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Asset Ownership and Income as Drivers of Household Poverty in South Africa

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Abstract:

The study was carried out to examine asset ownership and income as determinants of household poverty in South Africa. The specific objectives were to determine the poverty levels of the households and also investigate the influence of asset ownership and income on household poverty in South Africa. The results showed that assets owned by households included real estate assets, business assets, vehicle assets, financial assets, superannuation assets, livestock assets and possession. Two-thirds of the mean-per-capita household expenditure was used as the benchmark to estimate the poverty line, so that the poverty levels of the households could be determined. The results showed that 59.49% of South African households experience poverty, particularly in Kwazulu-Natal, Eastern Cape and Limpopo provinces. The results of the logistic regression revealed that asset ownership and income had a positive influence on household poverty level. The Western Cape, Northern Cape, Free State, and Gauteng provinces showed high odds for improving poverty level, while Kwazulu-Natal province showed odds of increasing poverty. It was recommended that policies should focus on income redistribution through employment generation, which will lead to enhanced income. This can, in turn, be used to acquire assets, especially in the most affected provinces like Kwazulu-Natal, Eastern Cape and Limpopo province.

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INTRODUCTION

The number of people living in extreme poverty in the world has dropped by more than half – from 1.9 billion in 1990, to 836 million in 2015. However, a sizeable number of people are still struggling to meet the most basic human needs; mostly living on less than \$1.25 a day (SDGFund 2015). In South Africa, the proportion of the population living in poverty declined from 66,6% (31,6 million persons) in 2006 to 53,2% (27,3 million) in 2011, but increased to 55,5% (30,4 million) in 2015. The number of persons living in extreme poverty (i.e. persons living below the 2015 Food Poverty Line of R441 per person per month) in South Africa increased by 2,7 million, from 11 million in 2011 to 13,8 million in 2015 (Stats SA 2017). Poverty is therefore still of serious concern in South Africa, especially among households living in the rural areas (Bird, et al. 2002).

According to FAO, food production will need to double to feed an additional two billion people by 2050 and growing demand for agricultural products will increase pressure on already severely degraded natural resources (2017). This shows the significance of studying poverty by agricultural institutions. The sheer weight of numbers, with the majority of poor people living in rural areas, depending on agriculture would suggest that they will benefit more from growth originating in agriculture. They may also benefit indirectly through the labour market and employment expansion in non-traditional agro-export sectors (Christiaensen, Demery and Kuhl 2011). Most importantly, understanding household poverty and its determinants will help government to better focus policy and implementation in the agricultural sectors, as well as others.

To promote rural development and inclusion, countries must take specific policy and create programs that reach the poor directly. A significant change in the set of development policies over the years (since the 1990s) have led to the adoption of a range of direct interventions, variously called “antipoverty programs,” “social safety nets,” and “social assistance.” Their common feature is the use of direct income transfers to poor families (Ravallion 2016).

Furthermore, these types of social assistance highlight the import of income to the household poverty discussion. In major surveys, income is often used (in the absence of consumption) for measuring poverty (Ravallion 2016). Household assets, which help households to diversify their sources of income and consequently reduce the risk of income failure have also been identified as important determinants of poverty (Omotesho, Adewumi and Fadimula 2010).

This study is significant because it will contribute to knowledge in achieving Goal 1 of the 2030 Agenda for Sustainable Development; no poverty. This information will help advise government in policy formulation with regards to poverty issues. It will also contribute to knowledge base for further study into asset ownership, income and household poverty issues in the country.

This paper therefore examined asset ownership and income as determinants of household poverty in South Africa.

LITERATURE REVIEW

This section reviews existing literature on research that has been carried out, around Africa and the World, on the influence of income and asset ownership on poverty.

A research carried out in Nigeria, to examine the levels and the major determinants of food security and poverty among the rural households, observed that non-farm income and ownership of physical assets were important determinants of rural poverty (Omotesho, Adewumi and Fadimula 2010). According to that study, households with physical assets received some rents from these assets and they did not pay for such asset, thus reducing cash outflow. This supported the school of thought that asset ownership should lead to reduced poverty.

