

ANALYSIS OF INCOME INEQUALITY AND POVERTY DYNAMICS AMONG RURAL HOUSEHOLDS IN SULEJA LOCAL GOVERNMENT AREA (LGA) OF NIGER STATE, NIGERIA

Ojo A.O, Ojo M.A, Kashim A. and Bako R.K

Department of Agricultural Economics and Extension Technology, Federal University of Technology, P.M.B. 65, Minna, Niger State

Corresponding Author e-mail: ojonikky@yahoo.com

ABSTRACT

The study employed primary data with the aid of structured questionnaire while a multi-stage random sampling technique was used to select 80 rural households in the area. The analytical techniques involved the use of descriptive statistics, Gini coefficient and Freer, Greer and Thorbecke Poverty Index. The results revealed a mean age of 54years with male-headed household (89%) prevalence in the area. Majority (98%) were married with average household size of 6 persons. The analysis of income distribution showed mean income/month of ₦23,139.24 and mean per capita income of ₦7,251.90/month. Gini coefficient value of 0.46 revealed even distribution of income among the households. In addition, majority (86%) of the rural households lived below \$1 per day. Furthermore, the poverty incidence, depth and severity were 58%, 21% and 13%, respectively. The results of logit regression analysis revealed diversification index ($P < 0.10$), years of experience ($P < 0.05$) and access to credit ($P < 0.10$) as the main determinants of poverty status of the households. Based on the results, this study therefore recommends that policy makers should identify and formulate all-inclusive policy interventions that will have long-lasting positive impact on the rural households alongside the general economic policies of the country.

Key words: Poverty, Income, Rural, Gini-coefficient, Households

Introduction

Nigeria is the most populous country in Africa with agriculture as her mainstay. The bulk of agricultural activities in the country are carried out by the large rural agricultural-based traditional sector that encompasses about two-third of the population in the low-income class. This low-income class earn their income from various on-farm or off-farm income generating activities (Awe and Olawumi, 2012). However, the labour market often fails to allocate income equally. Some households earn more income while many more earn less income. Differences in workers productivity, varying trade pattern, patterns of past discriminations and tax policies have been identified as some of the reasons for income inequality. In addition, high rate of unemployment and under employment, a large public sector, median property/asset values, the strength of local economies, population growth, rural-urban migration, low wage and poor working conditions has continued to exhibit a strong influence on the nature and pattern of income distribution in the Nigerian economy (Alayande, 2003, Awe and Olawumi, 2012; Oluwatayo, 2008). Income inequality is said to be the extent of disparity between high and low incomes; i.e. the ratio of a high household income to a low household income after adjustment for household size and consumption (Ayinde *et al.*, 2012). This disparity coupled with instability in climate, socio-economic and political environment has continued to hinder economic growth and development and has fanned the flames of the poor living conditions of most households

especially those living in the rural areas. Most of them are living below USD\$1 per day without access to basic necessities of life. This has resulted into severe poverty with an alarming Global Hunger Index (GHI) of 25.5 in 2016.

Poverty can be generally understood as the lack of, or inability to achieve, a socially acceptable standard of living, or the possession of insufficient resources to meet basic needs. It is strongly influenced by the resources that people can claim, under what conditions and with what level of choice. It is a broadly multidimensional, partly subjective phenomenon, often viewed as both the cause and symptoms of underdevelopment (Ogunniyi *et al.*, 2011). In Nigeria, the incidence of poverty has remained relatively high, hovering around 54% between 2005 and 2009 (CBN, 2009; Osahon, 2011). With eighty-five per cent of the rural households being poor in 2006 (Olorunsanya and Omotesho, 2011), the poverty situation remains an overwhelming challenge as findings of a 2013 core welfare indicator questionnaire survey conducted by National Bureau of Statistics (NBS) revealed that over 67 percent or two-third of Nigeria's rural population was poor (Sadiq and Kolo, 2015). The rural dwellers are thus more vulnerable to poverty than urban dwellers who can invest their money and time to acquire education and skills for better opportunities and enumeration. Therefore, low living standard, hunger, malnutrition, poor health status and inaccessibility to other basic necessities of life have continued to plague the rural households who are the main producers of the food needs of the country. This situation persists despite the various interventions programmes such as, the National Poverty Eradication Programme (NAPEP), National Economic Empowerment Development Strategy (NEEDS) and the Nigeria Millennium Goals (MDGs), put in place by the government to address these challenges. Presently in Nigeria, poverty incidence tends to be on the increase especially in most rural areas due to the present economic recession being witnessed in the country. This has resulted into incessant rise in the general price level of goods and services. This has led to a significant decline in the real income, a weakening purchasing power of income earners and declining aggregate supply and demand. This glaringly will further widen the disparity in income if proper policy interventions are not enforced by the government (Sanusi, 2011).

