Journal of Studies in Social Sciences
ISSN 2201-4624
Volume 16, Number 1, 2017, 45-64

INFINITY PRESS
www.infinitypress.info

Women Asset Ownership and Household Poverty in Rural Nigeria

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Abstract

Several methods have been adopted in studies involving household poverty but very few focused on structural causes and constraints to poverty. Women being most times the homemaker occupy a very important position in the household. This study employed Women Asset Approach to assess household poverty in South-West Nigeria. Data collected from 363 respondents sampled through a multistage sampling procedure were analyzed using descriptive statistics, Principal Component Analysis (PCA) and Probit Regression analysis. The average age of women sampled in study was 45 years while the average income was ₦33,158 (about $195 as at the time of the study). The Asset which had the highest value in the PCA reduction was mobile phone (0.4548) and the lowest Asset Value was black and white television (-0.0430). The mean of the poverty quintile which represented the poverty line was 1.6574. The Logit regression result revealed that education, marital status and income were significant determinants of poverty status in the study area. The study recommended that governments at all levels should enact and enforce policies which will make female education compulsory. Implementation of effective women empowerment programme should be embarked upon in order to encourage alternative sources of income and vocations thereby reducing household poverty.

Keywords: Poverty, Women, Asset, household, Nigeria

Introduction

Poverty and the need to reduce it has being a major issue of concern to most governments in developing countries including Nigeria. The World Bank in December 2015 set a new global poverty line after an extensive review of costs of living in most countries around the world and the release of the 2011 Purchasing Power Parity (PPP) index at $1.90 per person per day. According to Global Monitoring Report (2015), about 702.1 million people lived in extreme poverty in 2015, down from 1.75 billion in 1990. Among this, about 347.1 million people lived in Sub-Saharan Africa (35.2% of the population) and 231.3 million lived in South Asia (13.5% of the population). Between 1990 and 2015, the proportion of the world's population living in extreme poverty fell from 37.1 percent to 9.6 percent. This made the global poverty rate to fall below 10 percent line for the first time. The Sustainable Development Goals (SDGs) launch in late 2015 after the expiration of the Millennium Development Goals (MDGs) first target is to end poverty in all its forms everywhere. This is a step forward above the MDG first target of eradicating extreme poverty and hunger by halving the number of people living on $1 a day (adjusted to $1.25 per day using 2005 PPP) between 1990 and 2015.

World Bank (2011) defined poverty as deprivation in well-being and comprises of many dimensions. It includes low incomes and the inability to acquire the basic goods and services necessary for survival with dignity. Poverty also includes low levels of health and education, inadequate physical security, poor access to clean water and sanitation, lack of voice, and inadequate capacity and opportunity for individuals to better their lives. In Nigeria, not less than 60 percent of the population are living in poverty (National Bureau of Statistics NBS, 2010). This figure has since being on the increase. The country is ranked as the 21st largest economy in the world in terms of nominal GDP, and the 20th largest in when Purchasing Power Parity is considered. It is the most populous country in Africa with a projected population of about 182 million people, the largest oil producer

in Africa and sixth in the world. Yet, the country is home to the largest population of poor people in sub-Saharan Africa and is ranked 158th on the human development index.

Meanwhile, there have been arguments on how best poverty can be measured as this has being a topmost issue in researches. Income approach has long being adopted and preferred, but recently, researchers have shifted focus to structural constraints as the cause of poverty. Hoddinott (2003) asserted that the number of panel studies of African poverty had risen substantially, and, common finding across these studies is that transitory poverty constitutes a rather large proportion of overall poverty. The large share of transitory poverty based on income or expenditure underscores the inherent stochastic nature of flow-based measures of welfare (such as the income approach). It was opined that some people are better off in one period than another without any significant or lasting change in their underlying circumstances, particularly the stock of productive assets under their control. The instability in the measure of poverty is due solely to random price, yield fluctuations, stochastic earnings from remittances, irregular gifts, lotteries e.t.c. Furthermore, it has been emphasized that the magnitude of the measured transitory expenditure or income poverty may also reflect the measurement error to which such flow-based welfare measures are prone to.

