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Drivers of Poverty Among Rural Women in Nigeria: Implications for Poverty Alleviation and Rural Development

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Abstract

Extreme poverty is highly concentrated among rural women in developing countries as they are most vulnerable. High poverty undermines rural women's productivity and lowers their purchasing power thereby denying them access to quality education, health care, and basic needs. Despite this, most previous poverty studies, especially in Nigeria, did not focus on women. This study, therefore, assessed the poverty status of rural women in Nigeria and identified the factors responsible for their poverty status. Multistage sampling technique was used to select 450 rural women. Primary data, collected with the use of a structured questionnaire and interview schedule, was analysed with descriptive statistics, Foster-Greer-Thorbecke and logistics regression. The result revealed that rural women were less educated, had an average age of 47 years and 85.8% of them were married with an average household size of seven persons. They were mostly involved in agricultural activities and had an average income of ₦22,561 (USD 57.17) monthly. This study further revealed that poverty was pervasive among the rural women in Nigeria. The incidence, depth, and severity of poverty among rural women were 0.6911, 0.1265 and 0.0374, respectively. The factors contributing to the high poverty rate among rural women are age, household size, and cropping system: While education, access to credit facilities, farm size, marital status, and agricultural extension contacts were the inhibiting factors. The study recommends the provision of credit facilities, access to extension services, birth control measures, and intensification of education as a means of alleviating poverty among the rural women.

Keywords: driving factors, Foster-Greer-Thorbecke, Nigeria, poverty indices, rural women

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Moteurs de pauvreté chez les femmes rurales au Nigeria : implications pour la réduction de la pauvreté et le développement rural

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Résumé

L'extrême pauvreté est fortement concentrée parmi les femmes rurales des pays en développement car elles sont les plus vulnérables. Une pauvreté élevée sape la productivité des femmes rurales et réduit leur pouvoir d'achat, les privant ainsi d'un accès à une éducation de qualité, aux soins de santé et aux besoins de base. Malgré cela, la plupart des études précédentes sur la pauvreté, en particulier au Nigeria, ne se sont pas concentrées sur les femmes. Cette étude a donc évalué le statut de pauvreté des femmes rurales au Nigeria et identifié les facteurs responsables de leur statut de pauvreté. La technique d'échantillonnage à plusieurs degrés a été utilisée pour sélectionner 450 femmes rurales. Les données primaires, recueillies à l'aide d'un questionnaire structuré et d'un calendrier d'entretiens, ont été analysées à l'aide de statistiques descriptives, de Foster-Greer-Thorbecke et d'une régression logistique. Le résultat a révélé que les femmes rurales étaient moins instruites, qu'elles avaient un âge moyen de 47 ans et que 85,8% d'entre elles étaient mariées au sein d'un ménage d'une taille moyenne de sept personnes. Elles étaient principalement impliquées dans des activités agricoles et avaient un revenu moyen de 22 561 N (57,17 USD) par mois. Cette étude a en outre révélé que la pauvreté était omniprésente parmi les femmes rurales au Nigeria. L'incidence, la profondeur et la gravité de la pauvreté chez les femmes rurales étaient respectivement de 0,6911, 0,1265 et 0,0374. Les facteurs contribuant au taux de pauvreté élevé chez les femmes rurales sont l'âge, la taille du ménage et le système de culture : alors que l'éducation, l'accès aux facilités de crédit, la taille de l'exploitation, l'état matrimonial et les contacts avec la vulgarisation agricole étaient les facteurs inhibiteurs. L'étude recommande la

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fourniture de facilités de crédit, l'accès aux services de vulgarisation, des mesures de contrôle des naissances et l'intensification de l'éducation comme moyens de réduire la pauvreté chez les femmes rurales.