Reducing inequitable income distribution and poverty is therefore a major challenge in Nigeria as in other African countries. It is against this backdrop that the study aimed at investigating the income distribution and poverty status of the rural households in the study area so that the welfare of the persistently poverty trapped rural households could be improved through appropriate recommendations.

Methodology

Study Area: The study was conducted in Suleja Local Government Area (LGA) of Niger State. It is one of the 25 LGAs in the State which lies between Latitude 9° 6' and 9° 17' North of the equator and also between Longitude 7° 65' and 7° 12' East of the Greenwich Meridian. It has an area of 136.33 square kilometres. It is only 110 kilometres south-east of Minna, the State capital, and bounded by the Federal Capital Territory (FCT), Abuja by the west. The provisional result of the National population showed that Suleja LGA has a projected population of 758,023 at the population growth rate of 2.5% (World Bank, 2013). The major ethnic groups are Gbaya, Gade, Bassa, Fulani and Hausa out of which the Gbaya has the largest share of the populace. The rapid growth and expansion of Suleja LGA can be explained by the large influx of people from FCT into the Area. Its location near the FCT has had the most profound effect on its production expansion. The increase in production over the years has brought about rapid development in structures. The major economic activity is agriculture (farming, livestock rearing and fishing). The area is blessed with vast arable land, good weather, water and mineral resources like clay, silica and sand. It has an ideal condition for livestock due to its abundant grass land.

Sampling Technique: Multi-stage sampling technique was employed in the collection of primary data for this study. Stage one involved the random selection of 4 districts out of 34 districts in Suleja LGA, stage two involved the random selection of 2 communities from each district making a total of 8 communities while the third stage involved the random selection of ten rural household heads from each of the communities making a total of eighty respondents. The communities were Kwamba, Kuchiko, Rafin sanyin, Lafidi zango, Pandam Abuci, Gwari babba, Bariki and Zariyawa.

Method of Data Collection: Primary data were collected with the aid of a structured questionnaire for 2014 production season one year period to elicit information from the rural households on relevant information regarding their poverty status in the area.

Analytical Techniques: Descriptive statistics such as mean, standard deviation, percentages and frequency distribution tables were used for the description of socio-economic characteristics. Gini coefficient was used to determine the income distribution of the households. When the Gini Coefficient is close to 1, the income distribution is more uneven (unequal) because most income is earned by the richest households, whereas the lowest-income group earns much less. When the Gini Coefficient is close to 0, the income distribution is more even (equal) because the highest-income household does not earn much more than the lowest-income household. When the gini index expands, the Gini Coefficient will be nearer to 1; and the income distribution will be more unequal but when it diminishes, the gini coefficient will be nearer to 0 and, the income distribution will be more equal.

Mathematically, the Gini coefficient as used by Ojo (2014) is expressed as follows:

$$GC = 1 - \sum XY \dots\dots\dots(1)$$

Where:

GC = Gini coefficient

X = proportion of households

Y = cumulative proportion of income

Σ = summation sign

Freer, Greer and Thorbecke (FGT) Poverty Index: FGT poverty index was employed to ascertain the poverty status of the respondents and this was then used to disaggregate them into poor and non-poor categories following the work of Olutayo (2009) and Ojo *et al.*, (2015). The FGT model postulated that there are three different ways by which poverty can be measured which are headcount, poverty gap and squared poverty gap (FGT, 1984). The mathematical formulation of poverty measurements as derived from Foster, Greer and Thorbecke (1984) is estimated as:

$$P\alpha = \frac{1}{n} \sum_{i=1}^q \left[\frac{z - y_i}{z} \right]^\alpha \dots\dots\dots (2)$$

Where,

$P\alpha$ = the weighted poverty index for the *i*th sub-group

α = Foster-Greer-Thorbecke (FGT) index and takes on the values of 0, 1 and 2.

z = the poverty line

q = the number of households below poverty line.

n = the total number of households in the sampled population.

y_{ij} = the income of the *i*th household

y_{ij} = the per capita income of household *j* in the sub-group *i*

$z - y_{ij}$ = poverty gap of the *i*th household

$$\frac{z - y_{ij}}{z} = \text{poverty gap ratio}$$

The quantity in bracket is the proportionate shortfall of income below the poverty line.