An asset based approach concentrates on whether certain level of asset acquisition implies that a household is in poverty trap in the long run. A means by which poverty strikes household is the meager asset accumulation potential of individuals in the household, especially with respect to women. Different studies have shown the importance of asset accumulation in poverty reduction (e.g Hoque 2014, Moser and Felton 2007). Asset accumulation is seen as a way out of poverty, and it matters a lot in considering an economic status of an individual. Here, the term asset is considered to broadly encompass conventional, privately held productive and financial wealth, as well as social, geographic and market access positions that gives economic advantage (Carter and Barrett, 2006). Development economists in recent times and in various researches

assert that the role of assets is a key to the study of changes in welfare outcomes. According to McKay (2009), individual's asset ownership or the assets he/she has access to are important because assets can play an important role in reducing vulnerability which is an important dimension of poverty. Evidence abound to the fact that assets help provide insurance against shocks, reducing insecurity and frequently reducing risk-aversive behaviour and reliance on more destructive coping strategies; which commonly involve reducing asset levels, e.g. withdrawal of children from school. Naturally, many households, especially those in chronic poverty, may not have access to sufficient assets, which then limits their ability to cope with vulnerability. Furthermore, assets play an important role in influencing what households are able to achieve, in terms of income and many other outcomes. Those with more assets are often better able to improve their income and therefore participate more in economic activities which promote growth. For instance, by having better access to credit as well as being able to better protect themselves against unfavourable economic situations.

It is generally known that women's rights have always been impaired by men and law and culture sometimes prevent women from owning property. These have resulted into debates on whether there is a tendency toward the feminization of poverty (Jackson 1996; Buvinic and Gupta 1997; Quisumbing *et al.*, 2001; Medeiros and Costa 2008). Several authors have investigated issue of feminization of poverty (i.e peculiarities of females and poverty) and the links between women and household poverty due to their economic status (e.g Edem and Etim 2014, Horrell and Krishnan 2007 e.t.c). There is no gainsaying that the female wealth and assets accumulation potential is meager compared with that of men, and this could contribute to the reason why most female headed households suffer chronic poverty as reported in many literatures.

The possession of tangible and intangible assets is a major determinant of the longer-term prospects of households and individuals. A drop of current consumption below the poverty line is often seen to have a structural and hence more worrying nature when

permanent income falls below the poverty line or asset holdings are below some critical threshold (Carter and Barrett, 2006; Morduch, 1994).

As earlier elucidated, the crippled right of women has naturally handicapped their asset and wealth accumulation potentials hence contribute to household poverty which in one way or the other hinders the prosperity of a nation's economic growth and development. Several studies have employed the income approach in studying poverty in Nigeria (e.g Akinbode 2013, Adetunji 2012, Asogwa *et al.*, 2012, Akerele and Adewuyi 2011, Ayinde *et al*, 2002 e.t.c). It is therefore imperative to employ other equally and possibly more important criteria to investigate household poverty in Nigeria given its multi-dimensional nature. Hence, this study adopted the asset-based approach with specific focus on women asset ownership to investigate household poverty in Nigeria. Specifically, the study attempted to determine households' poverty level and investigate the relationship between household poverty and women asset ownership among other determinants. The motivation for the adoption of an asset based approach is the realization of the limited ability of conventional poverty measures to deal with time and poverty transitions as emphasized by Cater and Barret (2006). The asset-based measures provide information on the depth of structural poverty given the current distribution of assets including potential returns to the assets in some cases. This is expected to give more detailed information about household poverty and suggest the best ways to reduce or eradicate it through appropriate policy recommendations.

METHODOLOGY

Study Area

This study was conducted in Ogun state, South-west Nigeria. The state which is located in the south-west corner of the country was created in 1976 by the Federal Military Government ruling the country at that time. It is one out of the five Yoruba speaking states created from the former Western Region. The 2006 National Population

Commission's census result puts the population of the state at over 3 million people. The present projected population of the state is about 5 million people. This is partly due to migration of people from the country's over populated commercial capital city of Lagos to the state as it does not only share geographical boundary with Lagos but has actually merged into one another in some areas, and partly, due to rapid urbanization and rural-urban migration in the state. Predominant occupations of the inhabitants of the state are farming, civil service, transport services, artisanship and trading. Farmers in the state grow food crops (e.g cassava, yam, maize, beans, vegetables e.t.c) while very few others grow cash crops, such as cocoa, kola nut, rubber, coffee among many others. The State is characterized by tropical rain forest vegetation with pockets of Mangrove Rain Forests in the coastal areas. Trade and commercial activities in the state have being on the increase in the recent time. Sub-ethnic groups found in the state include the Egbas, Ijebus, Yewas and the Eeguns, immigrants from ethnic groups such as the Igbos, Hausas e.t.c while there are only few foreigners in the state.

