent analysis of the determinants of poverty status is based on the asset-based poverty status.

4.4 Results on the determinants of poverty status

This section provides both the cross-tabulation and logistic regression results on the link between the asset-based poverty status and various demographic factors. Cross-tabulation results in Table 2 show that among the female-headed households, 35.7 percent are poor, while 64.3 percent are non-poor. The level of

poverty status increases to 42.6 percent when the male-headed households are considered. The p-value of 0.052 suggests that the difference in poverty status between female- and male-headed households is statistically significant at the 10 percent level of significance. The poverty status is high among households with a size of more than seven individuals. The p-value of 0.005 implies that the observed difference in poverty status among the 3 categories of household size is statistically significant. As a result, it can be accepted that poverty status varies across different categories of household size. The level of poverty is high (67.8%) within the households headed by an unmarried head, while the households with a married head have a relatively low level of poverty (14%). The p-value of 0.001 indicates that the observed difference in poverty status between married and unmarried household heads is statistically significant at the 1 percent level of significance.

Regarding social grants, the level of poverty is relatively low among households receiving grants, suggesting that social grants assist in poverty reduction. However, there is no statistically significant difference between the poor and non-poor within the employment status and level of education categories.

Table 2. Distribution of demographics within poverty status (cross-tab.)

		poor	Non-poor	Chi-square' P-values
Gender	Females	35.7%	64.3%	0.052
	Males	42.6%	57.4%	
Marital status	Married	14.0%	86.0%	0.001
	Non married	67.8%	32.2%	
Household size	1-3	44.0%	56.0%	0.005
	4-6	46.3%	53.7%	
	≥ 7	42.6%	57.4%	
Social grant	Grant recipient	39.1%	60.9%	0.041
	Non grant	58.8%	41.2%	
Employment status	Employed	44.2%	55.8%	0.214
	Unemployed	53.8%	46.2%	
Educational level	Grade0-3	53.1%	46.9%	0.280
	Grade 4-7	56.8%	43.2%	
	Grade 8-11	43.4%	56.6%	
	Matric	51.3%	48.7%	
	Post matric	50.7%	49.3%	

To further analyse the effect of the demographic variables on asset-based poverty status, the logistic regression was used and the results are in Table 3. The omnibus test for coefficients' goodness fit of the model is significant at the 1 percent level of significance (Chi-square p-value = 0.00), implying that the model passed the goodness of fit test. The coefficient for gender is not significant at any levels of significance, suggesting that there is no statistically significant relationship between assets-based poverty status and gender, holding other factors constant. For household size, the comparative category is 1-3 members. The coefficient for 4-6 members is not statistically significant (p-value = 0.118) meaning that their having 3-6 members (compared to 1-3 members) does not increase probability of being poor. However, the coefficient for ≥ 7 members is negative and significant at the 1 percent level of significance. This means that households with ≥ 7 members, compared to 1-3 members, is less likely to be poor. The coefficient for marital status of the household is negative and statistically significant at the 1 percent level of significant (p-value = 0.008). This means that a household with a married head is less likely to be poor than one with an unmarried head. Another coefficient that has influence on poverty status is the social grant (significant at 1%). The negative sign indicates that receiving any form of social grant reduces the household's likelihood of being poor. The coefficients for age, education and employment status of the household head are not statistically significant, suggesting these variables have no influence on household's poverty status.

Table 3: Results of logistic regression

	B	S.E.	Sig.	Exp(B)
A5_HH_Gender	-0.150	0.318	0.637	0.860
B1_HH_Size (1-3)			0.008	
B1_HH_Size(4-6)	-0.938	0.600	0.118	0.391
B1_HH_Size (≥ 7)	-1.609	0.601	0.008	0.200
B3_Age_Head	.005	0.009	0.594	1.005
B5_Marital_Head	-1.011	0.261	0.008	0.365
B7_Educ_Head	-0.185	0.119	0.120	0.831
B8_HHH_Employ	0.017	0.383	0.965	1.017
Social grant	-1.415	0.528	0.014	0.243
Constant	0.121	0.828	0.884	1.129
Chi-square = 112.235 (Sig. 0.00)	Log likelihood = -218.7312			

