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Kampala International University ISSN: *2415-0843*; 3(2): 53-66

Perceived Effects of Livelihood Diversification on Farmers' Household Poverty Status in Ogun State, Nigeria

A. S. ONASANYA, O. A. ONASANYA, O. J. ATOYEBI
Olabisi Onabanjo University, Yewa Campus, Ayetoro, Ogun State, Nigeria.

Abstract. The study investigated perceived effects of livelihood diversification on farmers' household poverty status in Ogun State. Data were collected from 132 farmers from the 4 agricultural zones of the state using multistage sampling procedure and snow ball approach. The study reported that majority of the farmers were above 40 years of age, males, married, had one form of education or the other, earned more than ₦100,000.00 annually and were having between 3–4 children. Also, cassava, maize, yam and green vegetable production are the most common agricultural related livelihood activities involved in by all the farmers. However, farmers' involvement in non-agricultural activities was low. Major influencing factor to livelihood diversification was lack of credit facilities. The farmers perceived that diversifying livelihood activities will definitely enhance income generation of their household and it is a form of survival strategy of rural household especially in times of drought and famine. Farmers' perception of the effect of diversifying on their livelihood activities on poverty status was high ($\overline{X}$ = 38.8). The study concluded that significant relationships exist between perceived effects of livelihood diversification on farmers' poverty status and sex, educational level; factors influencing their involvement in diversification of livelihood activities; poverty status and possession of welfare attributes. The study therefore recommends that there is need for the urgent provision of basic infrastructure across the state and farmers should be trained in areas of enterprise combination for maximizing their profits with a better extension services and inputs.

Keywords: Perception, effects, livelihood, diversification, poverty

1. Introduction

1.1 Background Information

It is not understatement to say that Nigeria in its underdeveloped nature is faced seriously with problem of poverty. Poverty is like a worm that has eaten very deep into the fabric of Nigerian's economy. The rate of poverty in Nigeria is so alarming that it has turn out to be a matter of concern. Poverty is often described as inability of people to satisfy their minimum basic needs of food, clothing and shelter. Poverty goes beyond the income view by encompassing absence of resources and opportunities that are basic to human survival. Onasanya (1997) posited that rural Africans engage in income-generating activities in addition to crop and/or livestock production. Indeed, for Barrett *et. al*., (2001b) 'diversification is the norm'. However, the more recent debate around rural income diversification highlights not so much its existence, as in its extent. Specifically, the argument is that for many people non-farm income has moved from a minor to a major component of total income. The implication of this change is that, while previously it may have been defensible to consider the vast majority of

the economically active rural population as 'farmers', this is no longer the case. It seems evident that such a change of status for large swathes of the rural population could in turn have implications for many aspects of rural development policy, including agricultural research policy.

Diversification is a process of moving towards a position of greater diversity. In relation to the incomes of rural Africans, diversification can be understood at a variety of levels, from growing a greater number of varieties of a staple crop, through the introduction of new crops or livestock into a farming system, to engage in one or more non-farm income-generating activities to what might be considered 'intra-sectoral' diversification (Ahmed, M.M., Sanders, J.H. and Well, W.T., 2000, McIntire *et. al*., 1992). Also, Onasanya (2008) reported involvement of farmers in more than one income generating activities in cement producing precincts of Ogun State, Nigeria. But the recent literature on diversification generally focuses more on inter-sectoral diversification, and specifically the increasing engagement of rural people in non-farm activities. Reardon (1997) considers these non-farm activities to include: (a) employment in the rural non-farm labour market; (b) self-employment in the local non-farm sector; (c) employment in the migration labour market; and (d) employment in the farm labour market.

Based on more recent data from Ethiopia, Nigeria, Tanzania, Malawi, Zimbabwe and South Africa, Bryceson (2002) argues that non-farm income accounts for 60-80% of household income. A significant proportion of households earn a significant proportion of their incomes from non-farm sources. However, while there is insufficient data to specify more precisely the dynamics or outcomes of this process of diversification in terms of absolute numbers of people or households, their locations or their socio-economic characteristics, there is nevertheless strong prima facie evidence that non-farm income plays an increasingly important role in many Nigerian rural economies.

1.2 Problem Statement

The resources of rural areas determine the economic activities engaged in by rural folks (Olanloye, 2013). However, the objective of farming by rural folks has a diverging view as some engage in farming to maximize gross margin, while some to satisfy family food requirements among others. Although farming is generally the predominant economic activity in most rural areas, there are also off-farm economic activities such as food processing, cottage industries (weaving, tie and dye, smothery and mat making). Indeed, in the last thirty years or there about, these off-farm activities have actually become the predominant economic activities in some rural areas (Olanloye, 2013).