Sampling Technique, sample Size and Data collection

Multistage sampling technique was used to select rural households used for this study. The first stage involves the purposive selection of two rural Local Governments each from the three (3) senatorial districts the state is divided into. Therefore, Ipokia and Imeko-Afon Local Government Areas were selected in the West Senatorial District. Obafemi-Owode and Odeda Local Government Areas were selected in the Central Senatorial District while Remo-North and Odogbolu Local Government Areas were selected in the East Senatorial District. It should be noted that the so called rural Local Governments have been urbanized to a reasonable extent. For instance, some of the selected Local Governments share boundaries with big towns and cities while some host higher educational institutions, though, still retain some degree of rurality. The next stage was the random selection of six (6) villages/small towns from each of the Local Government Areas giving a total of 36 villages/small towns. The third stage involves the

random selection of ten (12) households from each village/streets of small towns. The last stage was the purposive selection of women in the households. Data were collected with the aid of well-structured questionnaire. Socio-economic characteristics, demographic, asset data, income accruing from different sources as well as data on other indicators of poverty were collected and recorded accordingly. It is worthy of note that a total of 432 respondents were sampled, but, data from only 363 questionnaires were eventually used for the analyses because some were discarded due to incomplete information.

Analytical Techniques

Descriptive Statistics: Some descriptive procedures involving the use of frequency and percentages tables, means and standard deviation were used to describe socio-economic characteristics of the respondents/households. The variables included were age, years of education, marital status, employment status, household size and income level.

Principal Component Analysis: The study constructed an asset index with a view to assessing poverty in the study area. The asset index was constructed using Principal Component Analysis (PCA). The approach of PCA is a statistical technique closely related to Factor Analysis or Multiple Correspondence Analysis (MCA). This technique replaced the weight as the factor score for each asset variable. This index which is adopted from Prakongsai (2006) is constructed using:

$$A_j=f_i*(a_{j1}-a_1)/s_1+\ldots\ldots\ldots\ldots+f_n*(a_{jn}-a_n)/s_n$$

$$A_j=\sum_{i=1}^{n} f_i(a_{ji}-a_i)/s_i$$

Where:

A_j= an asset index for each household (j=1,……..n)

f_i= the scoring factor for each durable asset of household (i=1,…….,n)

a_{ji}= the i^{th} asset of j^{th} household (i,j= 1,……..n)

a_i= the mean of i^{th} asset of household (i = 1……..n)

s_i = the standard deviation of i^{th} asset of household (i=1,…….,n)

z = the standardized variables of each household.

According to Gjolberg (2009), standardization implies that mean values for each of the different variables are converted to the same scale so that different variables can be compared. It has been said to more appropriate when applied to the distribution that are normal.

Probit Regression: the model is mathematically stated thus:

$$y = b_0 + b_j \sum_{j=1}^{7} X_j + e_i$$

Y= poverty status, dummy variable (1 if household is classified as poor, 0 if otherwise)

X_1= Age of the responding woman in the household in years

X_2= Employment status, dummy variable (1 if employed, 0 if otherwise)

X_3= Education (in years spent in school)

X_4= Marital Status, dummy variable (1 if married, 0 if otherwise)

X_5= income in Naira per month

X_6= Household size

X_7= Membership of cooperative (1 if the woman is a member, 0 if otherwise)

Results and Discussions

Table 1 shows the distribution of respondents by socioeconomic characteristics. Majority (about 80 percent) of the women were less than 55 years of age with a mean value of 45 years. This implies that the respondents were still within the economically active age. Majority (about 85 percent) of the women were married while others were either single, separated, divorcee or widows. A cumulative of about 60 percent of the women were not educated beyond Senior Secondary School while 8.5 percent had no formal education. This may have implication on poverty. Majority (50.7 percent) of the respondents earned between ₦20001 and ₦50,000 while as low as 0.8 percent earned more than ₦150,000. The mean income was ₦33,158.33 (about $195 during the research period). The general low

income level may increase household poverty. Majority (58.2%) had between 1 and 5 people in the household with a mean of six (6) people. Farming and trading were the primary occupation of majority (about 78 percent) of the respondents.

