

## **DETERMINANTS OF HOUSEHOLDS' LIVELIHOOD AMONG RURAL WOMEN IN DELTA NORTH LOCAL GOVERNMENT AREA OF DELTA STATE, NIGERIA**

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### **ABSTRACT**

*This study assessed the determinants of households' quality of life among rural women in Delta North Local Government Area of Delta State, Nigeria. A total of 200 households were randomly selected using the multistage sampling procedure. Delta North zone purposively selected as it has the highest intensity of agricultural activities and the highest concentration of arable crop farmers. Five Local Government Areas out of the nine in Delta North Senatorial District were purposively selected. The study achieved the following objectives: to describe the socio-economic characteristics of women, identify the main sources of livelihood of women, and to analyse the determinants of the selected livelihood strategies in the study area. Data were collected using structured questionnaire. Descriptive and inferential statistics were used for data analysis. Result shows that (28.0%) of the rural women were young, married, had formal education, with large household size and well experienced in farming. A higher percentage were engaged in farm enterprise and considered problems such as pest and diseases, high cost of transport, bad road network, lack/inadequate improved planting materials, and inadequate capital as most serious faced. Probit regression test result revealed that education ( $\beta = -0.465$ ) house hold size ( $\beta = -0.312$ ) and farm size ( $\beta = 0.709$ ), had significant influence on the women livelihood enterprise decision. It is recommended that government should seriously consider formulating Policies that recognize the diversity and heterogeneity of women's income generating activities.*

**Keywords:** Quality of life, Women, Rural households

### **INTRODUCTION**

Rural areas are the economic backbone in most developing countries and they enhance economic growth through job creation, labor supply, provide food and raw materials to other growing sectors of the economy, and help generate foreign exchange (United Nation's Development Programme, UNDP, 2014). Despite these significant contributions, rural areas are the most marginalized. They are characterized by poverty, food insecurity, unemployment, inequality and lack of important socioeconomic services. Poverty is one of the challenges facing rural women, and the greatest obstacles to the pursuit of sustainable socio-economic growth (UNDP, 2014). According to Olaolu, Akinagbe and Agber (2013), lack of food is the most critical dimension of poverty, reflected in the popular saying that 'when hunger is excised from poverty, the burden of poverty is light'. Farming is the backbone of the Nigeria economy and the performance of the sector directly or indirectly affects the lives of many people especially the rural populace. More than 85% of the population is engaged in agriculture (Njoku, 2013). The sector contributed 41.5% to GDP between 2001 and 2005 and 41.68% between 2001 and 2010 (Aderibigbe, 2013).

Nonetheless, the author noted that agriculture still provides employment for about 70% of the working population and its primary source of income for the majority of rural dwellers. However the sector is not without its challenges and because of the natural and socioeconomic problems, Nigeria rural women are suffering from instability of income. Low productivity of the sector is the major cause of unemployment and underemployment in the rural areas. Hence rural non-farm activities can play an important role in improving the well-being of the rural women families. It has been observed that 57.3% of the farm households have one or more members participating in non-farm activities (self-employment 43% and wage employment 25.3%). Therefore, giving emphasis to the role of non-farm economic activities by governmental and non-governmental organisations dealing with rural development will enable farmers to diversify their sources of income. Farmers have financial constraints in being involved in non-farm activities.

Several studies have shown that women farmers, particularly the rural farm families, usually engage in different farm and non-farm income generating activities ostensibly to obviate the seasonality of primary agricultural production and create a continuous stream of income to cater for the starring exigencies of life. Diversification of most rural economies created new opportunities for non-farm employment and played a key role in raising the average income of women farm households, thus dissipating most of the policy concerns related to chronically depressed farm income. While much research has gone into understanding the patterns of rural non-farm enterprises and their contribution to household income and to household quality of life and poverty alleviation, as well as into understanding the determinants of rural women household participation in starting up and running such enterprises (Nagler & Naudé, 2014). Promoting enterprise activities for the working poor and near-poor is essential to development and improvement of the rural sector. In Nigeria almost all rural women participants in low-income households are engaged in household-based activities like family farming, and non-farm enterprises this is as a result of improving household quality of life, rural income growth and poverty reduction (Haggeblade, et al. 2010). Fields (2012) has noted, the only way for poor households in low-income countries such as Nigeria to improve household quality of life is through earning more money from non-farm enterprise activities. He argues that given that Household economy exist, and that most non-farm activities in low-income countries are now improving household economy. Analyzing household enterprises as a livelihood strategy brings a focus on one of the biggest issues enterprise owners may face: how much time and household capital to allocate to the enterprise, compared with other options such as agricultural activities or household chores. The decision may be based on the local economic environment, household assets and wealth, and household needs for cash income, for food security, for non-market goods such as water from the well, for risk management and income smoothing, as well as social norms and responsibilities to other family, household and community members. (Lay,2011) and underestimated in structural transformation debate (Fox & Pimhidzai, 2011).