Another interesting feature of the Nigerian rural economy is the relative ease with which the rural folks move from one economic activity to another in the course of a year. It is common for farmers to engage in off-farm activities during the off-season period and for those whose main occupation is not farming to engage in farming on part-time basis. One observation that emerges from literature is a positive relationship between non-farm income and household welfare. For example, using data from a 'relatively prosperous' area of Kenya, Evans and Ngau (1991) argue that 'rising income from non-farm employment and business activities makes it easier for the household to accept the risks associated with innovation, and hence enables farm households to raise levels of productivity and output in agriculture'; or more succinctly, 'rising non-farm income spurs advances in agriculture'.

Reardon (1997) and Barrett *et. al*. (2001a) develop a different angle on the link between non-farm income and welfare, with the proposition that more lucrative non-farm activities have high barriers to entry in the form of skills, contacts and/or capital, such that only the relatively rich are able to diversify into these. Richer people thus have greater freedom to choose among a wider range of non-farm options than the poor, and they (the rich) tend to bifurcate into two groups: 'full-time farmers', and 'farm and skilled non-farm'. On the other hand, the poor have little choice when

diversifying out of farming: they go into unskilled off-farm labour and other activities with low barriers and therefore generally poor returns. Even when the poor act to diversify their incomes, because of the high barriers to entry to more lucrative activities, they can expect both lower returns and higher variability in earnings. Thus it is not so much the fact of having a diversified income that has a positive impact on welfare, but rather the use of what we might think of as 'high value' diversification to build further on what is already a relatively privileged position. Indeed, there has been much debate around the causes of or motivation for diversification. Barrett *et. al*. (2001b), for example, cite diminishing or time-varying returns to labour or land; market failures and frictions; ex-ante risk management; ex-post adaptation to shocks; incomplete markets; and economies of scope. Much emphasis has been placed on the idea that richer people diversify more for risk management (i.e. self-insurance) and income enhancement, while the poor are more likely to diversify in response to shocks. Ellis (2000) referred to these two paths as diversification 'by choice' and diversification 'by necessity'.

In a recent paper, Bryceson (2002) argues that non-farm income has direct response to structural adjustment and liberalization measures which have put many small-scale producers growing food and traditional export crops at a distinct disadvantage. Further in relating income to well-being of people, Carasher et al. (1998) posited that access to food is closely related to physical resources that are readily available. In this view the on-going process of livelihood diversification is very much driven 'by necessity' and must therefore be seen to be directly associated with rural poverty.

Despite the much emphasis between the rich and the poor farmers within the paradigm of livelihood diversification, much attention has been shifted from conducting research on the perception of the poor rural farmers on the effect of their diversification could have on their poverty status, even if they diversify based on shocks or not. Hence, to bridge this gap in existing body of knowledge, this study was conducted to x-ray the perceived effect of livelihood diversification on farmers' household poverty status in Ogun state, Nigeria.

1.3 Objectives of the Study

In investigating the above therefore, study investigated the effects of livelihood diversification on farmers' poverty status in Ogun State, Nigeria. Specifically, the study:
(a) described the socio-economic characteristics of the selected farmers in the study area;
(b) assessed factors influencing the farmers to diversify into other livelihood activities apart from farming;
(c) determined the poverty status of the farmers before and after diversification of livelihood activities, and
(d) ascertained their perception of the effects of their diversification on their poverty status

1.4 Hypotheses of the study

For the purpose of the study, the following hypotheses stated in null form were tested:

$H_0$1: There is no significant relationship between perceived effects of livelihood diversification on farmers' poverty status and their selected socio-economic characteristics.
$H_0$2: There is no significant relationship between perceived effects of livelihood diversification on farmers' poverty status and factors influencing their involvement in diversification of livelihood activities.

2. Methodology

2.1 The Area of Study

The research was carried out in Ogun state which is one of the 36 states in the Federal Republic of Nigeria. Abeokuta is the capital of Ogun state and the largest urban centre in the state. It is cited about 100 kilometers from Lagos, Nigerians foremost commercial and industrial centre, and 740 kilometers from Abuja, Nigerian Federal capital territory (NPC, 1996). Ogun State has a total land area of 16409.26 sq/km politically; the state is divided into 20 Local Government Areas (NPC, 1996).

The main enterprise is traditional agriculture (Onasanya, 2008) and Ogun State Agricultural Development Programme (OGADEP) is the main government agency that is responsible for agricultural development in the state (Otun, 2000).