5. DISCUSSION OF THE RESULTS

This study constructed asset-based SES from which a poverty status was derived. Assets such as a car in working condition, an additional house and living an air conditioned house were found to be key indicators of high SES. The results are similar to those of the previous studies (Filmer & Pritchett, 2001; Vyas & Kumaranayake, 2006; Habyarimana et al., 2015) which constructed an asset-based SES and found that valuable assets in society are key indicators of high SES. However, it should be noted that the types of such asset-indicators tend to vary with the area of interest. This study found that there was no significant difference between asset-based poverty status and income-based poverty status. This finding is contrary to the results of Brandolini *et al*. (2010) which suggest that these measures produce different outcomes. However, they are similar to those of other studies (Attanasio & Székely, 1999; Bourguignon & Chakravarty, 2003; Bourguignon, 2006) which concluded that both measures can substitute each other. The current finding suggests that the asset index can be used to capture the level of poverty in low-income areas such as the South African townships with no regular incomes.

The results on determinants of poverty show that being married has a significant impact on reducing the probability of a household being poor. This finding is similar to those from previous studies (Sadeghi *et al.*, 2001; Sekhampu 2013; Sekhamphu & Muzindutsi, 2014) which found that poverty was higher among households headed by single/unmarried than among married individuals. The unexpected finding was that asset-based poverty status was found to be less among households of 7 and above members. Kamuzora (2001) also found similar results in rural areas where people have access to land and need more manpower. However, this finding is contrary to previous studies conducted in South African townships by Sekhampu (2013), Sekhampu & Muzindutsi (2014) and Meyer & Nishimwe-Niyimbanira (2016) and found that the increase in the household size increases the likelihood of being poor. The probable explanation of this finding is that households with more members tend to acquire more durable assets that increase the asset-based SES of such households. Additionally, an increase in household size can also contribute to household wellbeing when the household members are productive or able to secure income. However, this may not be the case in a township like Bophelong which has a high level of unemployment.

Receipt of social grants is also a significant determinant of asset-based poverty status suggesting that a social grant does not necessarily improve the household's income but it increases the ability to acquire durable assets. The high level of dependency on social grants among the participants can also explain why large households are less likely to be poor because an increase in household size tends to increase the chance of receiving more grants. The South Africa government's pro-poor policy of allocating a large portion of its budget towards social grants (Grobler & Sekhampu, 2012) may be relevant as it contributes to poverty alleviation. However, this may only provide a short-term solution to poverty and a long-term solution may be required.

The rest of the independent variables (namely age, gender, employment status, educational level) for this study were found not to be significant. This implied that the mentioned variables have no influence on households' asset-based poverty. This is contrary to previous studies (Connelly *et al*., 2014, Dunga & Sekatane, 2014) which found a strong relationship between poverty status and variables such education levels and employment status. The reason behind educational level not being significant is revealed by the descriptive statistics which shows that most participants had only obtained pre-matric education. In this context, the results for this study were in accordance with the findings of Sadeghi *et al*. (2001) who found that age and the level of the education of farmers did not have statistically significant effects on poverty levels.

6. CONCLUDING REMARKS

The research set out to evaluate asset-based poverty status and identify its key determinants in Bophelong Township. Previous studies in this area have used income to determine the household's poverty status but this study found that income mostly measures short-term poverty status and does not always reflect the holistic well-being of a household. Consequently, supplementing income as a measure of poverty with other poverty measures may produce advantageous results. This study used asset index to generate asset-based poverty status and showed that it is not different from income-based poverty status. This means that in urban areas such as the South African townships, asset-based index can be used to measure poverty in the absence of income.

On the determinants of asset-based poverty status, the findings of this study show that determinants of poverty status remain unchanged when an asset-based index is considered. The study found that the level of poverty tends to decrease with an increase in the household size and this is contrary to the results from many previous studies. This funding suggests that a household with many members are encouraged to acquire more assets. Another key determinant is that social grants were found to contribute to a reduction of asset-based poverty status. Although government grants are usually seen as a short-term solution to poverty, the current findings suggest social grants contribute to the acquisition of durable assets, which may be long-term in nature. In this context, South Africa's government policy of providing social security through grants is relevant in low-income areas.

The shortcoming of the asset-based measure of poverty is that it is more reflective of long-term households' wealth and may not capture wealth in the short-term. If the focus is on short-term assessment of the households' poverty, then an index based on assets may not be the ideal measure. It is therefore advisable to combine the asset-based index with another measure, implying the method of measuring poverty with a multidimensional approach is recommended.

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