According to Vijaya, et al. (2014), a multidimensional poverty study carried out in India included an asset inventory to capture ownership details, and valuation data. It considered assets as one of the most important poverty indicators, alongside education and standard of living. The study also showed that assets provide insights into a household's economic activity and security in a way that is not possible using income or consumption data. Asset portfolios reflect both past and future income-generation opportunities through their contribution to livelihood choices, and the potential for participating in financial markets, generating rents, interests on savings, and profits from business. The characteristics of assets impact the experience of poverty by providing a safety net during times of economic crises, through their sale or pawning to cope with an income shortfall (Vijaya, Lahoti and Swaminathan 2014).

Akinbode (2017) carried out a study on “Women Asset Ownership and Household Poverty in Rural Nigeria”. Data was collected from 363 respondents. The results of the logit regression showed that income was one of the significant variables that determined poverty status. It also highlighted that the personal possessions that was ranked as the most valuable asset was the mobile phone, while the least valuable was the black-and-white television.

Another research carried out in America in 2006, titled “Saving and asset accumulation among low-income families with children in IDAs”, looked at asset ownership as one of the important factors affecting low-income families. Assets ownership was specifically defined as home ownership, car ownership, and/or being banked. These seemed to be an important factor of savings among families with children. Home ownership and car ownership were used as a proxy to the fact that participants already had some experience with saving (Grinstein-Weiss, Wagner and Ssewamala 2006).

Lawal et al. (2011) prepared a paper for the European Association of Agricultural Economists (EAAE) 2011 congress on “Effects of Livelihood Assets on Poverty Status of Farming Households’ in Southwestern, Nigeria”. One hundred and thirty-five farming households were examined. The results showed that 31.9 percent of the farming households fell below the poverty line. Lawal et al. classified the socio-economic characteristics of the respondents into human assets, physical assets and financial assets, and these assets proved significant to improving the poverty status of farming households.

According to another study also carried out in Nigeria in 2017, 65% of Nigerians live below the poverty line. The study aimed to examine the multidimensional welfare deprivation of women in rural and urban South-South (SS) Nigeria. In ascending order of contribution to well-being, the six dimensions considered as follows in rural SS were: employment, information access, health and nutrition, education, autonomy, housing and sanitation. While in the urban in ascending order the dimensions were arranged thus; employment, health and nutrition, information access, autonomy, education, housing and sanitation (Oladokun, Adenegan and Oluwatayo 2017).

These studies show that income and asset ownership are significant variables to consider when carrying out poverty analysis. In this study, the influence of these variables will be considered in the South African context.

METHODOLOGY AND ANALYTICAL PROCEDURES

Study Area

The Republic of South Africa (RSA), is the southernmost country in Africa. It is bounded on the south by 2,798 kilometres (1,739 mi) of coastline of Southern Africa stretching along the South Atlantic and Indian Oceans; on the north by the neighbouring countries of Namibia, Botswana, and Zimbabwe; and on the east and northeast by Mozambique and Swaziland; and surrounds the kingdom of Lesotho. South Africa is the largest country in Southern Africa and the 25th-largest country in the world by land area and, with close to 56 million people, is the world's 24th-most populous nation.

Data sources and type

Secondary data will be sourced from National Income Dynamics Study (NIDS) 2014/2015 data. A stratified, two-stage cluster sample design was employed by NIDS in sampling the households to be included in 2008, when the data was first collected. In the first stage, 400 Primary Sampling Units (PSUs) were selected from Stats SA's 2003 Master Sample of 3000

PSUs. Each of these surveys was conducted on non-overlapping samples drawn within each PSU. Over the combined field work periods NIDS fieldworkers knocked on 10,642 household doors. Of these households, 7305 agreed to participate and the interview was completed. This equates to a 69% response rate. By the 2014/2015 data collection, the household size had increased to 11895.

The Sample size for this study was 9,619 households.

Analytical Techniques

Descriptive Statistics

Descriptive statistics such as tables, frequencies, mean, and charts will be used to describe the assets owned by the respondents within the households in the sample.