2.2 Sampling Procedure and Sample Size

The target population of the study consists of OGADEP contact farmers in selected zones of Ogun State. Multistage sampling procedure was used. Firstly, based on the stratification of the state into 4 Agricultural zones by OGADEP (Ijebu-ode, Abeokuta, Ikenne and Ilaro zones), 50% of existing extension blocks were selected. There are 6 blocks in Ijebu-ode zone, 6 blocks in Abeokuta zone, 4 blocks in Ikenne zone and 4 blocks in Ilaro zone. Thus, the selection resulted into the selection of 3, 3, 2 and 2 blocks respectively. Secondly, 20% of existing cells in each zones was selected, this led to the selection of 3 cells in Ijebu-ode, 4 cells in Abeokuta, 2 cells in Ikenne and 2 cells in Ilaro. Thirdly, based on the structure of OGADEP, a cell consist of 80 contact farmers, hence from the selected cells 15% of the contact farmers were selected and this resulted into the selection of 36, 48, 24, and 24 contact farmers from Ijebu-ode, Abeokuta, Ikenne and Ilaro zones respectively. For the purpose of the study, snow ball approach was adopted in reaching the target audience. Thus, the sampling procedure resulted into the selection of 132 respondents and this represented the sample size for the study (see Table 1).

TABLE 1: Summary of Sampling Procedure and Sample Size

State	Zones	No of blocks	50% of blocks	Selected Blocks	No of cells/ blocks	20% of cells	Selected cells	No of contact farmers per cell	15% of contact farmers
Ogun state	Ijebu-ode	6	3	Isoyin Ala Ago-Iwoye	6 5 4	1 1 1	Ogbogbo Odogbolu F. Settlement	80 80 80	12 12 12
	Abeokuta	6	3	Olorunda Opeji Wasinmi	4 6 8	1 1 2	Olorunda Alabata Wasinmi Itori	80 80 80 80	12 12 12 12
	Ikenne	4	2	Isara Someke	4 4	1 1	Sagamu Ibafo	80 80	12 12
	Ilaro	4	2	Sawonjo Imeko	7 6	1 1	Sawonjo Ayetoro	80 80	12 12
	Total	20	10		54	11		880	132

Source: OGADEP Handbook, 2012

2.3 Measurement of Variables

Farmer's perception of the effects of livelihood activities on their poverty status

The dependent variable of the study which was farmer's perception of the effects of livelihood activities on their poverty status was measured using a profile of perceptional statements that were presented to the farmers on a Likert-type scale of SA = Strongly Agree, A = Agree, U = Undecided, D = Disagree and SD = Strongly Disagree. For positive statements, SA = 5 points, A 4 points, U = 3 points, D = 2 points and SD = 1 point, while for negative statements, SA = 1 point, A = 2 points, U = 3 points, D = 4 points and SD = 5 points.

For a profile of 17 perceptional statements, the maximum score for a farmer was 85 points and a minimum score of 17 points. The scores for individual farmers were computed. Using mean score of all the farmers, those having scores that equals the mean score or above were regarded as having a high level perception of the effect of diversification of livelihood activities, while those having scores below the mean score were regarded as having a low level perception of the effect of diversification of livelihood activities.

2.4 Farmers' Household Poverty Status

In order to determine the farmers' household poverty status, from the various welfare attributes of material and non-material indicators

whose changes are assumed to impact on poverty status of people were selected. These indicators was classified according to Bettie *et al.* (2005), into categories of indicators comprising of housing/sanitation, economic condition/security, goods of comfort, equipment and assets, means of transportation, education, energy, communication, community project involvement, health, ownership of land and livestock and access to basic infrastructure.

An index of multidimensional poverty was computed using the assigned scores of the welfare attributes (indicators) identified above. It should be noted that the more welfare attributes possessed by individual farmer, the lower his poverty symptoms i.e. the farmers possess capability of acquiring more possessions due to increase in his income or wealth, hence, his low poverty index. For dichotomous indicators, the farmers were asked to indicate possession and non-possession, following Costa (2002) that posited that household that possess was scored zero (0), while household not possessing was scored one (1). This was also noted by Bettie *et al*. (2005) that most individual items indicating non-monetary deprivation often takes the form of simple yes/no dichotomies. However, some items may involve more than two ordered categories, reflecting different degree of deprivation. This is seen in cases where the indicators are reflecting different degree of deprivation taken a score of two (2) for mostly deprived household, one (1) for fairly deprived and zero (0) for not deprived.