Mots clés : facteurs déterminants, Foster-Greer-Thorbecke, Nigéria, indices de pauvreté, femmes rurales

1.0 Introduction

Poverty level is among the major determinants of the degree of economic growth and development, and welfare of people in a country. Yet, the high poverty rate is one of the major challenges facing the world today. This prompted the United Nations Development Programme (UNDP) to put eradication of extreme poverty and reduction of the number of poor people by half by 2030 as the first Sustainable Development Goals (SDG). The high rate of poverty in the world especially among developing economies remains a major concern among policymakers, government, and non-governmental organisations globally. Over 80% of extremely poor people in the world live in rural areas with the majority in developing countries (De La O Campos et al., 2018). More than half of the population in Africa lives in extreme poverty with 82% of the extreme poor living in rural areas (Allen et al., 2018; World Bank, 2019a). Sub-Saharan Africa alone accounted for 56% of the world's extreme poor (Beegle & Christiaensen, 2019; World Bank Group, 2018) and nine out of ten extremely poor people will be from sub-Saharan Africa by 2030 (Barne & Wadhwa, 2018).

The poverty rate in Nigeria is worrisome and disturbing despite several programmes that have been put in place to curtail it by the government. Over 85 million people—accounting for 40.1% of the population—are poor, with the vast majority in rural areas (National Bureau of Statistics, 2020a). Over 70% of the rural populace in Nigeria are poor (Emefesi & Yusuf, 2014). Nigeria has the largest proportion of poor people in Africa as it accounts for about one-quarter of Africa's poor people. More than 70% of the Nigeria population lives in rural areas and is widely engaged in agriculture and allied activities.

Nigeria is an agrarian country endowed with natural resources. Agriculture contributes immensely to the nation's economy by accounting for 22% of the GDP (Central Bank of Nigeria, 2020; National Bureau of Statistics 2020b) and serves as a source of employment for two-thirds of the nation's population (Food and Agriculture Organization [FAO], 2020; Oladimeji et al., 2014). The agrarian communities in Nigeria are characterized by low income and poor infrastructures such as poorly equipped health centres, poor portable water supply and electricity, and bad road networks which are characteristics of high poverty in the area.

Rural poverty is concentrated and widespread among young people and women (International Fund for Agricultural Development [IFAD], n.d.). More than half of women in Nigeria reside in rural areas and engage in agriculture as their means of livelihood (Abdullahi et al., 2015; Bishaw, 2014). Over 60% of women in sub-Saharan Africa earn a living in agriculture (FAO, 2011) and contribute significantly to the household's income. A low income among women will thus reduce the household's income and increase the chances of a high poverty rate in households. Rural women assist in providing households' basic needs, contribute to family wellbeing, community development, and economic development of a nation (Handragama et al., 2013, as cited in Abdullahi et al.,

2015). Their involvement in agricultural activities and other income-earning activities is, therefore, very important to improve households' economic status and reduce the poverty rate. Rural women in Nigeria contribute significantly to agricultural activities especially in the areas of processing and marketing but do not have enough capital to increase their level of operation from small scale to large scale due to high levels of poverty.

Poverty undermines rural women's survival, productivity, health, livelihood, and wellbeing. It further reduces their contribution to households' needs. Poverty reduces rural women's purchasing power, thereby denying them access to quality education and basic needs. It also exposes them to malnutrition and disease, thereby lowering their life expectancy.

Several studies have assessed the poverty of rural communities (e.g., Ayanwale & Adisa, 2012; Bogale, Hagedorn & Korf, 2005; Bogale & Korf, 2009; Etim & Patrick, 2010; Etim & Ukoha, 2010; Fakayode et al., 2015; Falola et al., 2015; Oladimeji, 2013; Oladimeji et al., 2014; Olorunsanya et al., 2011; Omotesho et al., 2007; Pelemo et al., 2020. However, none of these studies concentrate on rural women of Nigeria who are more prone to poverty. There is thus a need to fill this gap in literature by investigating rural women's poverty status. Therefore, the aim of our study is to investigate the poverty status of rural women in Nigeria. Our study further describes the socioeconomic characteristics of rural women and identifies the driving factors of rural women's poverty status. This would allow the understanding of rural women's poverty in a bid to eradicate poverty and enhance rural development. Identification of the underlying social, economic, and institutional driving factors of rural women's poverty will ensure proper intervention to meet rural women needs, improve their wellbeing, and alleviate poverty among women. The findings of this study will, therefore, be appropriate for policymakers and the government as it will provide deepened insights into the major problem facing the rural women. It will enhance and form a basis for formulating appropriate policies to eradicate poverty, especially among rural women in developing countries.

