

Full Length Research Paper

Assessment of Farm and Non-Farm Livelihood Diversification among Youths in Ekiti State, Nigeria

¹Aturamu, Oluyede Adeleke, ²Owoeye, R. S. and ²Odelele Tajudeen Opeyemi

¹Department of Agricultural Science and Technology, Bamidele Olumilua University of Education, Science and Technology, Ikere Ekiti, Nigeria

²Department of Agricultural Economics and Extension Services, Ekiti State University, Ado Ekiti, Nigeria

Corresponding email: rufus.owoeye@eksu.edu.ng and aturamu.oluyede@coeikere.edu.ng

Accepted 19th May, 2021.

The study examined farm and non-farm livelihood diversification among youths in Ekiti State, Nigeria where it described the socio-economic characteristics of the respondents; identified various jobs engaged in by young farmers and non-farming youths and examined the determinants of livelihood diversification among rural youths. This study presented a result which relied basically on the data collected from multistage sampling of 90 farming and non-farming youths in the study area using a well structured questionnaire. Data analysis was carried out using descriptive statistics, t-test, chi square and probit regression model. Result of socio-economic characteristics of the respondents revealed that 68.9% of the respondents sampled were male with mean age of 31 years. About 63.3% indicated that they were married while 78.9% of them had tertiary education. The result revealed that 67.8% of them involved in multiple jobs, and the prominent ones among them are; crop production, poultry production, part time teaching, tailoring, food selling, *okada* (commercial motorcycle) riding and commercial driving. The results of the probit regression model showed that the coefficients of sex, age, marital status, years of formal education, household size and farm size were positively correlated, indicating that an increase in the values of the coefficients of these variables had a higher likelihood of positively influencing the livelihood diversification status of the respondents. Furthermore, the coefficients of income, amount of loan obtained, number of dependants and farming experience were negative. Hence, an increase in the value of any of these aforementioned variables negatively influenced the livelihood diversification status of the youths. It was deduced from the hypothesis tested that there was no significant difference between the income of the youths who were primarily farmers and that of the non-farming youths and that livelihood diversification of the youth farmers had no significant effect on their income. This implied that having multiple jobs did not necessarily mean that the youths made a better income or had better living standards.

Keywords: Youths, Livelihood diversification, probit

1.0 INTRODUCTION

Agriculture is one of the most viable sectors particularly in terms of its employment potentials; it generates employment for over 70 percent of the total

labour force, accounts for about 60percent of the non-oil exports and, perhaps most importantly, provides over 80 percent of the food needs of the country (Adegboye,

2004; Onwuemenyi, 2008; CBN, 2008). Agriculture is the foundation for the development of stable human communities, both in rural and urban communities. It provides environmental benefits such as, conservation, guaranteed sustainable management of renewable natural resources and preserved biodiversity (Preshstore, 2013). The agricultural sector is strategically positioned to have a high multiplier and linkage effect on any nation's quest for socioeconomic and industrial development. Unfortunately, Nigeria's agricultural sector is bedeviled with several challenges such as lack of access to markets and credits, low level of technology especially mechanization, inadequate post-harvest infrastructure (storage, processing, transport), low uptake of research findings by stakeholders and limited availability of improved technological packages especially planting materials and certified seeds (Ministry of Agriculture, 2007).

All the same, Agriculture remains critical to the economic development of most, if not all developing countries across the globe, including Nigeria. Mashindano *et al.*, 2011 posited that it remains an important source of national income for most developing countries. Furthermore, for many countries, the production of agricultural commodities, both for domestic use and export is an important source of economic growth and livelihoods (UNEP, 2012). According to UNEP (2011) approximately 2.6 billion people depend on agriculture for livelihood, the majority of who are small holder farmers in rural areas. Hence, agricultural growth can reduce poverty directly by raising farm incomes and indirectly, through labor markets and reduction of food prices (World Bank, 2008).

