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ANALYSIS OF LIVELIHOOD DIVERSIFICATION STRATEGIES AMONG FARMING HOUSEHOLDS IN TARABA STATE, NIGERIA.

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ABSTRACT

The study was conducted in Taraba State. Multistage and proportionate sampling techniques were adopted in sampling nine hundred and forty nine (949) respondents. Both primary and secondary data was used for the study, and was obtained through the use of structured questionnaire which was administered directly to the respondents. Both descriptive and inferential statistics was used in analyzing the data obtained. Descriptive statistics such as frequencies, percentages and means were used to categorized respondents based on socio-economic characteristics, income level and livelihood activities of respondents (objectives. i, ii, and v.).Inferential statistics such as multiple regression model, multinomial logistic model and Gini coefficient was employed to determine relationships between variables. Multiple regression was used to examine socio-economic factors affecting income of respondents. The study shows that majority (75%) of the respondents were male while 25% were females with a mean age of 42 years. The result reveals that about 39% had farming experience of between 11 – 20 years with 53% of them belonging to farming association. The major source of income of the respondents was faming with 83% of them having 1 – 5 hectares of farm. Marital status, household size, educational level attained, number of years spent in acquiring formal education and farm size were all significant at 5% level, while gender, age, farming experience, membership of farmers organizations and access to loan though not statistically significant all have positive coefficients, meaning they have positive influence on the income level of the farming households in the study area. The results shows that income from farm (GE α =0, 0.072, GE α =1, 0.075 and GE α =2, 0.078) activities contributed more to income inequality than any other livelihood strategy and may be attributed to the fact that farming activities yield higher returns than non -farm activities in the study area largely due to the fact that the research targeted mainly farming population. As a result, there is high income disparity among the

households engaged in farm activities. It is recommended that government should formulate policies that will lead to job creation, poverty reduction and wealth creation to combat income inequality among crop farming households.

INTRODUCTION

Despite the unprecedented economic growth in recent years, the global income inequality is probably greater than it has been in human history (Risvi, 2005). The pattern of income distribution has been of concern to economist for a long time (Clarke, et., al., 2003). Specifically, the 1990s witnessed resurgence in theoretical and empirical attention by economist to the distribution of income (Atkinson and Bourguignon, 2000). This is because high levels income inequalities produce an unfavorable environment for economic growth and development. Currently, Milanovic (1999) found that the richest (25%) of the world's population receives 75% of the world's income, even when adjusting for Purchasing Power Parity. The poorest 75% of the population shared just 25%. The reason given for the occurrence is that a large proportion of the world's population lives in the poorest countries, and within the poorest regions of those countries, particularly in the rural areas of China, rural and urban India and Africa.

In Nigeria, the increasing level of income inequality has also been of concern to policy makers for a long time. For instance, Canagarajah *et al.* (1997), reported that there is an increasing level of income inequality between 1980s and 1990s as shown by an increase in the Gini-coefficient from 38.1% in 1985 to 44.9% in 1992. Similarly, Aigbokhan (1999), found out that income inequality worsened after the Structural Adjustment Programme (SAP) of 1986. World Bank (2003), found that in 1997, the Gini index of income inequality was 0.506. Using the 2004 National Living Standard Survey (NLSS) data, Oyekale *et al*. (2006), found that the overall Gini index for Nigeria was 0.580. In sectoral sense, the study found out that income inequality is to be higher in rural areas (Gini – 0.5808) as compared to urban areas (Gini – 0.5278), and that employment income increases income inequality, while agricultural income decreases it. On the contrary, however, Awoyemi and Adeoti (2004), found that agricultural income inequality is

increasing while wage and self-employed income inequality are decreasing.

Over the past decades, there has been an outstanding trend of livelihood diversification in rural areas in the developing countries including Nigeria. A related literature suggests that rural households adjust their activities either to exploit new opportunities created by market liberalization (Delgado and Siamwalla, 1997) or to cope with livelihood risks (Barrett *et al*., 2001; Carter, 1997). These adjustments are found to have an important impact on income, distribution and welfare across rural households (Ellis, 1998, 2000; Hoogeveen, 2001; Reardon *et al*., 2000). Ecological and environmental influence due to human developmental activities has been steadily increasing and causing unprecedented magnitude and rate of global ecosystem change. The rural poor have developed the capacity to cope with increasing vulnerability associated with agricultural production-diversification, intensification and migration or moving out of farming (Ellis, 2000).