The multidimensional poverty index of a farmer was computed to determine the poverty status as follows:

$$\text{The multidimensional poverty index} = \frac{\text{Total score of possession of welfare attributes}}{\text{Total possible score of possessing welfare attributes}} \times 100$$

The mean index score was used to categorize the poverty status of poor and non-poor farmers as follows:

a) Poor Farmers (High Poverty Status): Total score that equals or fall above the sample mean i.e. ($X \geq$ mean), and

b) Non-Poor Farmers (Low Poverty status): Total score that fall below the sample mean i.e. ($X <$ mean).

2.5 Data Analysis

Descriptive analytical tools (frequency distribution, percentages, means and deviation from means) and inferential statistical tools (chi-square to test for variables measured at nominal levels, Pearson Correlation Coefficient to test for relationship, among variables measured at ratio or interval level of measurement) were used for data analysis.

3. Results and Discussion

3.1 Frequency Distribution and Percentages of the Selected Variables

The distributions of the respondents by selected socio-economic characteristics were presented in Table 2. The table showed that majority of the respondents (80.4%) were above 40 years of age and this based on the saying that "a fool at forty is a fool forever". It implies that majority of the respondents have actually come of age to be able to determine the implication of their decisions of diversification on themselves, members of their household's welfare and poverty status. The findings is corroborated by the findings of Yahaya (2002) and Onasanya (2008) that posited that farmers are in their active years when they are within the age range of 20 – 50 years. The table further showed that most of the respondents were males (55.3%) while only 44.7% were females with 90.2 percent married. This finding was corroborated by the assertion of Jibowo (2000) who posited that marriage is an important framework within which social roles and statuses are prescribed. This findings show that farmers have very strong family ties and is corroborated by the assertions of Dipeolu (2003) that reported that 89.2% of farmers in Ogun state were married while Olujide *et. al*. (2001) reported that 70.7% of farmers in Niger delta areas of Edo state were married. The table showed that 90.2% of the respondents have one form of education or the other. This finding is at variant with that of Akinbile and Omolara (2000) that reported 61.0% of farmers in Osi

village in Ekiti State were illiterates and that of Ewuola (1985) that reported a low educational level of among farmers in Ondo State, Nigeria. Also, majority of the respondents (64.4%) were of Christian beliefs while 35.6% were of Islamic beliefs.

The table further showed that majority of the farmers earn more than ₦100,000.00 annually. Among the farmers, 31.8% indicated that they were earning above ₦300,000.00 annually based on the number of activities they are involved in. One thing that is not clear about their income is whether it is gross income or not. The farmers at times (probably because of their low level of education) may not consider the cost incurred on their involvement, the inputs used and the cost of labour in their estimation of their generated income. This finding was corroborated by the findings of Onasanya (2008) that reported that 88.7% of farmers in cement producing areas were earning between ₦50,000.00 and ₦250,000.00 annually. However, it was far above the estimated income of farmers in Papalanto Area of Ogun State as reported by Olubanjo *et. al.*, (2002) that reported that the average annual farm and non-farm income of the farmers was ₦58,195.45. The disparity of income may have been as a result of the farmers' level of diversification into farm and non-farm income generating activities in both areas. Also, the table indicated that majority of the farmers (62.1%) were having between 3 – 4 children, while 23.5%, 12.1% and 2.3% were having 1 – 2, 5 – 6 and 7 or more children respectively. However, this depends on some other factors such as number of wife(s) and the biological status of the children. But, no matter their status, they will contribute to family labour and hence the opportunity for the farmer to diversify into more activities deem fit for income purposes.

TABLE 2: Distribution of respondents by selected personal characteristics (n = 132)

Socio-economic characteristics	Frequency	Percentage
Age		
Up to 40 and below	26	19.7
41- 50 years	38	28.8
51- 60 years	53	40.2
Above 60 years	15	11.4
Sex		
Male	73	55.3
Female	59	44.7
Marital Status		
Married	119	90.2
Widow	13	9.8
Level of Education		
No formal education	13	9.8
Primary	33	25.0
Modern III	9	6.8
Secondary	50	27.9
Tertiary	27	20.5
Religion		
Islam	47	35.6
Christianity	85	64.4
Estimated Annual Income		
Up to ₦ 100,000 and below	13	9.8
₦ 100,001- ₦ 200,000	35	26.5
₦ 200,001- ₦ 300,00	42	31.8
Above ₦ 300,000	42	31.8
Number of children		
1-2	31	23.5
3-4	82	62.1
5-6	16	12.1
7 and above	3	2.3

Source: Field Survey, 2013

3.2 Factors Influencing Farmers to Diversify their Livelihood Activities

The distribution of the factors influencing farmers in diversifying their livelihood activities was presented in Table 3. It showed that most of the farmers indicated one factor or the other as influencing them to diversify. Among the factors, the most influencing is lack of credit facilities as indicated by 73.5% of the farmers, closely followed by weather and climate (68.2%); poverty / family welfare and needs (67.4), awareness of benefits of other activities (59.8%), lack of technical know-how (53.0%), land degradation (45.5%) and lastly, government policy (40.2%).

