

Effect of Farm and Non-Farm Livelihood Activities on the Well-Being of Arable Crop Farmers in Yenagoa Local Government Area of Bayelsa State, Nigeria

Henry Amaegberi¹, Ologidi Patrick Oyintonbra²

^{1,2}Department of Agricultural Economics and Extension, University of Africa, Toru-Orua, Sagbama, Bayelsa State, Nigeria

ABSTRACT: This study analyzed the effect of farm and nonfarm livelihood activities on the well-being of arable crop farmers in Yenagoa Local Government area of Bayelsa State, Nigeria. Data were collected through well-structured questionnaire from 100 arable crop farmers. Data were analyzed using simple descriptive and inferential statistical tools. The result showed that poultry rearing ($\bar{x}=3.5$), swine rearing ($\bar{x}=3.3$), cassava cultivation ($\bar{x}=3.3$), maize cultivation ($\bar{x}=3.1$), rice cultivation ($\bar{x}=2.9$) were the farm and non-farm livelihood activities which had effect on arable crop farmers well-being. The result further showed that 60.0% of arable crop farmer had block house as the shelter and 40% had meal ratio of 1:0:1 daily. The regression result indicated that the coefficient of well-being of arable crop farmers (2.521) was positive and statistically significant at 1%. The study concluded that farm and non-farming livelihood activities had positive effect on arable crop farmers. Hence, it was recommended that arable crop farmers should be encouraged to also engage in non-farm livelihood activities.

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Corresponding Author:
Henry Amaegberi

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INTRODUCTION

There has been increasing recognition in recent years that the rural economy is not confined to the agricultural sector, but embraces all the people, economic activities, infrastructure and natural resources in rural areas (Csaki and Lerman, 2018). Equally, rural livelihoods are not limited to income derived solely from agriculture but may derive from diverse sources. However, rural development literature posits that rural households make up their livelihood based on complex strategies and not just agricultural production (Kilic, Carletto, Miluka and Savastano, 2009). The livelihood structures in rural areas in developing countries have exhibited tremendous changes in the last few decades (Jan, Khattak, Khan, Hayat and Rahim, 2012).

Despite ongoing urbanization, over 70% of the world's poor are located in rural areas (International Fund for Agricultural Development IFAD, 2001). Agriculture plays an important part in their livelihoods. Rural households play a central role in realizing policy objectives. Production decisions at farm household level determine the current availability of agricultural produce, as well as future production potentials (Roetter and Van Keulen 2007; Verhagen 2007). Thus, non-farm rural activities might include manufacturing (i.e. agro-processing) and be accumulative (e.g. setting-up a small business), adaptive, switching from cash crop cultivation to commodity trading (perhaps in response to drought), coping (e.g. non-agricultural wage labour or sale of household assets as an immediate response to a shock), or be a survival strategy as a response to livelihood shock (Ellis, 2016).

The non-farm rural activities cannot be considered homogenous (Barrett, 2005); rather it is characterized by its heterogeneity, incorporating self-employment, micro, small or medium-sized enterprises (MSMEs) and trade activities. Our definition of the non-farm rural activities is not solely activity-based (waged work or self-employment), as it includes the rural institutional framework (roads, schools, hospitals etc.) which are an integral part of the rural economy (Csaki and Lerman, 2000).

The increasing participation in non-farm activities has brought both economic and social changes in rural areas in developing nations. The rural livelihoods depend on income from both farm and non-farm sources. Farming as a principal source of income has failed to assure sufficient livelihood for most rural farming households in Nigeria (Babatunde, 2012). Hence, diversification into non-farm activities has become a surviving strategy for most rural farm households in developing nations. According to Talip (2008), traditional agriculture has been supposed as the only engine to rural growth. As a result, the livelihoods of rural

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households are more often characterized by complex strategies that involve multiple income-generating activities by one or more household members, as non-farm income sources assume an increasingly important role over time.

The levels of participation by rural households in non-farm activities are even higher, with the vast majority of rural households in many developing countries involved in some form of non-farm income-generating activity. However, while income diversification at the household and local level is the norm, agriculture is still a crucial sector of employment in those rural economies for which evidence is available (Davis, 2007, Haggblade, 2007).

Farmers are engaged in a variety of non-farm activities to diversify their income with a view to feed and sustain themselves during crop failures due to flooding, oil spill and other illegal human activities. Studies from Ellis (2004) argues that developing nations like Nigeria, Ghana, Ethiopia and others follows policies that trap people in Agriculture. The percentage of rural households' participation in non-farm activities have been close to 25 % (Merima and Jack, 2012). The policy focus is increasing agricultural productivity so as to attain food self- sufficiency at a national, regional and household level. According to the 2006 population census 83.8% of the population of the country derives its livelihood from agriculture, which is entirely dependent on rain fed agriculture.