Rural livelihood strategies are the combination of activities that people choose to undertake in order to achieve their livelihood goals. Rural people partake in a number of strategies, including agricultural intensification, and livelihood diversification, to attain their livelihoods goals (Bedeke, 2013).

STATEMENT OF THE PROBLEM

Agriculture plays a major role in the economy and society of most African countries and increased productivity in the sector is considered to be the very basis for the continents economic and social development. Small-scale farm households in particular have an important role to play in combating poverty and creating widespread growth. In Nigeria, agriculture plays a crucial role in economic development and its dominance in the economy is well articulated in government policy documents such as the Poverty Reduction Strategy (2001), Strategy for Revitalizing Agriculture (2004-2014), the Vision 2030 and Agricultural Transformation Agenda. Key priority areas of the agricultural sector are highlighted as promotion of food security, generation of income and creation of employment opportunities among the people which enhances wealth creation. High level income inequalities exist in many nations of the Sub-

Saharan Africa (SSA). This can be better understood by the widening dimension of poverty and general economic problems in many of these nations (Findeis and Reddy, 1987). In Nigeria, total incomes of farm households are comprised of incomes earned from several sources, with net income and off farm income from employment representing the principal components. It is likely that incomes received from different sources are distributed differently across the population of farm households. Many farm households continued to earn low net farm incomes. This occurred despite programmes and policies implemented by government to boost agricultural production and better the lives of farm households in Nigeria. While some farm households leave agriculture in response to low or negative farm incomes, many farmers choose not to exit agriculture altogether despite financial difficulties. Instead, it has been observed that farm households continue to farm but rely heavily on income from off farm employment to provide an income supplement.

From literature it was identified that there is a dearth of information about how incomes are distributed among different farming households in Nigeria and the variety of strategies the households engage in, so as to meet the demands of their livelihoods. Despite the efforts of government in Nigeria towards income generation, poverty reduction, employment creation to enhance wealth creation and combat income inequality as well as livelihood diversification by implementation of several strategies, the effort is yet to be analyzed. Considering the importance of agricultural production in particular, the study purposed to analyze the distribution of income among crop farming households and also examine how incomes influence their livelihoods activities. However literature still reveals that income distributions and livelihood diversification strategies showed how incomes are distributed among farming households. Several strategies have been identified in which farming households are engaged, but what is the nature of income distribution and its effects on farming?

Research Questions

i. What are the socio-economic characteristics of respondents?
ii. How do socio-economic factors affect

the income level of respondents?

iii. What are the livelihood diversification strategies of the respondents?

iv. Are income inequalities of respondents affected by livelihood strategies? , and

v. In what ways do livelihood strategies affect income inequality of respondents?

Objective of the Study

The main objective of this study is to analyze income distribution and livelihood

Diversification strategies among farm households in Taraba state, Nigeria. While the specific objectives are to:

i. Determine the socio-economic characteristics of farm households in the study area;

ii. estimate the socio-economic factors affecting income level of Farm households in the study area;

iii. determine the livelihood diversification strategies of farm households in the study area; and,

iv. Determine whether income inequalities of farm households in the study area is affected by livelihood strategies.

v. Identify, ways in which livelihood strategies affect income inequality of respondents

Hypotheses of the Study

The null hypotheses of this study include:

1. Ho: Income inequalities of farm house hold in the study area is not significantly affected by livelihood strategies

2. Ho: Socio-economic factors do not significantly affect income level of farm households in the study area.

Limitations of the study

The study will be based on the assumption that the sampled farmers will be a fair representation of the rest of farmers in Taraba State because of their homogeneity in cultural and socio-economic characteristics. Due to the fact that most households do not keep records, the accuracy of most of the data collected will depend on researchers' ability to have face to face contact with respondents during data collection.