If $\alpha = 0$, then FGT measures the incidence of poverty

If $\alpha = 1$, then FGT measures the depth of poverty

If $\alpha = 2$, then FGT measures the severity of poverty

Construction of the poverty line: The poverty line is that level of welfare which distinguishes poor households from non-poor. According to Foster Greer Thorbecke (FGT) poverty measure, poverty incidence (P_0) indicates the percentage of the households falling below poverty line, poverty depth (P_1) shows the amount by which the poor fall short of the poverty line and poverty severity (P_2) is the sum of the square of poverty depth by the number of households in the sample. Poverty line has been defined as the minimum or the cut-off standard of expenditure on food or per capita income below which an individual or household is described as poor (Adekoya, 2014). The international poverty line of US\$1 per day was adopted for this study. This translated to ₦10500 per month at the exchange rate of ₦350 per dollar (This was the prevailing rate during the period of the survey). Thus, any household whose income per capita/month falls below ₦10500 was considered poor and vice versa for non poor.

Logit regression model was used to determine the effect of socio-economic characteristics on poverty status of the rural households and it is represented as:

$$\ln Y = \beta_0 + \sum_{i=1}^n \beta_i X_i \dots\dots\dots (3)$$

Where,

Y = Poverty status (0 = non-poor, 1 = poor)

X₁ = income diversification index

X₂ = Age of respondent (Years)

X₃ = Sex (male = 1, 0 otherwise)

X₄ = Household size (No.)

X₅ = Education (Years)

X₆ = Experience (Years)

X₇ = Health status (Amount spend on drugs ₦)

X₈ = Feeding (Amount spend ₦)

X₉ = Access to credit (Yes = 1, 0 otherwise)

U_i = Error term

Results and discussions

Socio-economic Characteristics of Rural Households: The socio-economic characteristics of the households such as age, marital status, gender, household size, educational status years of experience, access to credit, and co-operative society of the respondents were as presented in Table 1. The Table revealed that 38.7% of the households were within the age range of 40-50 years while about 61.2% were above 50 years. The mean age was 54 years which was an indication that only a handful of the farmers were at their economical active age. This result could result have negative effect on their efficiency as farming activities were left into the hands of old and aged people. On the other hand, the households headed by young, energetic and active

middle-aged man could afford to take risks and migrate in search of off-farm income generating activities to augment their farm income. This agrees with the findings of Ayinde *et al.* (2012) which indicated that agriculture was practiced by older people in the area. Awoniyi and Salman (2012) in a study on non-farm income diversification and welfare status of rural households in South-West zone of Nigeria and, Awotide *et al.* (2010) in their research paper on poverty and rural livelihood diversification among farming households in South-West, Nigeria. The results indicated that majority of the households that engaged in non-farm income generating activities were still in their productive years. The distribution of the farmers based on household size showed that majority of them had household size of 1-10 (77.4%) and only 22.6% had over 10 persons per household. This showed that many of the farmers would have to augment the income from their farming activities with off-farm work to sustain the family during this period of economic downturn. This is in line with the findings of Okere and Shittu (2012) in a study on patterns and determinants of livelihood diversification in Odeda Local Government Area, Ogun State, Nigeria. They affirmed that larger households may have to depend on more income generating activities for sustainable livelihood than smaller households. Similar study of Ayinde *et al.* (2012) on the analysis of income inequality in Nigerian agricultural economy: a case study of Ekiti State showed that 75% of the rural household has a size of between 9 -12 persons. Furthermore, analysis of the distribution of the farmers according to the years of experience revealed that most of the households had 11-20 years working experience which accounted for 76.2%, followed by 21-30 years and 1-10 years of 11.2% and 10.0%, respectively. This implied that household heads would probably be willing to take additional risk of engaging in off-farm activities to earn additional income having had understanding of the intricacies of on-farm work.