Besides; farmers are engaged in a variety of non-farm activities to diversify their income with a view to feed and sustain themselves during crop failures. Hence, looking into the link between farm and non-farm activities and their determinants is necessary before policy measures are taken to promote non-farm activities (Tassew, 2000). The Rural Development Policy and Strategy studies of the Ethiopian Government (2001) also explicitly recognize the importance of non-agricultural income diversification in rural areas and have devoted considerable space to elaborating the link between the farm and non-farm sectors. The document in fact states that we can consider our rural development activities that have achieved their goal only when agriculture ceases to be the Main source of any economy".

Hence, the aim of this study is to fill the gap since little or nothing has been done to create the awareness in Yenagoa Local Government Area, Bayelsa State. Thus, the effect of Farm and Non-farm livelihood activities on the well-being of rural household is apparently unknown it is on this regard this study is conceived. It is on this back drop that the research questions were raised.

The objectives of this study include:

- i. identity the farm and Non-farm livelihood activities;
- ii. examine the Perceived well-being status of arable crop farmers in the study area and;
- iii. examine the effects of farm and Non-farm livelihood activities on the well-being status on arable crop farmers in the study area.

METHODOLOGY

This study was conducted in Yenagoa Local Government area of Bayelsa state, Nigeria. It is located at the southern part of the country with coordinates 4°55'29" N 6° 15'51"E. The Local government area has an area of 706-kilometer square and a population of 352,285 at the 2006 Census (National Population commission of Nigeria). Yenagoa Local Government area lies within the rain forest zone with a humid equatorial climate and mean annual rainfall ranging from 2000 to 4000mm alternating rainy (March to November) and dry (December to February) seasons. English language is the official language, but Epie-Atissa language is one of the local languages spoken in Yenagoa, others such as Ekpetiama, Gbarain, Biseni and Zarama are ijaw dialect in Yenagoa local government area. (Yenagoa Physical Setting, 2003). Purposive sampling technique was used in the selection of Yenagoa Local Government area, which has major health facilities. Stratified sampling technique was used in the selection of the sample of 100 arable crop famers. In the first stage, wo extension blocks were randomly selected from the Zone, while in the second stage, 2 sub-circles were selected from each block, giving a total of 6 sub-circles. In the third stage, twenty farmers were randomly selected from each sub-circle, giving a sample size of one hundred and twenty (100) farmers. Data collected through well-structured questionnaire were analyzed with descriptive statistic, simple linear regression was used to test the hypotheses. The questionnaire was a 4-point likert type of strongly agree, Agree, Disagree and Strongly disagree to which numerical values 4, 3, 2 and 1 were assigned respectively. Hence, the cut-off points of 2.55 as the upper limit was used to determine a positive response (i.e., $2.5 + 0.005 = 2.55$).

RESULTS AND DISCUSSIONS

Farm and Non-Farm Livelihood Activities

Result in Table 1 shows farm and non-farm livelihood activities. The result showed that farm and non-farm livelihood activities of arable crop farmers well-being are; poultry rearing ($\bar{x}=3.5$), swine rearing ($\bar{x}=3.3$), cassava cultivation ($\bar{x}=3.3$), maize cultivation ($\bar{x}=3.1$), rice cultivation ($\bar{x}=2.9$) which ranked 1st, 2nd, 3rd and 4th respectively. This implies that arable crop farmers were more involved in agricultural livelihood activities compared to non-agricultural activities such as electricity ($\bar{x}=2.1$), photographer ($\bar{x}=2.4$), vulcanizing ($\bar{x}=1.7$) and selling of water ($\bar{x}=1.0$) which means were below the decision cut-off point of

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2.5. this study is line with study of (Agbarevo and Nmeregini, 2019) who reported that non-farm income generating activities have become an essential component of livelihood strategies among rural households.