Various studies have shown that while most rural women households are involved in farm activities such as livestock, crop, or fish production as their main source of livelihood, they also engage in other income generating activities to augment their main source of income (Abimbola & Oluwakemi, 2013). The focus on household quality of life is relevant, in particular with the reduction on rural poverty. The reduction of poverty is the most difficult challenge facing any country in the developing world where an average, the majority of the population is considered poor and are beginning to diversify their livelihoods into farm and non-farm activities as a

relevant source of income, so the development of various non-farm-activities can effectively be exploited as a potent stimulator for further economic growth, offering rural communities better employment prospects on a sustainable basis. The study achieved the following Objectives: to describe the socio-economic characteristics of women in the study area, identify the main sources of livelihood of women in the study area, and to analyze the determinants of the selected livelihood strategies in the study area. The null hypothesis states that there is no significant relationship between the determinants of sources of livelihood and woman in the study area.

## **METHODOLOGY**

This study was carried out in Delta State of Nigeria. The State is in the south-south geopolitical zone of Nigeria. It lies roughly between longitude 5<sup>o</sup>.00” and 6<sup>o</sup>.45” and shares common boundaries with Edo, Ondo, Anambra, Rivers and Bayelsa State to the North, North-West, East, and South-East respectively (Delta State Agric Policy, 2007). It is generally low-lying and has a deep coastal belt inter-laced with rivulets and streams which form the Niger- Delta.

A multi-stage random sampling method was used in the selection of the rural women. The first stage involved the purposive selection of one agricultural zone from the state. The criteria for selection was the high farm and non-farm activities taking place in the zone. Which is Delta North agricultural zone in Delta state. The second stage was the purposive selection of five LGAs out of the nine LGAs in Delta North Senatorial District which represented 50% of the LGAs in the selected zone. Thus, a total of 5 LGAs were selected. The third stage was the random selection of two villages from the selected LGAs in the state, to give a total of 10 villages. In the fourth and final stage, stratified random sampling was used to sample women engaged in farm activities while snow ball sampling technique was used to select 20 rural women in each category per community. The total sampled were 200.

Trained enumerators were used to elicit information from the respondents, under the supervision of the researcher. Primary data was collected with the aid of a questionnaire and interview schedule administered by the researcher and trained enumerators, who were fluent in the local languages, while secondary data was sourced from the library, journals, Internet, and Local Government of study.

Descriptive statistics such as mean, frequency distribution tables, and percentages were used for data analysis. Data were also analysed using inferential statistics such as Probit regression model.

The mathematical representation of probit regression analysis is specified as follows (Quartey, 2005):

$$P (Y_1/1-Y_1) = a+b_1X_1+b_2X_2+-----+bnXn + e \quad \text{.....eqtn 1}$$

Where;

P = a dichotomous/dummy variable

a = the coefficient on the constant term

b = the coefficient on the independent variable(s)

X = the independent variable (s)

e = error term

*Dependent Variable:*

Y<sub>i</sub> = Decision to diversify economic enterprise (Dummy variable; diversified = 1, not diversified = 0)

*Explanatory variables:*

X<sub>1</sub> = Age (measured in years)

X<sub>2</sub> = Education (years of formal school education)

X<sub>3</sub> = family size (no. of persons living together under same roof)

X<sub>4</sub> = Marital status (dummy variable: married = 1; single = 0)

Probit regression was used to analyse the hypothesis which states that, there is no significant relationship between demographic characteristics and economic diversification decision.

## RESULTS AND DISCUSSION

### Socioeconomic characteristics of the rural women household

The socioeconomic characteristics of the rural women household is presented in Table 1.