METHODOLOGY OF THE STUDY

The Study Area

The study will be conducted in Taraba State. The state covers a land area of 60291.82 square kilometers and has a population of 2, 300,736 persons, 1,199,849 males, 1,100,887 females. It is located between latitude 6^0 30^1 and $9^0 36^1$ north and longitude $9^0 10^1$ and $11^0 50^1$ east of the Greenwich meridian (Taraba State Investors Guide, Undated). The state is bounded on the north by Bauchi and Gombe States, in the north-east and Adamawa on the east, by Plateau State in the north-west. The State is further bounded to the west by both Nasarawa and Benue States. While it shares an international boundary with the Republic of Cameroun to the south and south-east Agriculture is the bedrock of the state economy. Owing to the agrarian nature and rich alluvial tract of soil found in most parts of the state makes Taraba State is conducive for growing of various foods and cash crops. Its agrarian economy can sustain the entire Nigeria nation. As a result of its agrarian nature, the predominant population of the State engaged in farming as an occupation. The State also has a growing number of those who engaged in white collar jobs owing to the assumption of a cosmopolitan character by the state capital. About three quarter (75%) of the people are farmers while an estimated one quarter (25%) are engaged in other economic activities. The dry and rainy season common to tropical regions are also the dominant climatic features, rainy season starts in April and ends in October, while the dry season begins in November then terminates in March. The dry season reaches its peak in January and February when the dusty north east trade winds blow across the state. The vegetation of Taraba state comprises three types of vegetation zones namely; the Guinea Savanna, which is market by mainly forest and tall grass are found in the southern part of the state, like Wukari, Takum, Donga, the Sub-Sudan type characterized by short grasses are found in Jalingo, Lau, Ardo kola, interspersed with short trees, while the semi temperate zone are market by luxuriant pasture and short trees is found on the Mambilla Plateau. Taraba is richly endowed with a vast array of cultural festivals found amongst the different ethnic groups that make up the state. These festivals are celebrated on occasions ranging from death; birth and farming seasons etc. below are some of the cultural festival celebrated yearly.

Sampling Procedure and Sample Size

Multistage and proportionately sampling techniques was adopted in sampling the respondents for the research. In the first stage, two LGAs were purposively selected from each senatorial zone of the state. These were, Jalingo, and Karim – Lamido, from the north, Gassol and Sardauna from the central, then Wukari, and Ussa from the south. In the second stage, proportionate sampling was used to select nine hundred and forty nine (949) respondents among the registered farmers in each of the Local Government Area selected. (i. e. in Jalingo 137 farmers, Karim Lamido 170, Gassol 114, Sardauna 237, Wukari 191 and Ussa 100) for the study.

Analytical Techniques

Both descriptive and inferential statistics were used to analyze data obtained.

Descriptive Statistics

Descriptive statistics such as frequencies, percentages and means were used to categorized respondents based on socio-economic characteristics, income level and livelihood activities of respondents (objectives. i, ii, and v.).

Inferential Statistics

Inferential statistics such as multiple regression model, multinomial logistic model and Gini coefficient were employed to determine relationships between variables.

Multiple Regression: Multiple regression was used to examine socio-economic factors affecting income of respondents (objective iv). The implicit regression model was expressed thus:

$$Y = f(BX. U)$$

Where,

Y= Total Income

B = a vector of coefficient to be estimated

X = a vector of socio-economic variables of respondents

U = error term

This model was used by Ibekwe (2010) in determining household's income in Orlu Agricultural zone of Imo State, Nigeria.

A Priori Expectation: It is expected that socio-economic variables such as age, education level, sex and farming experience affect income level of respondents.