Co-operatives societies serve as means of raising and increasing financial capital base of the members and, also serve as means to secure and distribute food, seeds and other inputs in time of scarcity. From the Table, 76.2% of the households were members of co-operative society while only 23.8% were not members. The result further revealed that most of the households (93.8%) had access to credit facilities. Only 6.2% of the households had none. Acquisition of additional capital enables farm households procure production inputs such as fertilizers, agrochemicals and to hire additional labour for the on-farm and off-farm activities. Agricultural credit also has the propensity to break the vicious cycle of poverty and raise the purchasing power of farm household who over rely on meagre household resources (Igwe, 2013). Despite the cooperative membership of the majority of the households, they still sought for informal access to credit facilities from relatives, friends, and neighbours or through their personal savings probably because it was easier with no string (interest) attached. As indicated in Table 1, 43.8% of the households sought for fund through their personal savings, 50% from personal savings/friends and relatives and, 5% of them from money lenders.

Table 1: Distribution of rural households according to their socio-economic characteristics

Variables	Frequency	Percentage	Mean
Age			
<30	2	2.5	
41-50	29	36.2	
51-60	28	35.0	
> 60	21	26.3	
Total	80	100.0	54
Gender			
Male	71	88.8	
Female	9	11.2	
Total	80	100.0	
Marital Status			
Married	78	97.5	
Widowed	2	2.5	
Total	80	100.0	
Household size			
1-5	9	11.2	
6-10	53	66.2	
11-15	15	18.8	
16-20	3	3.8	
Total	80	100.0	9
Years of experience			
1-10	8	10.0	
11-20	61	76.2	
21-30	9	11.2	
31 Above	2	2.5	
Total	80	100.0	17.5
Membership of co-operatives			
Yes	61	76.2	
No	19	23.8	
Total	80	100.0	
Credit accessibility			
Yes	75	93.8	
No	5	6.2	
Total	80	100.0	
Other ways to access fund			
Personal saving	35	43.8	
Personal saving/relatives and friend	32	40.0	
Relatives and friends	8	10.0	
Money lender	5	6.2	
Total	80	100.0	

Source: Field Survey, 2015

Income Distribution of the Households: The income distribution of the households revealed a gini coefficient of 0.46 (Table 2) which showed that income was evenly distributed among the households and that they were within the low income group. The low value of the inequality as also reported by Ayinde *et al.* (2012) was as a result of the homogenous nature of the area and also because majority of the respondents engaged in the same occupation either as primary or secondary occupation. This is in consonance with the study conducted by Ogunniyi *et al.* (2011) on the comparative analysis of poverty and income inequality among food crop and livestock farmers in Ilesa metropolis, Osun State. Their result revealed a gini coefficient of 0.33 for food crop farmers, 0.40 for livestock farmers while that of crop and livestock farmers was 0.39. Ayinde *et al.* (2012) also reported a gini coefficient of 0.41 and 0.33 for agricultural and non agricultural activities of rural farm households in Ekiti State, respectively.

Table 2: Income Distribution of the rural households

IR/Month (₦)	FR	PH (X)	CPH	TI/Month(₦)	PI	CPI (Y)	ΣXY	GC
< 5000	5	0.063	0.063	10023.67	0.008	0.008	0.000500	
5000-10000	5	0.063	0.125	36027.75	0.030	0.038	0.002348	
10001-15000	30	0.375	0.500	386053.5	0.317	0.354	0.132883	
15001-20000	27	0.338	0.838	470577.3	0.386	0.741	0.249921	0.46
20001-25000	8	0.100	0.938	183119.1	0.150	0.891	0.089077	
> 30000	5	0.063	1.000	132833.3	0.109	1.000	0.062486	
		1.000		1218635	1.000		0.537215	

Source: Field Survey, 2015

***IR = Income Range; FR = Frequency; PH = Proportion of Households; CPH = Cumulative Proportion of Households; TI = Total Income; PI = Proportion of Income; CPI = Cumulative Proportion of income.

Poverty Status of Rural Households: The international poverty line of US\$1 per day was adopted for this study. This translated to ₦10500 per month at the exchange rate of ₦350 per dollar (This was the prevailing rate during the period of the survey). Thus, any household whose income per capita/month falls below ₦10500 was considered poor and vice versa for non poor. The poverty profile of rural household in the area as shown in Table 3 revealed a head count index of poverty showed that 58% of the rural farming households were poor while the poverty gap/depth which measures the extent by which poor household were below poverty line revealed that the poor households were 21% below the poverty line. Moreover, the poverty severity index was 12.5% which implied that 10 out of the 80 households sampled were extremely poor. This is in agreement with the research report of Ogunniyi *et al.*, (2011) that 3 out of the 50 crop farmers sampled were extremely poor. Meanwhile, the mean household monthly income was ₦15232.93 while the mean per capita monthly income was ₦7251.90 (Table 03). This implies that most of them were living below poverty line of USD\$1/day. The social welfare of the households was ₦7, 052.85.