Poverty Measure

Poverty line was calculated as two-third of the mean-per-capita household expenditure. Mean-per-capita household expenditure was calculated as the total amount that the households spent for a month divided by the total number of households (Rose and Charlton 2002). Households with expenditure above the poverty line were considered to be “non-poor” and those with expenditure below the poverty line were considered “poor”.

$$Poverty\ Line = \frac{2}{3} \times Mean\ per\ Capita\ Household\ Expenditure \dots\dots\dots 1$$

The Binary Logistic Model

Binary logistic regression estimates the probability that a characteristic is present. It is a procedure used to analyse the effects of categorical and continuous explanatory measures on a dichotomous response variable. Binary logistic technique was used to analyse the influence of assets ownership, household income and provincial locations on household poverty. The general regression equation is expressed below:

$$\log\left(\frac{P_i}{1-P_i}\right) = \log it\ P_i = \beta_0 + \beta_1x_1 + \beta_2x_2 + \beta_3x_3 + \dots + \beta_nx_n \dots\dots\dots 2$$

Table 1: List of Variables and Description

Variables	Description of variables	Unit of measurements
Y	Poverty Level (0 = poor, 1 = not poor)	Dummy
X ₁	Total Household Income	Rands
X ₂	Total Assets	Rands
X ₃ -X ₁₁	Provinces; Western Cape, Eastern Cape, Northern Cape, Free State, Kwazulu-Natal, North West, Gauteng, Mpumalanga, Limpopo	Dummy

RESULTS AND DISCUSSION

In Table 2, the highest population group was the African group with 84.58% of the respondents in this category. The population group with the least respondents were the Asian/Indian group with 0.77% represented in the study. Females were more represented in the study at 54.25%, while males constituted 45.75% of the respondents. The respondents were categorized into three age groups; under 15 years (32.99%), 15 to 64 years (60.87%) and over 64 years (6.14%). The highest number of the respondents studied up to Grade 7-11 (37.20%). This was followed by 22.32% of the respondents that attended Grade 1-6. The percentage of respondents that completed matric were 18.34%. While 18% of the respondents had no schooling at all. Among the respondents, 71.69% of the respondents were unemployed at the time of data collection. The 28.31% that had jobs were employed in the following sectors; Private households (8.95%), Agriculture, hunting, forestry and fishing (10.00%), Mining and Quarrying (3.37%), Manufacturing (10.82%), Electricity, gas and water supply (1.03%), Construction (6.64%), Wholesale and Retail trade; repair etc. (17.38%), Transport, storage and communication (4.51%), Financial intermediation, insurance, real (9.28%), and Community, social and personal services (28.02%).

Table 2: Socio-economic characteristics of the household members

Population Group	
African	84.58%
Coloured	12.89%
Asian/Indian	0.77%
White	1.75%
Gender	

Male	45.75%
Female	54.25%
Education	
Grade R/0	3.90%
Grade 1 - 6	22.32%
Grade 7 - 11	37.20%
Grade 12 (Matric)	18.34%
NTC /NCV Qualification	0.0005%
Certificate not requiring Grade 12/Std.	0.0003%
Honours Degree	0.00002%
Others	0.0015%
No Schooling	18.00%
Employment Status	
Employed	28.31%
Unemployed	71.69%
Sector code for occupation of employed	
Private households	8.95%
Agriculture, hunting, forestry and fishing	10.00%
Mining and Quarrying	3.37%
Manufacturing	10.82%
Electricity, gas and water supply	1.03%
Construction	6.64%
Wholesale and Retail trade; repair etc;	17.38%
Transport, storage and communication	4.51%
Financial intermediation, insurance, real	9.28%
Community, social and personal services	28.02%
Age Groups	
Under 15	32.99%
15 to 64	60.87%
Over 64	6.14%

Source: Authors' computation from data

Profile of Assets Owned by Households

Households in South Africa acquire various types of assets to improve their standard of living. Table 2 below shows a profile of the assets owned by households in South Africa. The table highlights the type of asset owned, the mean value of the asset to an average household in South Africa, and the number of households that owned the given asset.