However, the agricultural future of most developing countries as well as Nigeria may be bleak if the bulk of the production efforts are left in the hands of aged subsistent farmers who presently constitute the major farming population (Adefalu *et al.*, 2009). This is because the productivity level of the aged farmers cannot meet the food and fiber needs of the rapidly growing population and they are likely to phase out on account of age (I). Consequently, fostering youth involvement in agriculture is fundamental. According to Adeogun (2015) youth are an important and vital segment of human resources that can shoulder the responsibility of development including agriculture.

In order to foster a country's economic development, the agriculture sector must be viable and the youth should be encouraged to effectively participate; to foster effective and progressive agricultural development, an active work force (constituting youths) is required (Ugwoke *et al.*, 2005). This is because they constitute an important component in society and are the greatest assets that any country can have (Kimaro, 2015). Furthermore, youth constitute

an important resource for sustaining agricultural productivity which is fundamental for economic development (Afande *et al.*, 2015). The youth are also among the most productive in any society given that they are resilient, persevering and resourceful stakeholders in developmental processes (Naamwintome and Bagson, 2013). Compared to the older population, youth are the ideal catalysts for agricultural developmental change given their greater ability and willingness to adopt new ideas, concepts and technology which are all critical to changing the agriculture sector (Suriname, 2009). According to Jibowo and Sotomi (1999), youth needs to be involved extensively in farming because they have qualities which when nurtured and utilized are invaluable assets to agricultural and rural development. These qualities include: great physical strength, innovation proneness, minimal risk aversion and faster rate of learning among others (Jibowo and Sotomi, 1999). With dynamism and flexibility, extraordinary resilience and ability to cope, even in most adverse and risky situations, youth have the potential to foster enhanced agricultural productivity hence, making agriculture better (Naamwintome and Bagson, 2013). Consequently, fostering youth involvement in agriculture is a worthwhile investment (Ahaibwe *et al.*, 2013).

Unfortunately, Nigeria's agriculture at present, being characterized by weak and inefficient production system, decaying infrastructure and risk and uncertainty has made agriculture unattractive and non-lucrative resulting in decline in the number of youth participation in agriculture (Muhammad-lawal, *et al.*, 2009). Moreover, the youths who farms are now constrained to develop strategies to cope with vulnerability of agriculture production system through livelihood diversification (Ellis, 2000). Although most rural youths are involved in agricultural activities such as animal, crop production and aquaculture as their primary source of livelihood, they also engage in other income generating activities to improve their primary source of income: only very few rural youths are involved in just one activity (Barrett, Reardon, and Webb 2001).

In the light of this, Ekiti youths diversify or engage in other income-generating activities as a proactive measure to avoid risks from many agricultural disasters or failures. Some farming youths diversify into other agricultural sectors while others diversify into non-farm activities especially artisanal jobs like tailoring, handicrafts and skills like knitting, plaiting of hair/barbing, and most commonly, "okada riding". Some others are also employed in civil/public service and private companies.

2.0 METHODOLOGY

2.1 STUDY AREA

This study was conducted in Ekiti State, Nigeria. Ekiti State is in Southwest region of Nigeria. The State is mainly an upland zone, situated entirely within the tropics. The State enjoys tropical climate with two distinct seasons. These are the rainy season (April–October) and the dry season (November–March). Temperature ranges between 21° and 28 °C with high humidity. The south westerly wind and the northeast trade winds blow in the rainy and dry (Harmattan) seasons respectively. Tropical forest exists in the south, while guinea savannah occupies the northern peripheries of the state. The homogeneous nature of Ekiti confers on the state some uniqueness among the states of the federation. Although some parts of the region are fairly urbanized, the greater majority of the population still lives in rural areas. The Ekiti people are usually good blacksmith, woodcarvers, and basket weavers, the main occupation in the state however is farming.

2.2 SAMPLING TECHNIQUE AND SAMPLING SIZE

A multistage sampling procedure was used for selection of respondents for this study. 3 Local Government Areas in the state were randomly selected; 3 communities were selected at random from each LGA. The first category of respondents was that of youths primarily involved in the non-farm/artisanal jobs of which 5 respondents were picked randomly from each community. The next stage employed purposive sampling technique in selecting 45 youths from the pre-selected communities in the state whose primary occupation is farming. Consequently, this study sampled a total of 90 respondents.