Table 3: Poverty profile among rural households in the study area

Poverty parameters(index)	Estimates	Percentage (%)
Mean income/Month (\bar{Y})	₦15232.93	
Mean per capita income/Month	₦7251.90	
Social Welfare	₦7052.85	
Poverty incidence (P_0)	0.582	58.2
Poverty depth (P_1)	0.207	20.7
Poverty severity (P_2)	0.125	12.5

Source: Field Survey, 2015

Effect of Income Diversification on Poverty Status of the Rural Households in The Study Area: Logit regression model was used to determine the effect of income diversification on poverty status of the rural households in the study area. The results of the analysis as reported in

Table 4 revealed that gender and household size were negative but statistically significant at 5% and 10%, respectively. This implied that the higher the household size the higher the number of mouths to be fed and hence, the higher the tendency to be poor especially when the members of the households are mostly dependants. Gender with negative coefficient may probably be because female headed households may have dual responsibilities of being decision makers/breadwinners as well as home keepers/ builders. This could have serious negative impact on their health. When their health dwindles, it could result into reduced source of income thereby increasing the poverty level of the households. This is in line with the study of Adepoju and Obayelu (2012) in a study on livelihood diversification and welfare of rural households in Ondo State, Nigeria. The results revealed that an increase in household size increased the likelihood of being poor as a result of greater burden it posed on the activities of the working-members of the households. In addition, diversification index, years of experience and access to credit were all positive and significant at $P < 0.10$ level. This implied that increase in the value of any of these variables decreased the probability of being poor in the study area. This is in consonance with the findings of Babatunde and Qaim (2009) on the study of patterns of income diversification in rural Nigerian who reported that access to credit had a positive influence on income diversification in the study area.

Table 4: Effect of income diversification on poverty status of the rural households in the study area

Variables	Coefficient	T-Value
Diversification index(X_1)	6.20535772	1.776*
Age(X_2)	0.01056299	0.330
Gender(X_3)	-1.20630897	-2.208**
Household Size(X_4)	-0.19911192	-1.674*
Years of Formal Education(X_5)	-0.04763528	-0.658
Years of Experience(X_6)	0.09824293	1.749*
Domestic Expenses(X_7)	0.42112504	0.468
Access to Credit(X_8)	1.39531866	1.807*
Constant	-4.12739066	-1.709*

Source: Field Survey, 2015 Pseudo $R^2=0.1753844$ Prob.> $\chi^2=0.199935$ **= Significant at 5% *= Significant at 10%

Conclusion and Recommendations

The study was carried out to investigate income inequality and poverty dynamics among rural households in Suleja Local Government Area of Niger State, Nigeria. Primary data were collected with the aid of well-structured questionnaire while a multi-stage random sampling technique was used to select 80 rural households in the area. The analytical techniques involved the use of descriptive statistics, gini-coefficient and Freer, Greer and Thorbecke (FGT) Poverty Index to determine the socio economic characteristics, income distribution and poverty dynamics among the rural households in the area, respectively. The results of the socio economic characteristics of the households revealed a mean age of 54years with male-headed household (89%) prevalence in the area. Majority were married (98%) with average household size of 6 persons. The analysis of income distribution showed mean income/month of ₦23,139.24 and mean per capita income of ₦7251.90/month. The gini-coefficient value of 0.46

revealed that income was evenly distributed among the rural households in the area. The result further revealed that majority of the rural households, (86%), lived below \$1per day. Furthermore, the poverty incidence, depth and severity were 58%, 21% and 13%, respectively. The result of logit regression analysis revealed that diversification index ($P < 0.10$), years of experience ($P < 0.05$) and access to credit ($P < 0.10$) had positive and significant effect on the poverty status of the rural households while gender ($P < 0.05$) and household size ($P < 0.10$) had negative but significant effect on the poverty status of the rural households in the area.