Table 1: farm and non-farm livelihood activities

Variables	SA	A	D	SD	Sum	Mean	Rank
Swine rearing	45	35	15	10	325	3.3	2 nd
Poultry rearing	59	29	12		347	3.5	1 st
Maize Cultivation	40	41	10	9	312	3.1	3 rd
Cassava Cultivation	54	26	12	8	326	3.3	2 nd
Rice Cultivation	30	45	15	10	295	2.9	4 th
Yam Cultivation	30	20	40	10	270	2.7	5 th
Electrician	10	20	40	30	210	2.1	9 th
Photographer	20	20	40	20	240	2.4	7 th
Vulcanizing	10	10	20	60	170	1.7	10 th
Sales of used clothes	40	38	12	10	228	2.3	8 th
Barbing	20	30	40	10	260	2.6	6 th
Teaching	30	10	20	40	230	2.3	8 th
Selling of water	47	23	20	10	100	1.0	11 th
Decision Cut-off point						2.5	

Source: Field survey data, 2023

Note: SA = Strongly agree, A = Agree, D= Disagree and SD = Strongly disagree

THE PERCEIVED WELL-BEING STATUS OF ARABLE CROP FARMERS

The Result in Table 2 shows the perceived well-being status of arable crop farmers. The result showed that 60.0% of arable crop farmer had block house as the shelter, 25.0% had mud house. Majority 60.0% of the arable crop farmers owned the house they reside while, 40.0% of the sampled arable crop farmers are tenants. Moderate proportion 40.0% of the sampled arable crop farmer had 1:0:1 ratio of meal daily and 40.0% revealed that schools were the basic infrastructure, 45.0% revealed that they are not secured. Majority 55.0% revealed that they are healthy.

Table 2: Perceived well-being status of arable crop farmers

Variables	Freq. n=100	Percentage
What kind of shelter do you have		
Mud house	25	25.0
Block house	60	60.0
Tached house	15	15.0
Residential status		
Land lord	60	60.0
Tenant	40	40.0
What is the ratio of your meal daily		
1:1:1	35	35.0
1:0:1	40	40.0
0:1:0	20	20.0
0:0:1	5	5.0
Basic infrastructure do you have access to		
Quality road	10	10.0
Electricity	18	18.0
Portable water	20	20.0
Schools	40	40.0
Health facility	12	12.0
What is the security status of your well-being		
Very Secured	35	35.0
Not secured	45	45.0
Fairly secured	20	20.0

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What is your health status

Healthy	55	55.0
Not healthy	45	45.0

Source: Field survey data, 2023

EFFECTS OF FARM AND NON-FARM LIVELIHOOD ACTIVITIES ON THE WELL-BEING STATUS ON ARABLE CROP FARMERS

Four functional forms – linear, exponential, semi-log and double-log were tried for choice of a lead equation. Based on the magnitude of the coefficient of simple determinations (r^2), the significance of the regression coefficient, and the sign of the significant variable as they conform to *a priori* expectations as well as the significant of the entire model as shown by the F-statistic, the linear model was chosen as the lead equation. The value of the coefficient of multiple determinations (r^2) was 0.371, implying that about 37.1% of the variations in the livelihood activities of the farmers in the study area was explained by the explanatory variable included in the model.

The regression result indicated that the coefficient of well-being of arable crop farmers (2.521) was positive and statistically significant at 1%. This implied that well-being was positively related to changes in the livelihood activities of arable crop farmers. Thus, the engagement in non-agricultural activities will improved the well-being of arable crop farmers. This study is in line with findings of Barrett, (2001) non-farm sources contribute 40-50% to average rural household income across the developing world.

Table 3: Effect of farm livelihood and non-farm livelihood activities on the well-being status on arable crop farmers

Variables	Linear+	Exponential	Semi-log	Double log
Constant	11.161 (12.954)***	1.093 (42.412)***	14.543 (36.707)***	1.152 (94.892)***
Well-being	2.521 (4.926)***	0.075 (3.645)***	7.949 (3.380)***	0.233 (3.227)***
r^2	0.391	0.344	0.312	0.300
Adj r^2	0.371	0.115	0.304	0.270
F-statistic	15.665***	13.052***	12.402***	11.411***

Note: *** indicates statistically significant at 1% level. + stand for the lead equation. Figures in parentheses are t-values.

CONCLUSION AND RECOMMENDATIONS

This study concluded that since the cardinal goal of all agricultural production activities is to feed the populace, generate income for rural farmers within our rural communities and provide raw material for the industries and create employment opportunities among others. The well-being of arable crop farmers can improve their standard of living. Still the involvement of arable crop showed that farm and non-farming livelihood activities had positive effect on arable crop farmers.

Based on the result of the findings, the following recommendation were made

- i. There is need to encourage arable crop farmers to engage effective on non-farm livelihood activities.
- ii. Farmers should be encouraged to venture into swine farming and soft loan should be made available by agricultural development banks and the government as well.

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