2.0 Literature Review

The previous studies on poverty focused on households where the majority of the household heads were male. Bogale et al. (2005) examined the determinants of poverty in rural Ethiopia using the Foster-Greer-Thorbecke poverty index. They employed food energy consumption and expenditure to meet basic needs criteria to measure the poverty line. The study revealed that about 40% of rural households in Ethiopia were below the poverty line. Several factors influencing poverty status were identified in their study: (a) age and educational level of household heads, (b) proportion of irrigated land owned, (c) non-farm income, (d) number of oxen owned, (e) gender and household size were factors influencing rural households in Ethiopia poverty status. Bogale and Korf (2009) analysed farmers' poverty status in Ethiopia. The study used per capita expenditure and Foster-Greer-Thorbecke poverty index. They reported that 35.6% of the smallholder farmers were poor in Ethiopia, with the highest concentration in Babile district.

Etim and Ukoha (2010) assessed the poverty status of rural households in South-South Nigeria using the household expenditure approach. The study reported that 57% of the respondents were poor with the highest concentration among households with older household heads. The poverty headcount ratio, gap, and severity increase as the age increases. Etim and Patrick (2010) examined the factors influencing poverty among fishing households in Akwa Ibom State, Nigeria. The study revealed that marital status, dependency ratio, and labour

employed positively influence poverty status while sex, education, the use of modern fishing equipment and fishing experience negatively influenced it. Omotesho et al. (2007) assessed the poverty status of rural households in Kwara State, Nigeria. The study reported that 66% of rural households were poor. Non-farm income, ownership of physical assets, and educational qualification were poverty-reducing factors while the household size was a contributing factor to poverty.

Ayanwale and Adisa (2012) assessed the poverty status among arable crop farmers in Osun State, Nigeria. They reported that the beneficiaries of the Farmers Empowerment Programme had a lower poverty incidence (42%) than the nonbeneficiaries (58%). Also, poverty depth and severity were reported lower among beneficiaries of the programme. Farming experience, household size, and level of education were the major poverty alleviation factor among the farmers. Oladimeji (2013) examined the poverty status among fishermen in Kwara State, Nigeria. The study revealed that poverty and income inequality exist among fishermen. The study further reported that dependency ratio and fishing experience were the positive factors influencing poverty status while fishing equipment, access to credit, cooperative society, and non-farm income were the negative factors. Fakayode et al. (2015) assessed the poverty status among beneficial and nonbeneficiary of IFAD/FGN poverty reduction programme in Ondo state of Nigeria. The study revealed that the poverty rate was higher in nonbeneficiary (79%) of the IFAD/FGN programme than the beneficiaries (66%). Falola et al. (2015) assessed the impact of microcredit on farmers' poverty status in Kwara State Nigeria using Foster-Greer-Thorbecke. They discovered that poverty was more prevalent among non-users than users of microcredit. Their study further revealed that household size and age were the contributing factors to farmers' household poverty, while access to credit, farm income, and belonging to a poverty alleviation group were the factors reducing farmers household poverty. Pelemo et al. (2020) investigated the poverty status of cashew farmers in Kogi State of Nigeria. The study used two-thirds of the average income to measure the poverty line and reported that 24.8% of the farmers were below the poverty line.