The results show that all households had personal possessions that they considered assets. Personal possessions were valued at an average of R60,231.63 per household. Real estate assets were the second popular asset acquisition of South African households. Of the 9619 households, 7895 households had real estate assets with a mean value of R200,239.70. Financial assets had a mean value of R21,232.86 per household with 4908 households owning that asset type. Vehicle assets ranked fourth among the type of assets owned. There were 1270 households that had acquired this asset, and the average value per household was R108,500.30. Superannuation assets (also referred to as a “company pension plan”) ranked fifth among the seven asset types. Only 769 households had access to Superannuation assets, with each household having an average value of R1,224,168.00 on that asset. Livestock assets rank a little lower than superannuation assets with 754 households possessing the asset. The mean value of livestock assets per household was R43,000.24. Business assets had the lowest ranking in the profile, as only 344 households acquired this assets type. However, it proved more valuable than all the other assets (save for superannuation assets) at R427,666.70 per household. Research has shown that a strong inverse relationship exists between the incidence of poverty and small business (Gebremariam, Gebremedhin and Jackson 2004). This might explain this occurrence. Policies should include financial education in poverty alleviation schemes as this would equip the population make better financial decisions.

Table 3: Profile of Assets Owned by Households

Type of Asset	Mean Value (in Rands)	Households that own asset
Real Estate Assets	200239.70	7895
Business Assets	427666.70	344
Vehicle Assets	108500.30	1270
Financial Assets	21232.86	4908
Superannuation Assets	1224168.00	769
Livestock Assets	43000.24	754
Possessions	60231.63	9619

Source: Authors' computation from data

Poverty Level of Households

As explained in the methodology, the poverty line was calculated as two-third of the mean-per-capita household expenditure. The mean-per-capita of the households in the data was R4874.97. Two-thirds of this was R3249.98. That is, the poverty line for South Africa households per month was set at R3249.98. ArcGIS sets the average household size for South Africa at 3.3 people per household (ArcGIS 2017). Comparing the poverty line in this study to the 2015 national poverty line by Stats SA, the lower bound poverty line (LBPL) is R647 and the upper bound poverty line (UBPL) is R992, per person per month. Dividing the poverty line per household by the average household size, gives R985 poverty line per person per month. This falls closely to the UBPL.

Households above the poverty line per household were coded as 1 (that is, non-poor). While households below the poverty line were coded as 0 (that is, poor). Table 3 shows the results of coding 0 and 1 according to provinces.

Table 3 shows the provinces in South Africa and their poverty levels. It reveals that 59.49% of South African households are experiencing poverty. This figure is 4 percent higher than that given by the Poverty Trends report (Stats SA 2017). According to Stats SA (2017), 55.5% of South Africans were experiencing poverty.

Kwazulu-Natal had the highest proportion of poor households (74.58%) in its province, followed by Eastern Cape which had 68.37% of its households experiencing poverty and Limpopo at 63.18%. The Poverty Trends report also recorded these three provinces as the 3 poorest regions. A paper presented at the Centre for Social and Development Studies (May 2016), University of Natal suggested the following as the causes of the poverty level in these provinces:

- “The impact of apartheid which stripped people of their assets, especially land, distorted economic markets and social institutions through racial discrimination, and resulted in violence and destabilisation;
- Under-mining the asset base of individuals, households and communities through ill health, over-crowding, environmental degradation, the mis-match of resources and opportunities, race and gender discrimination and social isolation;
- The impact of a disabling state, which included the behaviour and attitudes of government officials, the absence of information concerning rights, roles and

responsibilities, and the lack of accountability by all levels of government (May 2016).”

Western Cape, Northern Cape and Gauteng experienced the lowest proportions of household poverty in their provinces at 39.85%, 48.17% and 48.21% respectively. The Poverty Trends report also listed Western Cape and Gauteng as having the least poverty. However, Free State province ranked 3rd among the provinces with the lowest poverty level, and Northern Cape ranked fourth.

Table 4: Provinces and Poverty Levels

Provinces	Poverty Level	
	Poor (0)	Not Poor (1)
Western Cape	444 (39.85%)	670 (60.15%)
Eastern Cape	802 (68.37%)	371 (31.63%)
Northern Cape	343 (48.17%)	369 (51.83%)
Free State	312 (52.17%)	286 (47.83%)
KwaZulu-Natal	1,872 (74.58%)	638 (25.42%)
North West	354 (56.91%)	268 (43.09%)
Gauteng	675 (48.21%)	725 (51.79%)
Mpumalanga	412 (60.06%)	274 (39.94%)
Limpopo	508 (63.18%)	296 (36.82%)
Total	5,722	3,897
Percentage	59.49	40.51

Source: Authors’ computation from data

Poverty Determinants among Households in South Africa

Binary logistic regression was also carried out regressing total household income, total household assets and provincial locations, against the poverty level of the households. The results of the analysis can be seen in Table 4.