2.3 SOURCES OF DATA

Primary data were used for this study. It was collected with the aid of well-structured questionnaire administered in accordance with the selected Local Government Areas. The data obtained focused on; the socio-economic characteristics of the respondents, their primary jobs, number of jobs of respondents, their income, their farming experience, their location, and other determinants of their livelihoods diversification.

2.4 DATA ANALYTICAL TECHNIQUES

The data for this study were analyzed using both descriptive and inferential statistics. Frequency counts, percentages, mean and standard deviation were used to

analyze the describable objectives while Probit model was used to analyze the determinants of livelihood diversification among youths in the study area. T-test was used to determine if there is a significant difference between the incomes of the primary farmers and non-farming youths while chi-square test was employed to test whether livelihood diversification has an effect on the youth farmers' income or not.

2.4.1 THE PROBIT REGRESSION MODEL:

Probit Regression Model: This was used in the study because it measures the binary outcome variables. In this study, probit model was estimated to determine whether the individual respondent diversify their livelihood from farming activities or not. The model perfectly fits the objective well as it takes into account where the dependent variable is of two categorical outcomes, i.e. yes or no which were coded as 1 and 0 respectively. In regards to this case, a respondent who diversified was accounted for yes (1) and not diversified was accounted for no (0). The model is specified as:

$$Y^* = \beta_0 + \beta_1 X_1 + U_i$$

Algebraically expressed for the *i*th farmer, the probit model is explicitly expressed as:

$$Y_i^* = \beta_0 + \beta_1 X_{1i} + \dots + \beta_n X_{ni} + U_i$$

Where:

Y^* is the probability of livelihood diversification (i.e the probability of engaging in multiple jobs); diversified=1, not diversified=0.

β_0 is the intercept

β_1, \dots, β_n are coefficient of the independent variables.

X_1, \dots, X_n are the independent variables (i.e. age, household size, marital status, sex, farm size, Years of formal education, income of respondent, No of dependents, amount of loan obtained, farming experience)

(X_1) = Sex

(X_2) = Age (years)

(X_3) = Marital status

(X_4) = Years of formal education

(X_5) = No of dependents

(X_6) = household size

(X_7) = income of respondents (₦)

(X_8) = amount of loan obtained (₦)

(X_9) = size of farm (ha)

(X_{10}) = farming experience (years)

β = regression parameters or coefficient

e = error term

where e_i is normally distributed with zero mean and constant variance and β_0 is the intercept.

3.0 RESULTS AND DISCUSSIONS

3.1 SOCIO-ECONOMIC CHARACTERISTICS OF THE RESPONDENTS

The analysis of the socio-economic characteristics of the respondents is presented in Table 1. The study revealed that the respondents were mostly male (68.9%) with majority of them married (63.3%) and youths in their mid 30s with about (55.7%) having ages less than or equal to 35 years but with moderately small

household size. About 47.7% of the respondents had less than or equal to two dependants they catered for. Attempt to meet these household needs by majority of the youths may force some to engage in more than one job: this can be called a push factor of livelihood diversification. Majority (78.9%) of the respondents had tertiary education while 61% of them had less than or equal 5 years of farming experience. It was also revealed that the majority (35.6%) of the respondents who were not primarily farmers were artisans.

