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EFFECT OF FARM AND NON-FARM ACTIVITIES ON RURAL HOUSEHOLD INCOME IN ABIA STATE, NIGERIA

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ABSTRACT
The study compared the effect of farm and non-farm activities on rural household income in Abia State. In conducting the study, multi-stage random sampling procedure was used to select a sample size of 120 farmers. Data collection were through structured questionnaire and analyzed using both descriptive and inferential statistics such as z-test for independent samples at 0.05% level of significance. The findings revealed that, in Abia State, farm activities contributed an average annual income of five hundred and ninety-four thousand, four hundred and thirty-three Naira thirty-two kobo (₦594,432.32) representing 51.9% of household income greater than non-farm activities that contributed five hundred and thirty-six thousand, one hundred and seventy Naira, seventy-two kobo (₦532,170.72) representing 48.1% of household income. Test of hypothesis revealed no significant difference between farm and non-farm income in Abia State. The study concluded that Abia State rural households are diversifying in farm and non-farm activities at the same level showing coping strategy to household income and general economic uncertainties. The study recommended that, while encouraging rural households' diversification of economic activities, the extension agents should emphasize more in diversification of agricultural production to minimize much engagement in non-farm activities to increase food production.
Keywords: Effect, Farm, Non-farm, activities, rural, households, income.

INTRODUCTION

Engagement in farm and non-farm activities for income generation has become so much important to rural households due to the economic pressure, in order to adjust to the problem of insufficient income. Diversifying sources of income is a major challenge since petroleum was discovered in Nigeria (Madaki *et al.*, 2014 and Reardon, 1997). Non-farm activities have become crucial because it is the main variable for diversification of the sources of rural household income.

Farm sector involves four main components such as crops, livestock, fisheries, and poultry (Parvin *et al.*, 2012). The rural farm activities include all those agricultural activities, which generate income for rural households, either through wage work or through self-employment (Tanjila, 2015). A widely accepted view of the development literature is that, in the course of structural economic transformation that goes with economic development, as a country GDP grows, the share of the farm sector in the country's GDP will decrease (Chenery and Syrquin, 1975). This indicates that, in rural areas, a dwindling agricultural sector and increasing rural

non-farm activities, as well as a varying definition of rural itself, can be viewed as possible features of economic development (Benjamin, and Kimhi2007). The belief that rural areas of Nigeria are completely agrarian is also fast becoming obsolete as youths no more regard subsistence agriculture practised by their parents under land fragmentation system but aspire for commercial agriculture which involves huge capital, and a large area of land.

Non-farm activities create income opportunity than subsistence agriculture in the sense that it enables households to modernize their production by giving them a prospect to apply the necessary inputs as well as reduce their income shortage during periods of unexpected crop failure (Madaki *et al.,* 2014 and FAO, 1998). A non-farm activity refers to any economic activity other than the production of primary agricultural commodities, livestock and forestry, fishing and hunting (LIFCHASA, 2012). Non-farm activities thus include mostly processing of agricultural commodities into different forms with private machines, shop-keeping, peddling, petty trading, medium and large-scale trading, manual labour based activities such as mining, manufacturing, construction, commerce, financial and personal services, self-employed subsistence-oriented cottage industries, wage employment in rural business activities, transport operation, and construction labour, etc. (Mhazo *et al*., 2008 In: Ndirika, 2011). Physical and human capital-intensive activities include commercial type rural industries, including food processing, trading, basket weaving, shoemaking, carpentry, transportation, etc. The types of non-farm activities differ across geopolitical locations (Meludu *et al.,* 1999; Lanjouw and Lanjouw, 2001). Generally, non-farm activities are categorized into two groups of livelihoods: labour associated with high productivity that leads to high-income activity and labour associated with low productivity that provides an only residual source of income (Ellis and Freeman, 2004).