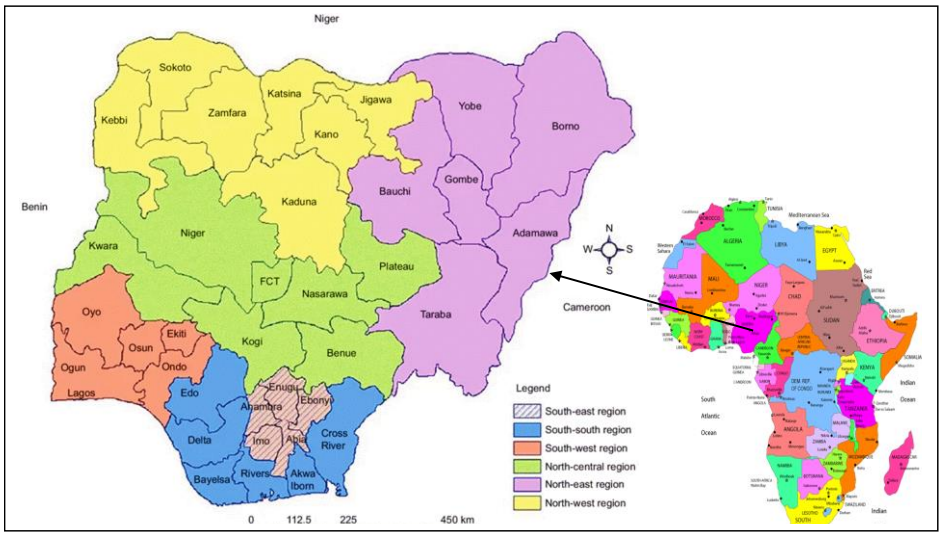
As shown from the literature reviewed, the focus of the previous studies on poverty was not rural women but rather on rural communities where the male serves as respondents to the studies. Thus, there is a dearth of information on determinants of rural women's poverty status. This is the gap the present study intends to fill as it will serve as a reference point on rural women's poverty status. It therefore became pertinent to examine factors influencing rural women poverty.

3.0 Methodology

3.1. Study Area

This study was conducted in Nigeria. The high rate of poverty in Nigeria, especially among rural women, motivated selection of Nigeria as the study area. Nigeria has 36 states and the Federal Capital Territory, Abuja, which are grouped into six geopolitical zones: South-West, South-South, South-East, North-West, North-East, and North-Central. Nigeria is Africa's most populous country with a population of over 202 million people and has a landmass of 923,768 sq. km (World Bank, 2019b). The country is located in West Africa and shares a border with Chad in the northeast, Cameroon in the east, Niger in the north, and Benin in the west. It lies on latitude 10^0 North and a longitude of 8^0 East (mapsofworld.com, n.d.). The country is an agrarian nation with the majority of its populace living in rural areas and engaged in agriculture and allied activities.

Figure1. Maps showing the study area.



Source: Authors.

3.2 Sampling Procedure

A multistage sampling technique was employed in this study. The first stage involved a random selection of three geopolitical zones in Nigeria; the selected zones were Northcentral, Southeast, and Southwest. The second stage involved a random selection of one state from each zone using a table of random numbers. Kwara state was selected from Northcentral, Enugu state from Southeast, and Oyo state from Southwest. At the third stage, three local government areas were randomly selected from each state making nine local government areas. The fourth stage involved a random selection of five villages from each local government making a total of 45 villages. The last stage involved a random selection of ten smallholder women farmers from each village making a total of 450 women.

3.3. Data Collection

Primary data were collected from 450 rural women. Data were collected using a semi-structured questionnaire coupled with an interview schedule–guide. The interview schedule was done to get the required information from the rural women due to high rate of illiteracy among them. The data were collected by the researchers and research assistants who understand the local languages for easy communication with the rural women. Data collected covered relevant information such as their demographic, institutional, social, and economic features.

3.4. Data Analysis

Data collected were analysed with descriptive statistics, Foster-Greer-Thorbecke decomposition and logistic regression. Descriptive statistics was used to describe the demographic features of the rural women. This includes the use of frequency, percentage, and mean.