Estimation of Asset index

Asset Index was estimated using the Principal Component Analysis (PCA) on the data collected across households. Using SPSS statistical tool, PCA was used to extract the first and the best principal component of ten (10) asset variables among the sampled data sets (Table 2).

The weight of each Asset is calculated by factor score of asset divided by standard deviation of asset (F/SD). The mean of the index is assumed to be zero by construction Prakongsai (2006). Hence, the differences between the haves (1) and have-nots (0) of each asset is F/SD. We, therefore define asset index as the sum of weight for each property of each household. For example, among the three hundred and sixty-three (363) households surveyed, a woman in a household that owns a refrigerator has an asset index higher by 0.4136 than another without it, and a woman owning a vehicle has an asset index higher by 0.4050 than an average household with a woman without vehicle (Table 2).

The asset index frequency for each household was computed and the results show that 41.67% of the households have an asset index less than 1.5 while 53.3% have asset index between 1.51 and 3.0 (Table 3).

Classification into Poverty Group

The classification into “non-poor” and “poor” using asset index is based on quintile or deciles as used in literature (e.g Prakongsai 2006, Catter and Barrett 2006; Hoque 2014 and Moser and Felton 2007). The poorest household belongs to the first quintile, while richest households belong to the fifth quintile. One out of every five among the 363 households sampled is represented in each quintile. The mean of the first quintile was 0.4347, and the mean of the fifth quintile was 2.7820. This difference between the richest

quintile and the poorest quintile was 2.3473. The last two quintiles were classified as the non-poor households, while the top three quintiles were classified as poor households. To this end, a total of 218 households were classified as poor while 145 households were classified as non-poor.

Results of the Probit Regression

The factors affecting poverty status of household from the women asset ownership point of view in the study area was analyzed using Probit regression model (Table 4). Recall that poor households were scored 1 while non-poor households were scored zero. Variable included in the model were age of the respondents, years of education, employment status, size of household, income level, and marital status. Results showed that years of education, marital status, and income had significant effect on Household poverty status in study area. The value of a marginal effect statistic gives the magnitude of change in the probability of being poor as a result of a unit increase in each of the explanatory variables The result revealed that there existed a negative relationship between educational status of women and poverty and this was significant ($p<0.05$). This implies that a woman with a higher years of education in a household will reduce the likelihood of the household being poor. The marginal effects showed that a one unit increase in the years of education of a woman in a household resulted in 3.2 percent decrease in the probability of a household becoming poor. This is in line with the findings of Wiggins and Sookram (2014) in Trinidad and Tobago and that of Habyarimana *et al.*, (2015) in Rwanda among some others.

Furthermore, the result also showed that marital status had a negative effect on household poverty, and this was significant at ($p<0.1$). Since married women were scored one (1) and single was scored zero (0) in the quantification of the variable - marital status, the negative sign of the coefficient implied that the presence of a married woman in a household will reduce the likelihood of the household being Poor. The marginal effect statistic revealed that the presence of married woman in the household will leads to 2.5%

decrease in the probability of being poor compare with others without married women. This may be due to the gap that is likely to be created by the absence of a man (husband) with whom the woman can pool resources and exchange ideas.

Income had negative effect on the household poverty status, and this was significant $p<0.05$. This showed that as income increases, the likelihood of the household being considered as poor reduced. The marginal effect implies that 1 unit increase in income of a woman in a household leads to a very small (0.008%) decrease in the probability of a household being poor (or ₦1,000 increase in income decreases the probability of the household being considered as "poor" by 8 percent). The significance and sign of income in this study agrees with the findings of Nedombelon and Oyekale (2015) in South Africa. Social capital is very important to avert poverty. This was confirmed by the significance of "membership of a cooperative societies". The results indicates that households whose women were members of cooperative societies were less likely to be poor. The marginal effect figure revealed that an average household with a woman who is a member of cooperative group was about 12 percent less likely to be poor.