According to Table 4 below, the variables household income, assets, Western Cape, Northern Cape, Free state, Kwazulu-Natal and Gauteng provinces were significant at 1 percent level. For household income, the odds ratio was 1.000337, or more precisely, 1.000337 to 1. This represented the amount of change expected in the odds ratio when there was a one unit change in the household income with all other variables in the model held constant. Akinbode (2017) got a similar while studying “Women Asset Ownership and Household Poverty in

Rural Nigeria”. The results of the study showed that as income increased, the likelihood of the household being considered as poor reduced.

For household assets, the odds ratio was interpreted as a 1.000002 change in the odds ratio when there was a one-unit change in household assets. In other words, as the household assets increase, the ratio of the odds became bigger. A paper, prepared for presentation at the European Association of Agricultural Economists (EAAE) 2011 Congress, showed that human capital, financial, physical and social capital assets are important to reduce the poverty status of farming households in Southwestern, Nigeria (Lawal, Omonona and Oyinleye 2011).

In Western Cape province, the odd ratio was 1.979492. In other words, the odds for improving poverty level was 1.979492 times higher in Western Cape than the odds for improving the poverty level in the other provinces. In Northern Cape province, the odds of improving poverty level was 1.559369 times higher than in any other province. While the odds ratio in Free State was 1.503973. That is, there was a 1.503973 change in the odds ratio is the household was in Free State than in any other province. Kwazulu-Natal province varied from the other provinces. The odds ratio was .5537005 (less than 1). This implied that the odds of improving household poverty level in Kwazulu-Natal decreased by .5537005, compared to other provinces. Gauteng province had an odds ratio of 1.381341, showing that the odds of improving household poverty in Gauteng province was 1.381341 times better than other provinces.

These results are significant when compared with the poverty status of provinces discussed earlier in Table 4. Western Cape, Northern Cape, Free State and Gauteng are four provinces with the lowest poverty levels. Hence, the odds of improving the poverty status of a household was higher in these provinces. Kwazulu-Natal had the highest percentage of poor households, and this explains why households in this province had lower odds of improving their poverty status. These results corroborated the results of the Poverty Trends report (Stats SA 2017).

The above showed that income, assets and the particular provinces that a household resided in all had an impact on the poverty level of that household.

Table 5: Logistic Regression Analysis

Poverty Line	Odds Ratio	Std. Error	<i>z</i>	P> <i>z</i>
Household Income	1.000337***	9.48e-06	35.61	0.000
Assets	1.000002***	1.44e-07	11.71	0.000

Western Cape	1.979492***	.2337124	5.78	0.000
Eastern Cape	1.031277	.1220484	0.26	0.795
Northern Cape	1.559369***	.2020311	3.43	0.001
Free State	1.503973***	.2025778	3.03	0.002
Kwazulu-Natal	.5537005***	.0596904	-5.48	0.000
North West	1.136828	.1564494	0.93	0.351
Gauteng	1.381341***	.1567374	2.85	0.004
Mpumalanga	.8544518	.1152674	-1.17	0.244
Limpopo	Omitted because of collinearity			
_cons	.0789699	.0079443	-25.24	0.000

*** indicates that variables are significantly different from zero at 1 percent level.

Source: Authors' computation from data

CONCLUSION AND RECOMMENDATIONS

The study was carried out on 9619 South African households to determine the influence of asset ownership and income on household poverty. The results showed that assets owned by households included real estate assets, business assets, vehicle assets, financial assets, superannuation assets, livestock assets and possession. It also showed that 59.49% of South African households were experiencing poverty. The results of the logistic regression revealed that asset ownership and income had a positive influence on household poverty level. The provinces, Western cape, Northern Cape, Free State, and Gauteng showed high odds for improving poverty level, while Kwazulu-Natal province showed odds of increasing poverty. More jobs would lead to increased income in rural households, which could be further used in acquiring assets. Therefore, it was recommended that policies should focus on income redistribution through employment generation. It was also recommended that South African households should acquire business assets as they had higher average value compared to other assets. This would increase the future income potential of these households.

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