3.4.1 Foster-Greer-Thorbecke (FGT) Decomposition of Poverty

Foster-Greer-Thorbecke (1984) decomposition of poverty was used to assess and profile the poverty status of rural women following Oladimeji et al. (2014), Fakayode et al. (2015), Falola et al. (2015), and Pelemo et al. (2020). This involved measures of poverty incidence or headcount ratio, poverty depth or gap, and poverty severity among rural women. The poverty incidence measures the

spread of poverty among rural women. The poverty gap or depth measures the extent to which poor women fall below the poverty line as a proportion of the poverty line, while poverty severity measures how severe the poverty level is among the women. The FGT poverty index is represented as:

$$P_{\propto} = \frac{1}{N}\sum_{i=1}^{q}\left(\frac{Z - Y_i}{Z}\right)^{\propto}$$

Where,

N is the sample size, q is the number of poor women, that is rural women below the poverty line. Z is the poverty line which was constructed as the two-third of the mean per capita income of the rural women $\left(\frac{2}{3} \times \text{mean per capita income}\right)$. Y_i is the income of i-th women. $\propto$ is the FGT parameters (degree of poverty aversion) which takes a value of 0 to measure poverty incidence or headcount, 1 to measure poverty depth or gap and 2 to measure poverty severity.

The poverty incident or headcount is represented as:

$$P_0 = \frac{1}{N}\sum_{i=1}^{q}\left(\frac{Z - Y_i}{Z}\right)^{0}$$

The poverty depth or gap is represented as:

$$P_1 = \frac{1}{N}\sum_{i=1}^{q}\left(\frac{Z - Y_i}{Z}\right)^{1}$$

The poverty severity is represented as:

$$P_2 = \frac{1}{N}\sum_{i=1}^{q}\left(\frac{Z - Y_i}{Z}\right)^{2}$$

3.4.2 Logistic Regression

Logistic regression is a predictive model used when the dependent variable is binary or dichotomous. This was employed to examine the driving factors of poverty among rural women. This was used because the model can perfectly account for dichotomous dependent variables. It is explicitly represented as:

$$Y = \beta_0 + \beta_1 A + \beta_2 MS + \beta_3 ED + \beta_4 HS + \beta_5 AC + \beta_6 PO + \beta_7 AH + \beta_8 FS + \beta_9 EXP + \beta_{10} EXT + \beta_{11} CS + e$$

Where,

Y is the poverty status (1 = poor women, 0 = not poor), A is the age of women (Years), MS is the marital status (1 = married, 0 = otherwise), ED is the educational level of the respondents (years), HS is the household size (number of persons), AC is access to credit loan facilities (1=had access, 0=otherwise), PO is the primary occupation (1 = farming, 0 = otherwise), AH is the cooperative association help (1 = yes, 0 = no), FS is the farm size (hectare), EXP is the farming experience (years), EXT is the extension contacts (number of contacts), CS is the cropping system (1 = monocropping, 0 = intercropping), β_0 is constant or intercept, β_1 to β_{11} are the coefficients, ln is the natural logarithms and e is the error term.

Gujarati (2004) and Greene (2005) suggested the derivation of the marginal effects of the explanatory variable. This is to have a comprehensive interpretation of the coefficient of the logistic regression model (Aboaba et al., 2019). The marginal values of the independent variables were estimated to show their predictive power.

4.0 Results and Discussion

4.1 Socioeconomic Features of Rural Women

The socioeconomic profile of rural women is presented in Table 1. The majority of rural women were above 40 years with an average age of about 47 years. This implies that they were adult, although they were still in their economic active age, but their productivity might have started to decline. About 86 per cent of the women were married while a few were widows or single. This suggests having responsibilities of house chores which may reduce the number of times spent on the farm. The majority of rural women farmers had a household size above four persons while only 12.2% had between one and four household members. They had an average household size of seven persons which suggests a relatively large household size. Rural households love to have large house size which is used as cheap labour in farming activities (Mukaila et al., 2020). Rural households in Nigeria and other sub-Saharan African countries are made up of extended family which puts financial pressure on the household heads and may reduce the per capita income of the household.