**Table 1: Socio-economic characteristics of rural women household in the study area**

Characteristics	Categories	Freq	%
Age (years)	25 & below	5	2.50
	26 – 35	43	21.50
	36-45	69	34.50
	46-55	63	31.50
	56 -65	19	9.50
	66 -75	1	.50
Marital status	Single	16	8.00
	Married	136	68.00
	Divorced/separated	14	7.00
	Widow (er)	34	17.00
Educational level	No formal	48	24.00
	Primary education	41	20.50
	Secondary	56	28.00
	Post secondary Edu.	55	27.50
Household Size	1- 4	80	40.00
	5 – 8	108	54.00
	9 -12	10	5.00
	13 -16	2	1.00
Farming Experience (years)	1 -5	11	5.50
	5 -9	51	25.50
	10 -14	32	16.00
	15 -19	43	21.50
	20 -24	5	2.50
	25 -29	9	4.50
	30 -34		
	35 -39	4	2.00

**Source: Field Survey, 2016**

An examination of result reveals that a higher proportion of the rural women were 36-45 years old (34.5%), 46-55 years (31.5%), 26-35 years (21.5%), 56-65 years (9.5%) and 66-75 years (.50%) with an average age of 40.48 years. The average age of the respondents implies that they were in their productive age. Olaleye (2008) noted that if provided with appropriate technology recommendations, these able-bodied persons will have the capacity to produce food and other agricultural products for both household consumption and commercial purpose, thus, catering for the household welfare.

It is observed that majority of the rural women were (68.0%) married, 17.0% were widow, (8.0%) single while Divorced represented 7.0%. This implies that the married predominates. Similar result has been reported by Akinwumi *et al* (2006), who noted that majority of rural women farmers were married. The fact that majority of the respondents were married, suggest a sense of family responsibility and the need for them to engage in economic enterprise in order to contribute to their family quality of life.

The results show that 28.0% of the rural women had secondary education, 24.0% had no formal education, 20.5% had primary education while 27.5% had post-secondary education. The result reveals that the respondents possessed different educational background, but most had formal education. This is likely to affect the quality of life their household would have since a higher educational attainment might promote economic diversification, which will improve their welfare. This finding is consistent with that of (Babatunde & Qaim, 2009). Onemolease (2004) reported that education enhances farmers understanding and application of modern technologies in their enterprise engagement, be it farm or non-farm which, consequently can enhance their contribution to household quality of life

The average household size of the women was 5 persons. A household size of 5-8 predominate (54.0%). The finding suggests the respondents had a fairly small family size. This might affect the supply of family labour to assist the respondents in their enterprise, compelling them to resort to other forms of labour such as hired labour. This will further constrain the women economically, considering their poor status. Similar household size was reported by Edokpa (2014) for households in Edo state.

As shown in Table 1, the non-response rate of 22.5% among the rural women suggest that these women were not engaged in farming, 5.5 % had 1-5 years farming experience, while 25.5% and 16.0% had 5-9 years and 10-14 years of experience respectively. The average experience was 9 years, which suggest that the women had some level of experience in their farm enterprise. Such an experience among farming places them in a better opportunity to cater for and contribute to their household quality of life. Okwuokenye and Onemolease (2011) confirms the finding, indicating that having good farming experience in enterprise activities will enable the farmers to be better positioned to know the needs and problems associated with farming activities with farming activities.

### **Enterprise activities and income**

Frequency distribution of enterprise activities and income of rural women farmers is presented in Table 2

**Table 2: Frequency distribution of Enterprise activities and income of rural women**

#### **Farm Activities in the study area**

Enterprise	Freq	%	mean (₦)
Marketing	116	58.0	70,500.00
Arable cropping	86	43.0	93,037.00
Tree crop production	55	27.5	84,779.00
Processing	80	40.0	50,417.00
Paid farm labour	60	30	25,806.00
Livestock keeping	55	27.5	47,745.00
Total	150		204,687.00

**Source: Field Survey (2016)**

Table 2 shows the main sources of livelihood for women in the study area, which reveals that 58.0 percent of the respondents were Marketers of agricultural products, 43.0 percent were into arable cropping, 27.5 percent were into tree crop production, 40.0 percent were into processing, 30 percent were into paid farm labour and 27.5 percent were into livestock keeping. This shows that a majority of the respondents were farmers. This implies that most of the respondents derived their source of livelihood from farming and trading/marketing activities. According to Ajayi et al. (2016), diversification of income sources by rural households and occupations are norms for individuals or households for different socio economic reasons which can be categorized as either farm or non-farm income sources for livelihood .In addition, it is evident that rural households in Nigeria engage in multiple livelihood activity such as trading, small scale business and processing of agricultural goods in order to supplement earning from agricultural enterprise (Edna et al. 2007).