Table 1: Analysis of socio-economic characteristics of the respondents

ITEM		FREQUENCY	PERCENT
Sex			
Female		28	31.1
Male		62	68.9
Age			
<21		5	5.5
21-25		10	11.1
26-30		25	27.7
31-35		50	55.7
Mean	30.51		
Marital Status			
Single/divorced/widowed		33	36.7
Married		57	63.3
Educational Background			
No formal education (0)		1	1.1
Primary Education (1-6)		0	0
Secondary Education (7-12)		18	20.0
Tertiary Education (>12)		71	78.9
No of dependents			
≤2		43	47.7
3-4		39	43.3
>4		8	8.89
Household size			
≤2		38	42.2
3-4		43	47.8
>4		9	10.0
Primary occupation			
Farming		45	50.0
Commercial driving		1	1.1
Okada riding		5	5.6
Civil service		7	7.8
Artisanal jobs		32	35.6
Years spent on primary occupation			
1-5		62	68.9
6-10		25	27.8
>10		3	3.3
Farming experience			
No farming experience		18	20
1-5 years		37	41
6-10 years		20	22.2
>10 years		15	16.8

Source: field survey, 2019

3.2 VARIOUS JOBS ENGAGED IN BY THE RESPONDENTS

The table below shows the distribution of the respondents by the other jobs they engaged in apart from their primary jobs. It reveals that most of the non-farming youths were artisans such as hairstylists, furniture makers, automobile repair engineers, fashion designers, etc. The result shows that 15.6% of the respondents were into part-time teaching, 5.6% were into tailoring, 4.4% were food sellers, 8.9% were into computer services, 4.5% engaged in *okada* riding

outside their primary jobs, 3.3% were cab/bus drivers, 6.7% were barbers/hairdressers, 13.2% involved in crop production, 3.3% reared animals, 6.7% engaged in poultry production, 3.3% were sales representatives, 1.1% were shoe-makers, 3.3% were photographers while 20.0% engaged in other jobs not mentioned like, plumbing, optical services, catering, and so on. This means that most of the respondents were involved in other jobs (not specified).

Table 2: Various job engaged in by youths

S/N	Type of Job	Frequency	Percentage
1	Part time teaching	14	15.6
2	Tailoring	5	5.6
3	Food selling	4	4.4
4	Computer services	8	8.9
6	Okada riding	4	4.5
7	Cab/bus driving	3	3.3
8	Barbing/hairdressing	6	6.7
9	Planting crops	12	13.3
10	Animal rearing	3	3.3
11	Poultry	6	6.7
12	Sales representative	3	3.3
13	Shoe making	1	1.1
14	Photography	3	3.3
15	Others	18	20.0
Total		90	100

3.3 THE PROBIT REGRESSION RESULT SHOWING THE DETERMINANTS OF LIVELIHOOD DIVERSIFICATION

From the probit regression analysis conducted, it was revealed that sex, age, marital status, years of formal education, household size and farm size had positive relationship with the livelihood diversification of the respondents. This implies that a unit increase in these variables brings about livelihood diversification among the youths. In contrast, number of dependants, income of respondents, and amount of loan obtained and farming experience of the respondents had negative relationship with livelihood diversification, indicating that an increase in these variables reduces the likelihood to diversify among the youths. The result further revealed that age, formal education, number of dependants, amount of loan obtained and farm size were statistically significant. This implies that these are the variables that determine livelihood diversification among youths in the study area.

The coefficient of age was positive and significant at 1%. This implies that the older the youths become, the higher their involvement in multiple jobs (the greater their livelihood sources). This is because

they begin to have greater responsibility in catering for themselves and their dependants and would love to simultaneously combine various livelihood activities to earn more income. The coefficient of educational status (years of formal education) was positive and significant at 5%. This implies that the higher their years of formal education, the higher the probability of youths' involvement in multiple jobs. As opposed to some formal studies on livelihood diversification of farming households which pose that the higher their educational status, the lower their involvement in multiple jobs, this research points out that most educated youths in Ekiti would rather diversify their livelihood as there are little or no skilled/white collar jobs with stable and tangible income that can suffice for the livelihood of the youths.

The coefficient of the number of dependants of the respondents was positive and significant at 5%. This infers that the respondents with more number of dependants were more likely to diversify. This poses a great challenge to them as they have a lot of responsibilities to discharge in terms of feeding, clothing,

sheltering and paying the tuition fees of their dependants. Therefore, looking for diverse means of income generating activities is not negotiable. The coefficient of amount of loan obtained was negative and significant at 5%. This implies that the higher the amount of loan obtained by the youths, the lower their involvement in multiple jobs. This can be due to the fact that they would rather specialize in their occupation for which they obtained loans solely rather than diversifying into other livelihood sources. This is done to avert the risk of losing their money because majority of them did not have expertise in the new business.