Generalized Entropy (GE): Generalized entropy inequality indices was used to examine the effects of livelihood activities on

income inequality among respondents (obj. iii and vi). This is owing to the fact that inequality measures of GE class are all decomposable into intuitively appealing components of within and between group inequalities (Cowell, 2000). The general model of members of the GE class of inequality measures was as follows:

GE(X) = 1

Where,
n = number of individual in the sample
Y_t = Socio-economic variables of the respondents
The parameter X represents the weight given to the distance between income variable of different parts of the income distribution and can take any real value.
X = 0; for low end inequality
X = 1; for middle end inequality
X = 2; for high end inequality

A Priori Expectation:

Multinomial Logistic Regression: This Model will be used to examine factors affecting choice of livelihood activities of respondents in the study area (obj. vi).It is assumed that each farm household faces a set of discrete, mutually exclusive choices of livelihood measures. This measures are assumed to depend on a number of socio-economic characteristics and other factors X. Multinomial logistic regression model for livelihood choices specifies the following relationship between the probability of choosing option A_i and the set of explanatory variable X as (Greene, 2003):

Prob (A_i = j) = $e^{Bjxi} / \sum^j e^{B}_{kxi}$, j=0, 1……J

Where,
B_j= a vector of coefficients to be estimated
X= a vector of independent variables
A_i = Random variable representing livelihood activities chosen by farm households.

A Priori Expectation: It is expected that the coefficient of household size, income and education levels to have positive effects on labour and capital intensive livelihood activities.

RESULT AND DISCUSSION

Socio-Economic Characteristics of Respondents

The socio-economic Characteristics considered in this study are ; sex , age, marital status, Household size, Educational level, Farming experience, , membership of organization, Farm size, access to loan and income (farm and non-farm) of respondents.

Sex of the Respondents

The distribution of respondents by gender as presented in Table 1, shows that majority 706 (75.19%) of the respondents are male while 233 (24.81%) are females, this implies that men are more actively involved in farm work than women in the study area, although the kind of farm works engaged in by men are different from women. This result is in line with Giroh (2010) who observed that, gender plays a key role employment and agricultural production in the African Continent where men are more favoured than the women. It goes further to reveal that, males are expected to bear the responsibilities of providing for the households. Males are mainly household heads while females are mainly home care takers (Joshua, 2014).

Age of the Respondents

Table 1 also reveals that the mean age of the respondents in the study area is 41.48 while the youngest household head is 20 years and the oldest is 72 years. Then table 2 goes to shows the distribution of respondents based on their age groups, where 40.8% of the respondents are between the age ranged of 21 – 40 years, while 53.3% are between the range of 41 – 60 years, and only 5.8% of the respondents are above 60 years. Results equally reveals that majority of the respondents are within the active age bracket and also possesses the needed energy to engage in farming to earn reasonable income in the study area.

Marital Status of the Respondents

This is a status that exhibit legal relationship between people either as a husband or wife. The marital status distribution of the respondents as indicated in Table 1 reveals, that most of the households in the study area are married 623 (66.35%), while 225 (23.96%) are not married, 65 (6.92%) are widowed and 26 (2.77%) have divorced. The majority of married family tends to give more responsibility to the household head to take care of the family needs thereby creating the needed motivation to diversify sources of income.

Household Size of the Respondents

Based on the household size, majority of the small scale farmers in Nigeria depends mainly on family members as a major source of labour for farm production, where mechanized farming is not feasible (Joshua, 2014). Table 2 reveals the distribution of the household size

of the respondents is relatively on the average, majorly 1-6 are 416 (44.30%), 6-10, 416 (44.30%), while 11-15 are 83 (8.84%) and 16 – 20 are 24 (2.56%) persons in each household. In accordance to the findings, the larger the size of family, the higher the proportion of household expenditure on family basic needs which give rise to the family to diversify their income. This result is in conformity with that of Sulaiman et.,*al.* (2015) who said, in the case of household size the greater the number of persons in the household, the more the hands that can be used as family labour, thereby increasing productivity and by extension income.

Educational Level of the Respondents

The level of educational attainment helped to know which respondents have formal education or not (Adepoju and Adeyeye, 2013). The distribution of the respondents by their educational levels as shown in Table 1, shows 2.67% or 25 respondents had no formal education, 11.93% or 112 respondents have primary education, 24.71% or 232 respondents have acquired secondary education, 60.70% or 570 respondents acquired tertiary education. This finding is in line with that by Joshua (2014) who revealed that, the level of farmers' education is believed to influence the resources used and hence income generation and its distribution. But contrary to the findings of Sulaiman *et., al.* (2015) who posits that, in the situation where farmers are of high level of education, they spend most of their time searching for more lucrative jobs in the city because of additional certificates obtained instead of being more serious with their farm work. This situation sometimes increases their income diversification strategies.