Despite continuing efforts to fight poor rural household income, it has persisted to the present day. In contrast to the past, current rural youth empowerment approaches have therefore adopted a more comprehensive view, acknowledging the diverse endowments of rural regions, and particularly the multiplicity of income sources of rural households (OECD), 2006; and World Bank, 2007). Farm-based households pursue non-farm activities because they lack sufficient agricultural output and because they seek additional income sources to diversify risks.

Rural households have always engaged in farm and non-farm activities, however, with the present hard economic situation, it does appear that rural households who are mostly farmers are diversifying their source of income to cope with the present hard economic conditions leading to greater engagement in non-farm activities to improve household income. In this regard, the situation in Abia State is apparently unknown and worth investigating. It is on these bases that the study was conceptualized. The study compared the effect of farm and non-farm activities on rural household income in Abia State, Nigeria. The paper hypothesized that there was no significant difference between income from farm and non-farm activities in Abia State.

METHODOLOGY

The study was conducted in Abia State. The population of the study comprised of all the households involved in both farm and non-farm activities. Abia State has an estimated population of 2,845,380people (NPC, 2006). The survey sample was based on the level of major farm and non-farm activities in the study area. In drawing the sample, a multistage sampling procedure was used. In the first stage, two (2) Agricultural zones were randomly selected from the State. In the second stage, two (2) Local Government Areas were randomly selected from

each zone, giving four (4) LGAs in all. In the third stage, two (2) communities were randomly selected from each LGA, giving a total of sixteen (8) communities. Finally, fifteen (15) respondents were randomly selected from each community. Thus the sample size for the study was one hundred and twenty (120) respondents.

Data were collected using questionnaire /interview schedule. A 4-point rating scale over an array of questions was adopted. Data collected for the study were analyzed using mean (a mean of 2.5 and above was regarded as a factor determining involvement in non-farm activities/ farm activities, while a mean less than 2.5 was not) and z-test significance of difference between means for large independent samples at 95% confidence level. The z– test for the hypothesis is expressed thus:

$$Z = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{\frac{S_1{}^2{}_1}{n_1} + \frac{S^2{}_2}{n_2}}}$$

Specifically:

Z	=	Calculated value
$\bar{X}_1$	=	Mean score of respondents
$\bar{X}_2$	=	Mean score of respondents
$S^2{}_1$	=	Variance of respondents
$S^2{}_2$	=	Variance of respondents
n_1 and n_2	=	Sample size of respondents

RESULTS AND DISCUSSION

Income from farm and non-farm activities

Table 1 showed that farm activities contributed an annual mean income of five hundred and ninety-four thousand, four hundred and thirty-three Naira, thirty-two kobo (₦ 594, 433.32) representing 51.9% of total household income, while non-farm activities contributed an annual mean income of five hundred and thirty-six thousand, one hundred and seventy Naira, seventy-two kobo (₦536, 170.72) representing 48.1% of total household income in Abia State.

Table 1: Mean and percentage household income from farm and non-farm activities in Abia State

Mean Farm Income	Percentage Farm Income	Mean Non-Farm Income	Percentage Non-Farm Income	Total Income
₦ 594, 433.32	51.9%	₦ 536, 170.72	48.1%	₦1,130,604.04 (100%)

Source: Field survey data, 2017

This gave a difference of fifty-eight thousand, two hundred and sixty Naira, six kobo (₦ 58,262.6) in favour of farm activities. This gave a monthly income of forty-nine thousand five hundred and thirty-six Naira, eleven kobo (₦49, 536.11) and forty-four thousand, six hundred and eighty Naira, eighty-nine kobo (₦ 44, 680.89) for farm and non-farm activities respectively. Furthermore, the distribution of household farm income was widely dispersed from the mean value of ₦ 594, 433.32, while non-farm income was widely dispersed around a mean value of

₦ 536, 170.72. The greater contribution of farm activities to household income mitigated the effect of dependence on one source of income. According to Ibekwe *et al.* (2010), this has implication for viewing the role of non-farm income as complementary by policymakers. This result agreed with the findings of Oseni and Winter (2009) cited in Babatunde (2015), who reported that in Nigeria, average household farm income was ₦ 92,534 which is higher than average household non-farm income of ₦ 34,360.00. The study further reported that southern Nigeria households earn more from non-farm activities, and about 40% of household income is from farm sources.