TABLE 3: Distribution of respondents by factors influencing their livelihood diversification (n=132)

Influencing factors	Type		Degree of influence		
	Yes	No	High	Moderate	Low
Poverty	89 (67.4)	43 (32.6)	76(85.4)	13(14.6)	-
Land degradation	60 (45.5)	72 (54.5)	36(60.0)	24(40.0)	-
Lack of technical know how	70 (53.0)	62 (47.0)	34(48.6)	26(37.1)	10(14.3)
Lack of credit facilities	97 (73.5)	35 (26.5)	76(78.4)	21(21.6)	-
Awareness of benefits of other activities	79 (59.8)	53 (40.2)	47(59.5)	32(40.5)	-
Weather and climate					
Government policy	90 (68.2)	42 (31.8)	40(44.4)	45(50.0)	5 (5.6)
Family welfare and needs	53 (40.2)	79 (59.8)	31(58.5)	22(41.5)	-
	89 (67.4)	43 (32.6)	50 (56.2)	29 (32.6)	10 (11.2)

Source: Field Survey, 2013 (Note: Figures in Parentheses are Percentages)

3.3 Farmers' Perception of the Effect of Diversifying their Livelihood Activities on their Poverty Status

Table 4 present the distribution of the respondent on the farmers' perception of the effects of diversifying their livelihood activities on their poverty status in Ogun State, Nigeria. From the table, it was asserted that majority of the respondents agreed that diversifying of livelihood activities will definitely enhance income generation of their household (95.8%) and it is also seen as survival strategy of rural household especially in times of drought and famine (97.7%). Also that off-season of agricultural makes it easier for them to diversify into non- farm livelihood activities so as to make more money (97.7%). Further, land tenure system and demand for exorbitant rent on agricultural land (78.1%) and high cost of living and poor living standard among rural dwellers (93.9%) are major reasons of the farmers diversifying into non-farm activities. The table indicated that 97.7% and 74.4% of the respondents posited that the possibility of making extra income in meeting the financial responsibilities by farmers, lack of knowledge of appropriate farming technologies and practices lead farmers into diversifying livelihood activities into non-farming so as to make ends meet in times of crop failure often lead into diversifying their livelihood activities. However, 91.7% were of the opinion that diversifying of livelihood activities reduces the effect of poverty among the households while 59.1% posited that farmers diversify into non-farm livelihood activities because they absorb surplus labour in rural areas. The main cause of diversification of livelihood activities among farmers is as a result of poverty incidence in the household was posited by 84.8% of the respondents while 96.4% posited that the unfavorable climate conditions affecting farming activities have made it impossible for most farmers to depend solely on farming as a sole business or profession. The table showed that the overall perception of the effect of diversifying their livelihood activities on their poverty status of the farmers is high ($\overline{X}$ = 38.8).

TABLE 4: Distribution of respondents by perceptional statements relating to the effects of livelihood diversification on farmers' poverty status

Perceptional statements relating to the effects of livelihood diversification on farmers' poverty status	SA F (%)	A F (%)	U F (%)	D F (%)	SD F (%)	Mean ($\overline{X}$)
1). Diversifying of livelihood activities will definitely enhance income generation of the household.	111 (84.4)	15 (11.4)	-	6 (4.5)	-	4.75
2). Household income may not necessarily increases as members diversify their Livelihood activities because not all activities will have a good return	5 (3.8)	52 (39.4)	64 (48.5)	11 (8.3)	-	3.39