The level of education was very low among rural women, about one-third did not have any formal education. The majority (47.3%) of those that had formal education had primary education, 16.9% had secondary school education while only 4.2% had tertiary education. This could affect their productivity as the level of education exposes farmers to innovative practices which will invariably increase their agricultural output (Egwue et al., 2020; Obetta et al., 2020,).

The major occupation of rural women was farming. This shows that rural areas are agrarian communities and agriculture is a means of livelihood to the women. They had an average farming experience of 18 years which implies that farming is not new to the women, and they were well experienced. Years of farming experience increases the productivity of farmers and enables them to make better decisions about input combination and resource allocation to increase profitability. The women were smallholder farmers as they cultivated an average of 1.6 hectares of land. The majority (81.6%) of the women practice intercropping, that is they cultivated two or more crops on the same piece of land at the same time. This helped rural women to overcome some climate change disaster such as drought and to be on the safer side in case one crop fails. Access to agricultural extension services was very low in the rural areas of Nigeria as about two-thirds of rural women did not have access to agricultural extension services. They had an average agricultural extension contact of two times.

More than half of the rural women did not belong to a cooperative society. This may affect their access to market information and deny them other benefits from the cooperative society. Access to credit was low among rural women, about one-third of the women were able to access credit. Their major source of credit was from friends and family, cooperative societies and money lenders. They were unable to access credit from commercial banks due to lack of collateral as the majority were using their husband's land to farm which they cannot tender as collateral in the commercial banks. The majority (69.1%) of the rural women had a monthly income of ₦20,000 (USD 56.68) and below followed by those with an income range of ₦40,001 (USD 101.37) to ₦60,000 (USD 152.05). They had an average income of ₦22,561 (USD 57.17) monthly. This result implies that most of the women are low-income earners, and this may have a negative influence on their household poverty level.

Table 1. *Socioeconomic Profiles of Rural Women*

Variable	Category	Frequency	Percentage	Mean
Age	≤ 30	38	8.4	46.54
	31–40	105	23.3	
	41–50	146	32.4	
	51–60	105	23.3	
	> 60	56	12.4	
Marital status	Single	24	5.3	
	Married	386	85.8	
	Widow	40	8.9	
Household size	1–4	55	12.2	7
	5–8	343	76.2	
	≥ 9	52	11.6	
Education	No formal education	142	31.6	
	Primary	213	47.3	
	Secondary	76	16.9	
	Tertiary	19	4.2	
Major occupation	Farming	387	86	
	Civil servant	11	2.4	
	Business	23	5.1	
	Artisan	29	6.4	
Experience	< 10	167	37.1	18
	11–20	120	26.7	
	21–30	98	21.8	
	> 30	65	14.4	
Farm size	< 2	394	87.6	1.64
	2–3	42	9.3	
	> 3	14	3.1	

Table 1 continued

Cropping system	Monocropping	83	18.4	
	Intercropping	367	81.6	
Access to extension services	Yes	166	36.9	
	No	284	63.1	
Number of contacts	≤ 2	135	81.3	2
	≥ 3	31	18.7	
Cooperative membership	Yes	218	48.4	
	No	232	51.6	
Access to credit	Yes	161	35.8	
	No	289	64.2	
Monthly income (₦)	≤ 20,000	311	69.1	22,561
	20,001–40,000	41	9.1	
	40,001–60,000	65	14.4	
	> 60,000	33	7.3	

Source: Field survey, 2019.