More so, the result in Table 1 conformed to the findings of Ibekwe *et al*. (2010), who observed that farm income accounted for 58.50% of total household income while non-farm income accounted for 41.50% of the total farm household income. In addition, Tanjila *et al.* (2015), LIFCHASA project's annual report (2012), and Oludipe (2009) opined that rural farm income has a significant effect on household income as against non-farm income.

The result disagreed with the findings of Yakubu *et al*. (2015) who reported that annual income earned from non-farm activities alone was ₦400,000 (96.30%) while income from farm alone was ₦270,000 (54.81%) inferring that, the amount contributed to households to support livelihood from farming activities is less in comparison to non-farm activities. Similarly, Obinna (2014) in the same vein stated that the mean annual income generated from non-farm activities was much higher than that of farm activities. The same opinion was in line with the findings of Tijjani *et al*. (2009), and Tania,2013 who revealed that return from farm activities is lower than that of non-farm activities.

Difference between household income from farm and non-farm activities

Table 2 showed the z-test analysis of difference between household income from farm and non-farm activities. The analysis showed no significant difference between household mean farm and non-farm income in the study area. The analysis of Z-test of significance revealed that the calculated Z-value of 1.05 at 238 degree of freedom was less than the critical value of 1.96. The difference was not significant at 0.05% level of significance. Hence, there was no significant difference between income from farm and non-farm activities of households.

Table 2: Significance of difference between household income from farm and non-farm activities in Abia State

Source of Variation	N	$\bar{X}$	DF	Z-cal	Z-tab	P-level	Results
Farm income		594, 433.32	238	1.05	1.96	0.05	Not Sig.
Non-farm income	240	536, 170.72					
Difference		58, 262.60					

Source: Field Survey, 2017. Decision: Null hypothesis accepted at 5% level of significance

The result implied that farm activities had a greater contribution to household income than non-farm activities. This could be because farm activity is the major occupation of rural households, which supported Ekong (2010) who stressed that rural areas depend more on food crop production in Nigeria. The result has shown that the household income generated from the farm and non-farm activities were the same in the study area. This could be attributed to time management and sufficient household labour attending to farm and non-farm activities

thereby improving household income and rural households' survivability during economic hardships. Also, the rural households considered diversification of resources as an important coping strategy.

On the contrary, Jabo *et al*. (2015) found that there was a significant difference between the income from non-farm activities and that of the farming activities. Furthermore, the result did no corroborate with Tanjila *et al*. (2015) and Ibekwe (2010) who reported that at 1% level of significance, the null hypothesis was rejected, which implied that there was a significant difference between the mean household farm income and non-farm income. Variation of household income has been revealed to be related to the level of income generating activities of the rural farm households (Ibekwe, 2001). Hence, diversification of income ensures against economic shocks and risks of a setback in income.

CONCLUSION

The findings of the study showed in the contribution of farm and non-farm activities to rural household income a complementary effect on income; and this mitigates the effect of the current economy on rural households and dependence on one source of income. Therefore, engagement in non-farm activities is the way forward to cope. However, farming activities remained the most enduring and dominant income source for the rural households.

RECOMMENDATIONS

The study recommends as follows:

i. engagement in non-farm sources of income in rural areas should be encouraged through entrepreneurial skills training, capacity building, and infrastructural development and thus check effects of factors considered in the study on non-farm activities. This does not negate enhancement of extension to boost food production.
ii. Furthermore, while encouraging engagement in non-farm activities, the extension services should emphasize diversification of agricultural production as a form of risk reduction strategy and economies of scope to minimize much engagement in non-farm activities so that food production does not decline.

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