Household Farming Experience

The year of farming experience in any form of production helps in determining the accuracy in decision making and in allocation of scarce resources wisely which also results in higher yields and thereby increased income. The result from Table 1 reveals, that about 39.19% or 368 of the respondents had farming experience of between 1–10 years, 31.63% or 297 of the respondents have farming experience ranging from 11–20 years, 16.83% or 158 of the respondents have farming experience ranging from 21-30 years, then 8.31% or 78 of the respondents have farming experience ranging from 31- 40

years and lastly 4.05% or 38 of the respondents have farming experience of 41- 50 years. The result is an indication of high farming activities at economic age. According to Mutenje *et., al.* (2010) farmers with more experience would be more efficient and have better understanding of farming, which therefore increase yield and income.

Membership of Association

Table 1 reveals how many farm households belong to any farm association in the study area. The result reveals that 53.04% or 498 of the respondents says they do not belong to any farming associations. While 46.96% or 441 of the respondents says they belong to one form of farming association or the other. Those that belong to an association stand a chance of accessing credit better than those that are not.

Farm Size of Respondents

Based on their farm sizes, as indicated in Table 1 reveals that, 83.07 % or 780 of the respondents had 1 – 5 hectares of farm size, 14.06% or 132 of the respondents had farm size between 6 – 10 hectares, 1.49% or 14 of the respondents had farm size between 11 – 15 hectares and 1.38% or 13 of the respondents had farm size between 16 - 20 hectares of land. The result reveals that, majority of the farmers had 1-10 hectares of farm land, though farm alone do not determine quantity of yield but many other factors.

Table 1: Socio-economic Characteristics of Respondents (n=939)

Variable	Frequency	Percentage %
Sex		
Female	233	24.81
Male	706	75.19
Total	939	100
Marital Status		
Single	225	23.96
Married	623	66.35
Divorced	26	2.77
Widowed	65	6.92
Total	939	100
Household Size		
1 – 5	416	44.30
6 -10	416	44.30
11 – 15	83	8.84
16 – 20	24	2.56
Total	939	100
Educational level		
No formal	25	2.66
Primary	112	11.93
Secondary	232	24.71
Tertiary	570	60.70
Total	939	100
Farming Experience (years)		
1 – 10	368	39.19
11 – 20	297	31.63
21 – 30	158	16.83
31 – 40	78	8.31
41-- 50	38	4.05
Total	939	100
Membership of organization		
No	498	53.04
Yes	441	46.97
Total	939	100
Farm Sizes (Ha)		
1 – 5	780	83-07
6 – 10	132	14.06
11 – 15	14	1.49
16 -- 20	13	1.38
Total	939	100
Access to loan		
No	707	75.29
Yes	232	24.71
Total	939	100

Source: Field Survey, 2020.

Estimation of the level of Income Inequality among Farm Households.
Income generating by the farming households in the study area is divided into levels as shown in Table 2.

Table 2 Levels of Income of Farming Households

Variable Income level (₦)	Frequency	Percentage %
100 – 500	585	62.30
501-1000000	238	25.35
1000001-1500000	46	4.90
1501000 – 2000000	37	3.94
2000001 – 2500000	13	1.38
2500001- 3000000	13	1.38
3000001 – 3500000	7	0.75
Total	939	100

Source: Field Survey, 2020.

Estimation of the Socio-economic Factors Affecting Income Level of Farm Households.
Multiple linear regression analysis was carried out to identify socio-economics factors affecting income levels of farming households in the study area. Results presented in Table 3 indicate that marital status, household size, Educational level attained, Number of years spend in acquiring formal education and farm size are all significant at 5% level, while gender, age, farming experience, membership of farmers organizations and access to loan though not statistically significant all have positive coefficients, meaning they have positive influence on the income level of the farming households in the study area. This finding is consistent with the findings of Harjes (2007) in which an increase in household size increased the likelihood of non-adoption of farming as a livelihood strategy. With respect to age, a positive and significant coefficient of 0.0466 suggests that a year increase in the age of the household head will lead to an increase in the likelihood of adopting the non-farm strategy by 0.0466 relative to the combination of both farming and non-farm strategy. Hence, the older the household heads are, the higher is their likelihood of adopting the non-farm livelihood strategy. This

finding corroborates the findings of Jacobs (2000) in which older household heads left the labour intensive jobs to the younger ones and adopted easier jobs. The coefficient of square of age was however negative but significant implying that the effect of age on the adoption of non-farm strategy weakens with time.