Conclusion and Recommendation

The study examined household poverty using women asset index approach in Ogun State South-West Nigeria. About 60% of the households were classified poor due to their inability to accumulate asset index beyond the poverty line. Education, marital status, income and membership of cooperative groups were identified as main determinants poverty. The study recommended that government at all levels should put in place policies aimed at improving women education in order to reduce poverty. Women empowerment should be instituted possibly through adult literacy and vocational training. Asset is a means out of poverty, therefore, women should form cooperative and savings groups in order to be able to acquire basic assets such as houses, lands, bicycles, motorcycles, grinding machines e.t.c which could be used as collateral for other loan

acquisition. Such loans can be invested into projects or ventures which could shield the household from poverty.

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Table 1: Distribution of respondents by socioeconomic characteristics

Variable	Frequency	Percentage
Age (years)		
≤ 25	13	3.6
26-35	59	16.1
36 – 45	94	26.0
46-55	113	31.1
56 – 65	72	19.8
> 65	12	3.3
Mean = 44.88		
Marital status		
Single	55	15.2
Married	308	84.8
Educational level		
No Formal Education	31	8.5
Primary School	99	27.3
Senior School	103	28.4
OND/NCE	38	10.5
HND/B.sc	76	20.9
M.sc	13	3.6
Ph.D	3	0.8
Average Monthly Income		
≤ ₦20,000	6	1.7
₦20001-₦50000	184	50.7
₦50001-₦100,000	96	26.4
₦100,001-₦150,000	59	16.3
≥₦150,000	18	5.0
Mean = ₦33,158.33		
Household size		
1-5	211	58.1
6-10	118	32.5
11-15	22	6.1
>15	12	3.3
MEAN = 6.07		
Primary Occupation		
Farming	121	33.3
Trading	159	43.8
Teaching	25	6.9
Civil Service	23	6.3
Unemployed	19	5.2
Others	16	4.4

Source: field survey, 2015

Table 2: The Factor score of the Asset index

Variable	Standard dev	Factor score	F. score/std.deviation
Phone	0.343	0.156	0.4548
Machine	0.390	0.016	0.0410
Vehicle	0.437	0.177	0.4050
Radio	0.462	0.103	0.2229
Grinding machine	0.503	0.121	0.2405
Refrigerator	0.469	0.194	0.41364
colour TV	0.437	0.119	0.2723
Black& whiteTV	0.279	-0.012	-0.0430
House	0.497	0.171	0.3440
Land	0.469	0.130	0.2772

Source: Field Survey, 2015

Table 3: The Household's Asset index

Asset Index	Frequency	Percentage (%)
<1.5	149	41.0
1.51-3.0	195	53.7
>3.01	19	5.3

Source: Field Survey, 2015

Table 4: The Mean factor of the Asset index Quintiles

Quintiles	Quintile 1	Quintile 2	Quintile 3	Quintile 4	Quintile 5
Mean Factor Score	0.4347	1.2338	1.6574	2.1319	2.7820

Source: Field Survey, 2015.

Table 5: Classification of Households by Poverty status

Classification poverty	Frequency	Percentage
Poor	218	60.1
Non-poor	145	39.9
Total	363	100.0

Source: Field Survey, 2015.

Table 6: Factors affecting Household Poverty status of Women

Variable Name	Variable label	Estimated coefficient	Marginal effect	T-Ratio
Constant	b_0	3.2948**		1.9653
Age	X_1	-0.028439	-0.0120	-1.5140
Employment	X_2	-0.11209	-0.0432	-0.14911
Education	X_3	-0.083203**	-0.0321	-2.21247
Marital status	X_4	-0.067111*	-0.0259	-1.7323
Income	X_5	-0.0020967**	-0.0081	-2.0076
Household Sixe	X_6	0.38967	0.1501	0.53215
Cooperative	X_7	-0.0137***	-0.1207	-2.5914

Log-Likelihood Function = -25.387 ***Sig at 1%, **sig at 5% and *Sig at 10%

Log-Likelihood Ratio TEST = 29.9869 with 6 D.F. P-VALUE = 0.00004

Mcfadden R-square = 0.57130

*=P<0.1: Significant at 10 percent, **=P<0.05: significant at 5 percent.

Source: Computed from Field Survey Data, 2015