Recommendations

Based on the findings of this research the following recommendations are made:

- i. Policy makers should identify and formulate all-inclusive policy interventions that will have long-lasting positive impact on the rural households alongside the general economic policies of the country.
- ii. Farmers should open up their spectacle to more income generating activities to boost their financial status and reduce poverty in the area
- iii. Government and non-governmental organizations should make concerted efforts to assist the rural households through the provision of basic amenities

References

- Alayande B. A (2003) Decomposition of Inequality reconsidered: Some evidence from Nigeria. Paper presented to *the UNU/WIDER conference on inequality poverty and human well being*, Helsinki, Finland between 29th and 31st of May, 2003.
- Awe A. A and O. R. Olawumi (2012). Determinants of Income Distribution in the Nigeria Economy: 1977-27005, *International Business and Management*. 5(1): 126-137
- Awotide O. D., A. L. Kehinde and P. O. Agbola (2010). Poverty and Rural Livelihood Diversification Among Farming Household in South-West Nigeria, *Journal of Food, Agriculture & Environment*. 8(1): 367-371.
- Ayinde O. E., M. Muchie, R. O. Babatunde, M. O. Adewumi, K. Ayinde and O. Ibitoye (2012). Analysis of income inequality in Nigerian agricultural economy: a case study of Ekiti State. Poster paper prepared for presentation at the International Association of Agricultural Economists (IAAE) Triennial Conference, Fozdo Iguacu, Brazil, 18- 24 August, 2012.
- Babatunde R. O. and M. Qaim (2009). Patterns of income diversification in rural Nigeria: determinant and impacts, *Quarterly Journal of International Agriculture*. 48(4): 305-320.
- Foster J., J. Greer and E. Thorbecke (1984). *A class of decomposable poverty measures*. *Econometrica* 52: Page 761–766.
- Igwe P. A. (2013). Rural Non-farm livelihood diversification and poverty reduction in Nigeria. Thesis submitted to the University of Plymouth for the award of the degree of doctor of philosophy (PhD) in Business with Management. School of Management (Plymouth Business School), University of Plymouth, Plymouth, United Kingdom, pp 253.

Ojo *et al.* Taraba J. Agric. Res. Vol. 5 No. 1, 2017
Global Hunger Index (GHI) (2016). www.ifpri.org/topic/global-hunger-index Accessed
20/10/2016

- Ogunniyi L. T., Adepoju, A. A. and Olapade-Ogunwole F. (2011). Comparative analysis of poverty and income inequality among food crop and livestock farmers in Ilesa Metropolis, Osun State, *Global Journal of Human Social Science*. 11(5): 1-8.
- Ojo A. O., A. Inijeze, M. A. Ojo and S. Jibrin (2015). Rural employment generation and poverty alleviation through small scale cassava processing ventures in Niger State, Nigeria, *Scientific Papers Series Management, Economic Engineering in Agriculture and Rural Development*. 15(2): 243-250
- Okere C. P. and A. M. Shittu (2012). Patterns and determinants of livelihood diversification among farm households in Odeda Local Government Area, Ogun State, Nigeria. Paper Presented at the Nigerian Association of Agricultural Economist Conference held at Obafemi Awolowo University, Ile-Ife between 25-27 September, 2012. Theme: Agriculture in the National Transformation Agenda: The Policy mix.
- Olorunsanya E. O. and O. A. Omotesho (2011). A gender analysis of poverty profile of rural farming households in North Central, Nigeria, *International Journal of Agricultural Economics and Rural Development*. 4(2): 11-27.
- Oluwatayo I. B. (2008). Explaining inequality and welfare status of households in rural Nigeria: Evidence from Ekiti State, *Humanity & Social Sciences Journal*. 3 (1): 70-80.
- Oluwatayo I. B. (2009). Poverty and income diversification among households in Rural Nigeria: A gender analysis of livelihood patterns. A paper presented at the 2nd Instituto de económicos (IESE) Conference on of poverty and patterns of economic accumulation in Mozambique on 22-23rd April, 2009.
- Osahon S. (2011). Poverty and income inequality in Nigeria: An Empirical Assessment, *Jorind*. 9(2): 447-453
- Sadiq M. S. and M. D. Kolo (2015). Poverty profile of rural farming household in Niger State and its implication on Food security in Nigeria. *International Journal of Agricultural Research and Review* 3(2): 161-171
- Sanusi W.A (2011). Effect of poverty on participation in non-farm activity in Ibarapa Local Government Area of Oyo State, *International Journal of Applied Agricultural and Apicultural Research*, 7 (1&2): 86-95
- World Bank (2013). Nigeria Populaton Growth. data.worldbank.org/country/nigeria