Similarly, the coefficient of household size of 0.0339 indicates that farming households with a large number seems most likely to adopt non-farm livelihood diversification strategy relative to the adoption of a combination of non-farm and farming as a livelihood strategy. This is expected as labour is among the most important resource in farming. Results also reveals that farm size has a positive coefficient of 0.1618 indicating an increase in the farm size by 0.1618 will increase the income level of the farming household by 0.1618, also marital statue though with a negative coefficient of -0.2288 but with a significant P value suggest that married household heads tends to adopts more income diversification strategies in order to improve on their income as they are seen to have more responsibilities than unmarried household heads, the results also reveals that access to loan has a positive coefficient of 0.1076 and a significant P value of 0.0000 suggesting that farming households that access credit facility can afford to increase their farm size thereby increased income . In summary, the major factors affecting the income levels of farming households in the study area are gender, age of the farming household, marital status, household size, educational level, Farm size and access to loan. Results of diagnostic statistics reveals that the variable inflector factor (VIF) is 1.7 suggesting that there is no multicollinearity, which means the independent variables are not linearly related. Again the result specification error tests (Linktest) reveals the hadsq. 0.0206 suggesting, that the model is correctly specified. Also results of the Breuch-pagan test for heteroskedasticity Hettest Probability of chi^2. 0.0531 suggesting the error term in the linear regression model have a mean value of zero and a constant variance. That is to say there are no problems of heteroskedasticity.

Table 3: Multiple Linear Regression Analysis Results

Variables	Coefficients	Std. Error	T. values	P. values
Constant	.9519068	(.2062543)	4.62	0.0000
Gender	.1537078	(.0792754)	-1.94	0.053***
Marital Statues	.2287953	(.0555711)	-4.12	0.0000**
Age	.0104662	(.0046954)	2.23	0.026***
Household size	.0333907	(.0105322)	3.17	0.002**
Educational	.152486	(.0480843)	-3.17	0.002**
Level	.0312971	(.0088565)	3.53	0.0000**
Years of	.0016715	(.0042531)	-0.39	0.694
Education	.16175	(.011481)	14.09	0.0000**
Farming Exp.	.0832756	(.079447)	-1.14	0.254
Farm size	.1076385	(.084987)	1.27	0.206
Membership of organization.				
Access to loan				

** Significant at 5%, *** significant at 10%
Source: Field Survey/ Data analysis, 2020.

Diagnostic Statistics;
R-Square
0.3032
Adjusted R-Square
0.3018
F-Statistics
41.54
Probability of F- statistics
0.0000
Test for Multicollinearity.
VIF
1.71
Specification error test
Linktest, hatsq.
0.0000
Breuch-pagan test for heteroskedasticity
Hettest Probability of chi^2.
0.0000
Source: Field Survey/ Data analysis, 2020.

Determination of the Livelihood Diversification Strategies of Farm House holds

Livelihood diversification strategies results on Table 4 reveals that 79% or 941 respondents says they do engages in the cultivation of several farm crops/farm expansion, while 50.11% or 470 respondents do involve in animal husbandry, very few 19.83% or 186 respondents are involve in craft making in order to earn additional income, 11.94% or 112 respondents do Information Communication Technology (ICT) business, while 55.76% or 523 respondents are involve in petty trading mostly of agricultural produce. 11.94% or 112 respondents are into Hair dressing/barbing, while 18.98% or 178 are into mini transportation business popularly known as Okada riding, 19.19%