4.2 Distribution of Rural Women According to Poverty Status

This section shows the degree of poverty among rural women in Nigeria using the three most common indices. These are headcount ratio or poverty incidence, poverty depth or gap, and poverty severity. Table 2 presents the poverty distribution of rural women in Nigeria. The result of the FGT revealed that rural women had a poverty incidence of 0.6911. This implies that 69.11% or approximately seven out of ten rural women were poor. This result shows that the poverty level was highly pronounced among rural women. This supports the position of IFAD (n.d.) that poverty is concentrated and widespread among rural women. Rural women had a poverty depth of 0.1265. This implies that poor rural women required a 12.65% increase in their income to move above the poverty line to be non-poor. The poverty severity among rural women was 0.0374. This implies that 3.74% of rural women are extremely poor, that is, the poorest of the poor was 3.74%. These results show that rural women require the attention of policymakers for the provision of free good healthcare facilities, good roads networks, housing facilities, and clean water.

Table 2. *Poverty Profile of Rural Women*

FGT indices	Value
Poverty incidence or headcount ratio	0.6911
Poverty depth or gap	0.1265
Poverty severity	0.0374

Source: Field survey, 2019.

4.3 Drivers of Poverty Status Among Rural Women

The results of the logistic estimates are presented in Table 3. The identified significant driving factors of poverty among rural women are (a) age, (b) marital status, (c) education, (d) household size, (e) access to credit, (f) farm size, (g) extension contacts, and (h) cropping system.

The coefficient of the age of the women was positively related to poverty status ($p<0.05$). The marginal effects coefficient indicates that a one year increase in rural women's age will increase the likelihood of being poor by 11.5%. This suggests that the older the women the higher the likelihood of being poor. This result implies that poverty level increase as the age of the women increases, and older women were poorer than their younger counterparts. This might be because as age increases so does strength and productivity decrease, thereby resulting in lower income. Falola et al. (2015) also reported a similar finding that age increases the likelihood of being poor.

The coefficient of marital status was negative and significant ($p<0.01$). The marginal effects of marital status revealed that the likelihood of being married decreases the probability of being poor by 16.4 per cent. This implies that poverty was lower among married women than their unmarried counterparts. This could be due to financial assistance gotten from their husbands to increase their agricultural productivity. This result disagreed with the findings of Etim and Patrick (2010) who reported marital status had a positive influence on poverty status.

The coefficient of education was negative and significant in relation to poverty status ($p<0.01$). The marginal effects of education indicate that a one-year increase in education level will reduce the likelihood of rural women being poor by 6.1%. This implies that the poverty level among women reduces as the level of education increases. This is because a high level of education paves the way for access to relevant information, adoption of innovation, and better decision making relating to agricultural production. Education therefore increases the income derived from their agricultural production (Mukaila et al., 2021a). Ayanwale (2012), Bogale et al. (2005), and Omotesho et al. (2007) reported a similar result that education lowered the rate of poverty in rural areas.

The coefficient of household size was positive in relation to poverty status ($p<0.05$). The marginal effects revealed that an increase in household size will increase the likelihood of rural women being poor by 21.9%. This implies that poverty level increases as household size increases, and households with larger size were poorer than those with small size. This is because a larger household size required more resources to satisfy their household needs. Thus, the resources available are limited and not enough to meet up with the larger household needs. Increase in household size reduced per capita income and impaired rural households' standard of living. This result is in line with the

findings of Falola et al. (2015) and Omotesho et al. (2007) that household size increase poverty level.

The coefficient of access to credit was negative in relation to poverty status (p<0.01). The marginal effects indicate that an additional 1% increase in credit accessibility will reduce the likelihood of rural women being poor by 9.9%. This implies that access to credit reduces the level of poverty among rural women. Rural women that can access credit are likely to be non-poor. This is because access to credit boosts the farmers' capital invested in the farming business, thus increasing their income to meet up with their needs. A similar result was reported by Falola et al. (2015) and Oladimeji (2013), that access to credit reduced the poverty level in rural areas.

The coefficient of farm size was negative in relation to the poverty status of rural women (p<0.10). The marginal effects indicate that a 1% increase in farm size will reduce the likelihood of rural women being poor by 0.4%. This implies that an increase in farm size reduces the poverty level of the women. This is because a large farm size may result in higher output which invariably increases women farmers' income and lowers their poverty level. Mukaila et al. (2021b) reported that farm size increases rural smallholder farmers' income.