to investment.						
3). The off-season of agricultural activities makes it easier for farmers to diversify into non-farm livelihood activities so as to make more money.	91 (68.9)	38 (28.8)	3 (2.3)	-	-	4.67
4). Diversifying of livelihood activities is seen as a survival strategy of rural households especially in times of farming and drought.	79 (59.8)	50 (37.9)	-	3 (2.3)	-	4.55
5). Lack of knowledge of appropriate farming technologies and practices lead farmers into diversifying livelihood activities into non-farming so as to make ends meet in times of crop failure.	21 (15.9)	77 (58.5)	26 (19.7)	8 (6.1)	-	3.84
6). Diversifying of livelihood activities reduces the effect of poverty among the households.	12 (9.1)	109 (82.6)	8 (6.1)	3 (2.3)	-	3.98
7). Diversifying of livelihood activities gives room for healthy practices.	17 (12.9)	23 (17.4)	85 (64.4)	7 (5.3)	-	3.38
8). Diversify into Non-farm livelihood activities will offer more remunerative activities in replacing agricultural income.	5 (3.8)	39 (29.5)	25 (18.9)	63 (47.7)	-	2.89
9). Farmers diversify into Non-farm livelihood activities because of the danger of ill-health due to long working hours.	17 (12.9)	14 (10.6)	71 (53.8)	27 (20.5)	3 (2.3)	3.11
10). Farmers diversify into Non-farm livelihood activities because they absorb surplus labour in rural areas	7 (5.3)	71 (53.8)	10 (7.6)	39 (29.5)	5 (3.8)	3.27
11). The main cause of diversification of livelihood activities among farmers is as a result of poverty incidence in the household.	32 (24.2)	80 (60.6)	12 (9.1)	8 (6.1)	-	4.03
12). The unfavourable climate conditions affecting farming activities have made it impossible for most farmers to depend solely on farming as a sole business or profession.	24 (18.9)	102 (77.5)	6 (4.5)	-	-	4.13
13). The high cost of farm labour and other inputs for farming are sources of depression to farmers which ultimately is forcing them out of farming.	2 (1.5)	43 (32.6)	73 (55.3)	14 (10.6)	-	3.25
14). The possibility of making extra income in meeting the financial responsibilities by farmers often lead into diversifying their livelihood activities.	71 (53.8)	58 (43.9)	-	3 (2.3)	-	4.49
15). The issue of land tenure system and demand for exorbitant rent on agricultural land is often forcing people to diversify into non-farm activities in order to meet their responsibilities.	60 (45.5)	43 (32.6)	26 (19.7)	3 (2.3)	-	4.21
16). Abandonment of agricultural sector has made exploiters to gain entry into the sector, thereby making requisition of inputs difficult for land-less farmers, hence diversification into non-farm activities as a way of escape.	19 (14.4)	39 (29.5)	74 (56.1)	-	-	3.58
17). High cost of living and poor living standard among rural dwellers is forcing farmers to get involved in other non-farm activities.	82 (62.1)	42 (31.8)	8 (6.1)	-	-	4.50
Grand mean ($\overline{X}$) of Farmers Perception of the effects						3.88

Source: Field Survey, 2013; Note: Strongly Agree (SA), Agree (A), Undecided (U), Disagree (D), Strongly Disagree (SD); F = Frequency; Figures in parentheses are percentages

3.4 Possession of Welfare Attributes

TABLE 5 presents the distribution of respondents by possession of high or low aggregates of welfare attributes. It showed that majority of the respondents possessed low level of housing / sanitation (68.9%), goods / equipment and assets of comfort (55.3%), energy (56.1%), involvement in community projects (50.8%) and access to basic infrastructures (61.4%) welfare attributes. However, the table indicated that the respondents possessed high level of security / economic condition (74.2%), communication (68.9%), access to means of transportation (63.6%) and access to health (62.9%) welfare attributes.

TABLE 5: Distribution of Respondents by Aggregate Possession of Welfare Attributes (n = 132)

Possession of Welfare Attributes	Frequency	Percentage
Housing / Sanitation Index (Mean = 20.16)		
Low Level of Possession (11.00 – 20.15)	91	68.9
High Level of Possession (20.16 – 32.00)	41	31.1
Goods / Equipment and assets of comfort index (Mean = 23.30)		
Low Level of Possession (9.00 – 23.29)	73	55.3
High Level of Possession (23.30 – 47.00)	59	44.7
Security and Economic condition (Mean = 2.55)		
Low Level of Possession (0.00 – 2.54)	34	25.8
High Level of Possession (2.55 – 4.00)	98	74.2
Communication index (Mean = 5.99)		
Low Level of Possession (3.00 – 5.98)	41	31.1
High Level of Possession (5.99 – 11.00)	91	68.9