or 180 of the respondents are into sewing of unisex wares, 44.65% or 447 of the respondents are into poultry farming business, 21.43% or 201 respondents says the do Fishing/ aquaculture activities these is largely due to the fact that the state is blessed with rivers which makes it rich in fish resources, 14.85% or 138 of respondents in the study area do visits construction site to be engaged in unskilled construction activities, 19.83% or 186 of the respondents are into water vendor and lastly 46.80% or 439 respondents are into mini processing of farm produce to add value, thereby making some profits. In summary the major livelihood diversification activities of farming household in Taraba State are, cultivation of crops like vegetables, some engage in expanding their farm size in order to make additional income, petty trading, poultry farming and processing of farm/Agricultural produce to add value. This is in consonance with Bayero, Joseph, and Odjuvwuederhie, (2019) who in their work the effects of households' livelihood diversification strategies on food insecurity in rural North eastern Nigeria, asserted that farmers in the North eastern Nigeria adopted five livelihood strategies of which cropping, poultry and livestock keeping (CPL) was predominant, accounting for 37.39% of respondents.

Table 4: Livelihood Diversification Strategies of Farm Households

Variable	Frequency	Percentage
Cultivation of several farm crops/farm expansion	941	79
Animal husbandry	470	50.11
Information Communication Technology Business	112	19.83
Petty trading	523	55.76
Hair dressing/barbing	112	11.94
Mini transportation business like Okada	178	18.98
Sewing of unisex wares	180	19.19
Poultry farming	447	44.65
Fishing/Aquaculture	201	21.43
Visit construction site to be engaged in unskilled construction activities	138	14.85
Water vendor	186	19.83
Mini processing of farm produce	439	46.80

Source: Field Survey/ Data analysis, 2020.

Determination of whether Income Inequalities, of Farming Households is affected by livelihood strategies.

Table 5 below reveals how livelihood diversification strategies affects income inequalities of the farming households in the study area, the results shows that income from farm activities contributed more to income inequality than any other livelihood strategy and may be attributed to the fact that farming activities yield higher returns than non -farm activities in the study area largely due the fact that the research targeted mainly farming population. As a result, there is high income disparity among the households engaged in farm activities. This result is however agreement with the findings of Adebayo (2002) in which agricultural income contributed most to overall income inequality in Ibadan Metropolis. With respect to gender, inequality was higher among male headed households than among their female counterparts for the three indices. The distribution of inequality by age revealed that inequitable distribution of income was more prevalent among individuals aged 46 to 55 years and the lowest among farming households aged 56 to 65 years for the three income groups. This could be attributed to the fact that the majority of the farming households in the study area were within their economically active age and as a result were more likely to earn higher income. This suggests that there are varying degrees of access to factors of production among farming households within the age group of 46 and 55 years than those in other age groups.

With respect to the educational attainment of farming households, income inequality was the highest among farming households whose heads had secondary education, followed by heads with tertiary education and the lowest among households whose heads had no formal education for the three indices. This indicates that farming household heads with secondary education contributed most to income inequality while farming household heads with no formal education contributed the least to income inequality. Further, income inequality was found to be high among respondents that do not have access to loan but higher among respondents that have access to loan especially among the high income earners. This suggests that access to loan does not explain much of the

income inequality in the study area.

Table 5: Effects of Livelihood Diversification Strategies on Income Inequalities.

Variables	GE(α =0)	GE(α =1)	GE(α =2)
Livelihood strategies.			
Farming	0.072	0.075	0.078
Non-farming.	0.027	0.029	0.030
Farming and non- farming	0.050	0.052	0.054
Gender			
Male	0.072	0.076	0.079
Female	0.040	0.041	0.038
Age.			
20 – 30	0.042	0.056	0.054
31 – 40	0.040	0.040	0.043
41 – 50	0.079	0.082	0.083
51 – 60	0.042	0.035	0.036
61 – 70	0.038	0.037	0.039
71 – 80	0.050	0.039	0.040

Source: Field Survey/Analysis, 2020.

CONCLUSION AND RECOMMENDATION

In summary the major livelihood diversification activities of farming household in Taraba State were, cultivation of crops like vegetables, some engage in expanding their farm size in order to make additional income, craft making, okada riding, petty trading, poultry farming and processing of farm/Agricultural produce to add value. It is recommended that government should formulate policies that will lead to job creation, poverty reduction and wealth creation to combat income inequality among crop farming households.

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