The coefficient of farm size was positive and significant at 10%. This implies that the bigger the

farmland, the more likely the farmers' involvement in multiple jobs. This may be as a result of the farmers' availability to other jobs since a large scale farm owner would most likely have a farm manager and other workers to look after his farm; he would then be able to actively participate in other livelihood activities. The coefficient of farming experience was negative. It was observed that even youths who were not primarily farmers and those who did not even diversify into farming at all had some experience in farming while some even had several years of farming experience. The positive coefficient implies that as farming experience increases, probability of livelihood diversification also increases.

Table 3: Probit analysis showing the determinants of livelihood diversification

<u>Explanatory Variables</u>	<u>Coefficients</u>	<u>Std. Err</u>	<u>P-value</u>
Constant	-7.17528	1.926187	0.000***
Sex	.6148302	.4059063	0.130
Age	.1542598	.0517115	0.003***
Marital status	.3927756	.4468277	0.379
Formal education	.2112695	.0915354	0.021**
No of dependants	.2169495	.0898359	0.016**
Household size	.0654182	.0723273	0.366
Income	-6.17e-06	6.07e-06	0.309
Loan	-3.44e-06	1.49e-06	0.021**
Farm size	.4312499	5.26e-08	0.086*
Farming experience	.0322941	.0336736	0.338
Number of observations	90		
Prob> chi2			
LR chi2(10)	0.0000		
Pseudo R2	43.91		
	0.3935		

Source: field survey, 2020

* = significant at 10%

** = significant at 5%

*** = significant at 1%

HYPOTHESIS TESTING

H_{01} There is no significant difference between the income of young farmers and non-farming youths. The test was conducted at 95% confidence level. With the results shown below, it can be concluded that there

is no significant difference between the income of the youth farmers and the non-farming youths. Hence, we would accept the null hypothesis and reject the alternative hypothesis.

Table 4: Result of the t-test statistic

<u>Paired variables</u>	<u>Mean</u>	<u>t value</u>	<u>P value</u>	<u>Decision</u>
Farmers income/non-farmers income	6.7377E3	.645	.552	Not significant

H_{02} Livelihood diversification has no significant effect on youth farmers' income

The result of the chi square crosstab analysis ran on SPSS posed that livelihood diversification had no significant effect on the income of the youth farmers because the value of the pearson chi square value is not

significant at any of the alpha levels (1%, 5% and 10%). Therefore, we would accept the null hypothesis that states that livelihood diversification has no significant effect on the youth farmers' income

Table 5: Result of the chi square test

Pearson Chi square	Value	Df	Sig (2 tailed)	Inference	Decision
Livelihood/income	13.573	12	.329	Not significant	Accept H ₀

CONCLUSION AND RECOMMENDATIONS

Based on the findings, it was concluded that most youths were fairly educated which availed them the opportunity to engage in multiple economic activities. It was further concluded that age, formal education, number of dependants, amount of loan obtained and farm size were determinants of livelihood diversification in the study area. Arising from the study, there is need for improvement in terms of creating an enabling and encouraging environment for youths in Ekiti to better thrive and specialize in agriculture and their other livelihood activities rather than diversifying into multiple jobs. Since farming remains the largest employer of labor for the rural populace, policy makers should upgrade agricultural production technology in a bid to facilitate the improvement of the output level of the young farmers. If technological and innovational advancement is made, youths will be encouraged to farm and the agricultural sector would look more industrial like other sectors of the economy which are seemingly more attractive to them. The government should intensify efforts at enhancing human capital development in the agricultural sector through education. In other words, youths should be well informed and educated about the pros and cons of agriculture; this I think can be executed by the re-enacted college of agriculture for students and also by public sensitization and orientation of the youths (especially through social media) on the benefits of agriculture.