Access to / Means of transportation (Mean = 1.70)		
Low Level of Possession (0.00 – 1.69)	48	36.4
High Level of Possession (1.70 – 6.00)	84	63.6
Energy index (Mean = 8.59)		
Low Level of Possession (6.00 – 8.58)	74	56.1
High Level of Possession (8.59 – 11.00)	58	43.9
Involvement in Community Projects (Mean = 1.80)		
Low Level of Possession (0.00 – 1.79)	67	50.8
High Level of Possession (1.80 – 4.00)	65	49.2
Access to / Health (Mean = 2.95)		
Low Level of Possession (1.00 – 2.94)	49	37.1
High Level of Possession (2.95 – 5.00)	83	62.9
Access to basic Infrastructure (Mean =22.00)		
Low Level of Possession (18.00 – 21.99)	81	61.4
High Level of Possession (22.00 – 28.00)	51	38.6

Source: Field Survey, 2013

3.5 Poverty Status of Respondents

TABLE 6 revealed the level of poverty status of respondents and it showed that most (53.0%) of the respondents had high poverty status. However, some of the respondents possessed high level of welfare attributes that were common in the study area and hence, having low poverty status. This implies that the targets of this study were engineered to diversify their livelihood activities based on their poverty level and interest in possessing more welfare attributes.

TABLE 6: Distribution of Respondents by their Poverty Status (n = 132)

Poverty Status of Respondents	Frequency	Percentage
Low Poverty Status (99.27 – 218.00)	62	47.0
High Poverty Status (56.00 – 99.26)	70	53.0

Source: Field Survey, 2013; Note: The mean Poverty Status = 99.27; Possession of High level of Welfare attributes is equivalent to having low poverty status and possession of low level welfare attributes is equivalent to possession of high poverty status

3.6 Relationship between perceived effects of livelihood diversification on farmers' poverty status and selected socio-economic characteristics

Table 7 indicated that significant relationships exist between perceived effects of diversifying of livelihood activities on poverty status and sex of respondents (χ^2=5.918; P< 0.05); educational level (χ^2=39.578; P< 0.05); income (χ^2=11.684; p<0.05) and number of children (χ^2=26.234; P< 0.05). However, it was found that no significant relationships existed between the perceived effects of diversifying of livelihood activities on poverty status and age and marital status of the farmers. The table further reveals that most of the farmers that were within the age range of 41-50 years indicated a high level of perceived effects while most of the farmers within the range of 51-60 years indicated a low level of perceived effect of diversification on their poverty status. It also indicates that more females indicated high level of perceived effect, while most male indicated low level of perceived effect. The distribution of the respondent indicates that high level and low level of perceived effect were indicated by those of the respondent that were married far above those that were widows. The table further indicated that 52.3% and 37.3% of the respondents of those indicating high and low perceived effect were having secondary education and tertiary education respectively.

On income, the table shows that 43.1% of the respondent that indicated high perceive effect of diversification on poverty status were earning above ₦ 300,000, while among indicating low level of perceived effect of diversification on poverty status (43.3%) were earning between ₦200,00 and

₦300,000 annually. Also, the table showed that majority of those having between 3 – 4 children indicated high level (63.1%) and low level (61.2%) of perceived effects of livelihood diversification on their poverty status respectively.

TABLE 7: Chi-Square analysis of Perceived Effects of Livelihood Diversification on Poverty Status of Farmers and Selected Socio-Economic Characteristics

Selected socio-economic characteristics	Perceived effects of livelihood diversification on Poverty status		χ^2 value	df	P Value	Remarks
	High Freq (%)	Low Freq (%)				
Age (years)						
≤ 40	14(21.5)	12(12.9)				Not
41-50	22(33.8)	16(23.9)	4.861	3	0.182	Significant
51-60	20(30.8)	33(49.3)				
Above 60	9(13.8)	6(9.0)				
Sex						
Male	29(44.6)	44(65.7)	5.918	1	0.022	Significant
Female	36(55.4)	23(24.3)				
Marital status						
Married	60(92.3)	59(88.1)	0.671	1	0.561	Not
Widow	5(7.7)	8(11.9)				Significant
Education						
No formal education	10(15.4)	3(4.5)				
Primary education	19(29.2)	14(20.9)	39.578	4	0.000	Significant
Modern 3	-	9(3.4)				
Secondary education	34(52.3)	16(23.9)				
Tertiary education	2(3.1)	25(37.3)				
Income						
Up to ₦ 100,000 and below	8(12.3)	5(7.5)				
₦ 100,001- ₦ 200,000	16(24.6)	19(28.4)	11.684	3	0.009	Significant
₦ 200,001- ₦ 300,00	13(20.0)	29(43.3)				
Above ₦ 300,000	28(43.1)	14(20.9)				
Number of children						
1-2	8(12.3)	23(34.3)				
3-4	41(63.1)	41(61.2)	26.234	3	0.000	Significant
5-6	16(24.6)	-				
7 and above	-	14(20.9)				