### **Determinants of rural women’s livelihood strategies**

Regression result of the determinants of rural women’s livelihood strategies I presented in Table 3

**Table 3: Regression of the determinants of rural women’s livelihood strategies in the study area**

Parameter	Coefficient (b)	Chi-square*	df	prob. level	Odd ratio
(Intercept)	-0.278	0.349	1	0.555	0.758
Age	0.168	3.192	1	0.074	1.183
Education	-0.465	26.265	1	0.000	0.268
Household size	-0.312	4.651	1	0.031	0.732
Farming experience	0.033	0.226	1	0.635	1.034
Size of land	0.709	39.294	1	0.000	2.032

*Likelihood Ratio Chi-Square (Omnibus Test) = 113.92; df = 5; P<0.001; Goodness of Fit = 416.709; df = 42; P>0.050; Pseudo R-Square = 0.451*

The coefficient for education is negative ( $\beta = -0.465$ ) and significant, indicating that the rural women having lower education were more likely diversify their income sources compared to those with higher education. The odd ratio ( $1/0.628 = 1.59$ ) implies that the less educated rural women were 1.6 times or 60% more likely to diversify their economic activities than the more educated women. A reason for this may be that the more educated women are engaged in professional jobs or other formal paid employment, which may not afford them opportunity to engage in other income activities. It is equally possible that women with less education receive little remuneration / salary, unlike the more educated ones, which is grossly inadequate, and therefore prompts them to seek for alternative economic activities to cater for their household welfare. Onemolease (2005) noted that persons with higher education are more likely to earn higher income or work in high paying job, which may not motivate them to seek alternative or complementary income sources.

The coefficient for household size is also significant and negative ( $\beta = -0.312$ ). The negative sign implies that rural women farmers with smaller household size are more likely to diversify their economic activities compared to those with larger families. The odd ratio ( $1/0.732 = 1.366$ ) implies that rural women with smaller household size were 1.4 times or 40% more likely to diversify their economic activities compared to those with larger household size. This is contrary to *a priori* expectation, since it is expected that women with larger families would tend to



diversify their income sources in order to cater for their larger families. It is possible that women with larger household have members who are economically independent, and so there may be no need for them to diversify economic pursuits. Thus, it is possible that the smaller families have more of the household members as dependents, who do not contribute to the income portfolio of the household. This finding is consistent with that of Asmah (2011), who noted that having smaller household to cater for will definitely give an opportunity to save more for future purpose. This also agrees with the study of Adepoju and Obayelu (2013), who reported a positive and significant relationship between household size and livelihood diversification. But this result is dissimilar to the one obtained by Bedemo, *et al.*, (2013) who reported that household composition has an insignificant effect on women's' decision to diversify their economic enterprise.

The coefficient for size of land was positive ( $\beta = 0.709$ ) and significant. The implication of this is that rural women with larger farm size are more likely to diversify their economic activities, compared to those with smaller farm size. A possible explanation for this could be that as size of farmland increases, more income is generated, which can be invested in other economic pursuits. The odd ratio is 2.03, which means that rural women with larger farms were two times more likely to diversify their economic activities compared to those with smaller farms. The relationship between respondent's age, farming experience and economic diversification decision was not significant. Both variables were however, positively related to the likelihood of the women diversifying the economic activities.

## **CONCLUSION**

The study focused on the determinants of sources of livelihood strategies of women in Delta North Local Government Area of Delta State. The socio-economic characteristics revealed that the rural women in the study area were young, married, had formal education, with large household size and well experienced in farming. A higher percentage of the women were engaged in farm enterprise. They believed their income activities had contributed to improvement in household quality of life, especially in the areas of regular feeding, health care and quality of food intake but encountered some constraints in their farm enterprise which include pest and diseases, high cost of transportation, bad road network, lack / inadequate improved planting materials and inadequate capital. Regression analysis reveals that education, household size and farm size had significant influence on the women economic diversification decision. Majority of them were farmers and traders, and they have access to some of agricultural inputs and farm implements, which enhanced their farming activity. It was also revealed that most of the respondents that were farmers encountered the problems of pest and diseases, high cost of transportation, bad road network, lack / inadequate improved planting materials and inadequate capital, while in their non-farm activities, they encountered problems such as high competition from other entrepreneurs, job insecurity, lack of information on how to start a business, inadequate capital, government high tax, low salary/remuneration, low pricing.

## **RECOMMENDATIONS**

This study therefore recommended that:

1. Efforts should be made to improve the livelihood portfolios of women farmers in the area to make their livelihood sustainable through different Government Women Empowerment programs and Non-Governmental Organizations. This could be achieved by providing modern storage facilities, credit facilities at lower rates, provision of

extension agents/education, good roads and a responsive marketing structure should be put in place.

2. Government policies should be directed towards creating an enabling environment for diversification to other livelihood activities that can improve sources of farming women's livelihood.

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