REFERENCES

- Adefalu, L. L., Adekunle, O. A., Oladipo, F. O., Adisa, R. S. and Fatoye, A. D. (2009): Constraints to Youths' involvement in Agricultural Production in Kwara State, Nigeria. 13 (1)
- Adegboye, R.O. (2004), Land, Agriculture and Food Security in Nigeria, 3rd Faculty Lecture, Faculty of Agriculture, University of Ilorin, 25/2/2004.
- Adeogun, S. O. (2015). Participatory diagnostic survey of constraints to youth involvement in cocoa production in cross river state of Nigeria. *Journal of Agricultural Sciences (Belgrade)*, 60(2), 211-225.
- Afande, F. O., Maina, W. N., & Maina, M. P. (2015). Youth engagement in agriculture in Kenya: Challenges and prospects. *Journal of Culture, Society and Development*, 7, 4-19.
- Ahaibwe, G., Mbowe, S., & Lwanga, M. M. (2013). Youth engagement in agriculture in Uganda: Challenges and prospects.
- Barrett, C. B., Reardon, T and Webb, P. (2001). Nonfarm income diversification and household livelihood strategies in rural Africa: concepts, dynamics, and policy implications. *Food policy*, 26(4), 315-331.
- Central Bank. (2008), Annual Report and Statement of Accounts for the year ended 31st December 2008
- Ellis, F. (2000). The determinants of rural livelihood diversification in developing countries. *Journal of agricultural economics*, 51(2), 289-302.
- Jibowo, A. A., & Sotomi, A. O. (1999). The Youth Programmes in Adebba LGA of Ogun State. *Proceedings of the 8th Annual Nigerian Rural Sociological Association*, 1(5), 53.
- Kimaro, P. J., & Towo, N. N. (2015). Determinants of rural youth's participation in agricultural activities: the case of Kahe East ward in Moshi rural district, Tanzania. *International Journal of Economics, Commerce and Management*, 3(2), 33.
- Mashindano, O., da Corta, L., Kayunze, K., & Maro, F. (2011). Agricultural growth and poverty reduction in Tanzania 2000-2010: where has agriculture worked for the poor and what can we learn from this?. *Chronic Poverty Research Centre Working Paper*, (208).

- Ministry of Agriculture (2007). National Agricultural Extension Policy Implementation Framework. Nairobi, FAO.
- Muhammad-Lawal, A., Omotosho, O. A. and Falola, A. (2009). Technical efficiency of youth participation in agriculture: A case study of youth – in – Agriculture Programme in Ondo State, south western Nigeria. *Nigeria Journal of Agriculture, food and Environment*, 5(1): Pp. 20- 26
- Nigeria, NBS (National Bureau of Statistics). 2010
- Naamwintome, B. A. and Bagson, E. (2013). Youth in agriculture: Prospects and challenges in the Sissala area of Ghana. *Net Journal of Agricultural Science*, 1(2), 60-68.
- Onwuemenyi, O. (2008). Taking agriculture to commercial status in Nigeria. *The Punch Newspapers, Sunday, 21*.
- Preshstore (2013). Improving Agricultural Production Through Agricultural Cooperatives. Retrieved from <https://preshstore/status/.com> on 27th July 2015
- Ugwoke, F. O., Adesope, O. M., & Ibe, F. C. (2005). Youths participation in farming activities in rural areas of Imo State, Nigeria: implications for extension. *Journal of Agricultural Extension*, 8
- UNEP. 2011. Towards a green economy: Pathways to sustainable development and poverty eradication – agriculture, investing in natural capital. Nairobi: United Nations Environment Programme.
- UNEP. 2012. Avoiding future famines: Strengthening the ecological foundation of food security through sustainable food systems. Nairobi: United Nations Environment Programme.
- World Bank 2015. World Development Indicators 2015. Accessed March 2015. <http://data.worldbank.org/data-catalog/world-development-indicators>.