Source: Field survey, 2013

3.7 Relationship between perceived effects of livelihood diversification on farmers' poverty status and factors influencing diversification of livelihood activities

Table 8 presents regression analysis of the perceived effects of livelihood activities of famers on their poverty status and factors influencing their diversification of livelihood activities. The table showed that significant relationships exist between the perceived effects and the contributing factors ($F=26.221$, $P<0.05$). However, the table reflects that the level of influence of the factors were different. Also, from the most influencing factor to the least factor resulting into farmers' diversification of their livelihood from agricultural based into non-agricultural based activities are as follows: poverty ($t = 2.760$, $p<0.05$), lack of credit facilities ($t = 2.650$, $p<0.05$), family welfare and needs ($t = 2.818$, $p<0.05$), awareness of benefits in other activities ($t = 2.267$, $p<0.05$), land degradation ($t = -1.999$, $p<0.05$), weather and climate ($t = -1.357$, $p<0.05$), government policy ($t = -1.018$, $p<0.05$) and lack of technical know-how ($t = -0.885$, $p<0.05$). Considering the above therefore, the farmers choice of diversifying their livelihood activities into non-agricultural was mainly because of poverty. Since the study is focusing on the effects of this diversification on their poverty status, then it suffices to posit that the farmers may be recording a better livelihood when they diversify into other activities. Hence, it is therefore recommended that Governments at all levels should make it a point of priority to plan, fund and implement programmes that can lead to poverty amelioration at the grass roots.

TABLE 8: Regression analysis of perceived effects of livelihood diversification on farmers' poverty status and factors influencing their diversification

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate		
	0.762	0.886	0.755	2.99030		
		Change Statistics				
	Model summary	F Change	df1	df2	Sig. F Change	R Square Change
1		26.221	16	115	0.000	0.785
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	3751.413	16	234.463	26.221	0.000
	Residual	1028.314	115	8.942		
	Total	4779.727	131			
Model	Coefficients(a)	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		Std. Error
	(Constant)	66.254	0.940	-	70.474	0.000
1	Poverty	11.174	4.048	0.870	2.760	0.007
2	Land degradation	-5.824	2.913	-0.482	-1.999	0.048
3	Lack of technical know-how	-2.395	2.706	-0.199	-0.885	0.378
4	Lack of credit facilities	9.429	3.557	0.692	2.650	0.009
5	Awareness	-5.860	2.584	-0.477	-2.267	0.025
6	Weather and climate	-4.200	3.141	-0.325	-1.337	0.184
7	Government policy	-5.712	5.610	-0.465	-1.018	0.311
8	Family welfare and need	11.281	4.060	-0.960	2.818	0.016

Source: Field Survey, 2013

4. Conclusions

Based on the findings, the study concluded that the mean perception of the effect of diversifying their livelihood activities on their poverty status of the farmers is high ($\overline{X}$ = 38.8). Also, significant relationship existed between perceived effects of livelihood diversification on farmers' poverty status and factors influencing their involvement in diversification of livelihood activities. Specifically, the most influencing factor to the least factor resulting into farmers' diversification of their livelihood from agricultural based into non-agricultural based activities is poverty ($t = 2.760$, $p<0.05$).

There is significant relationship between perceived effects of livelihood diversification on farmers' poverty status and possession of housing / sanitation attributes ($t = 12.792$, $p = 0.000$), goods / equipment and assets of comfort ($t = -2.946$, $p = 0.004$), communication attributes ($t = 1.806$, $p = 0.043$), access to / means of transportation ($t = 2.515$, $p = 0.013$), involvement in community projects ($t = -2.167$, $p = 0.032$) and access to / health attributes ($t = 4.552$, $p = 0.000$). However, no significant relationship exist between perceived effects of livelihood diversification on farmers' poverty status and sex, educational level of the respondents

The study therefore recommended that for a better agricultural and rural socio-economic transformation for farmers' welfare and good living, there is need for the urgent provision of basic infrastructure evenly, both at urban and rural areas in the region. Another interesting feature of the Nigerian rural economy is the relative ease with which the rural folks move from one economic activity to another in the course of a year and farmers engaging in off-farm activities during the off-season period, hence, policies that supports diversification of farming and non-farming activities will be enacted as a sure way of eradicating poverty at the grass-root level especially among the landless poor farmers. There is need for the improvement and diversification of the economy.

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