The coefficient of extension contacts was negative and significant in relation to rural women's poverty status (p<0.05). The marginal effects indicate that one per cent increase in agricultural extension contacts will reduce the likelihood of rural women being poor by 3.9%. This implies that an increase in extension contacts reduced the poverty level among rural women. This further implies that rural women who had more access to extension services were non-poor whereas those without agricultural extension contacts were poor. This might be because extension agents expose rural women to innovative practices thereby increasing their productivity and income. Mukaila et al. (2021b) reported that farmers' access to extension agents boost their farm income. A higher farm income will invariably lower their poverty level.

The coefficient of the cropping system was positive in relation to rural women poverty status (p<0.01). The marginal effects indicate that a 1% increase in practising monocropping will increase the probability of being poor by 17.9%. This implies that women farmers who practised monocropping were poorer than those who practised intercropping. Intercropping allows the farmers to grow more than one crop on the same land and makes them maximize land usage as well as reducing the risk of crop failure. Women farmers who practised intercropping were likely to make more income thereby reducing their poverty status.

Table 3. *Drivers of Poverty Status Among Rural Women*

	Coefficient	Std. Err.	*t*-value	*p*-value	Marginal effect
Age	0.7074812**	0.2860448	2.47	0.013	0.1145989
Marital status	-1.01325***	0.2092339	-4.84	0.000	-0.1641277
Education	-0.3774854***	0.0382046	-9.88	0.000	-0.0611457
Household size	1.091187**	0.4842125	2.25	0.024	0.2194765
Access to credit	-0.6094447***	0.1656915	-3.68	0.000	-0.0987188

Table 3 continued

Primary occupation	0.1557544	0.2036338	0.76	0.444	0.0252293
Association help	-0.0633249	0.0712072	-0.89	0.374	-0.0102575
Farm size	-0.025089*	0.0142733	-1.76	0.079	-0.004064
Farming experience	0.0088055	0.0116884	0.75	0.451	0.0014263
Agricultural extension contact	-0.2430806**	0.1112179	-2.19	0.029	-0.0393746
Cropping system	1.183671***	0.3107594	3.81	0.000	0.1789103
Constant	6.722839***	1.127684	5.96	0.000	
LR chi^2 (11)	231.03				
Prob > chi^2	0.0000				
Log likelihood	-162.67724				
Pseudo R^2	0.4152				

Source: Field survey, 2019

5.0 Conclusion and Policy Recommendations

This study focused on rural women who were mostly smallholder farmers in Nigeria. The study assessed their poverty status including its driving factors. The study concluded that poverty is pervasive among rural women in the study area. The positive driving factors which contributed to high poverty among the rural women were age, household size, and practising the mono-cropping system; while level of education, access to credit, farm size, marital status and extension contacts were the factors reducing the poverty level among rural women.

To eradicate the high poverty rate among rural women, we recommend the following:

1. Rural women need to be encouraged to have household sizes that their resources can cater for. This can be achieved through enlightenment programs on family planning and birth control measures.
2. More agricultural extension agents need to be deployed to rural areas to increase their contacts with rural women. The agricultural extension agents will thus educate women farmers on the best cropping systems and encourage them to practise intercropping to boost their output and reduce the incidence of poverty.
3. The level of education among rural women needs to be boosted. This can be done through adult education with the provision of incentives such as free educational materials to encourage more participation. This would not only boost rural women's educational status but also increase

their access to information, improve their decision making, and reduce the high poverty rate among them.

4. Provision of available and accessible credit at an affordable interest rate and convenient repayment plan to the rural women is very important. This will not only increase their productivity but also boost their income which will, in turn, lower the poverty incidence among them.

5. Women should be given more access to farmland to increase their level of production. Increase in agricultural production would lead to a high farm income, thereby lowering the incidence of the high rate of poverty among them. These would not only move the rural women above the poverty line but also lead to rural development in the long run.

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