

DETERMINANTS OF INCOME DIVERSIFICATION AMONG RURAL HOUSEHOLDS IN SURULERE LOCAL GOVERNMENT AREA OF OYO STATE

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ABSTRACT

This study investigated the determinants of income diversification among rural households in Surulere Local Government Area, Oyo State. To achieve this main objective, the study examined the socio-economic characteristics of the household, identified the determinants of income diversification among rural household, investigated the reasons for income diversification in rural areas and determined the constraints to engagement in income diversification. A sequential multistage sampling technique was employed and a mixed method of both descriptive and inferential statistical tools was used in analyzing the data to achieve the objectives of the study. Primary data was collected from the respondents through the administration of a well structured interview schedule. The information collected was based on the stated objectives of the study. The findings of the study revealed that the mean age was calculated as 49 and 60% of the respondents were male. Also, 51.1% of the respondents were practicing Islam while 63.3% of them were married and 56.7% of the respondents had between 1-5 members in their households. Below half (36.7%) of the respondents had completed Secondary education and 57.2% of the respondents were engaged in farming activities as their major occupation. Most (66.7%) of the respondents employed the use of hired labour on the farm from which 44.4% of the respondents were children. The findings also revealed that the mean income was #30,566.67 and 95.6% of the respondents agreed that the major reason for diversifying their income was to provide a means to survive when the major income is not sufficient. Also, 98.9% of the respondents agreed that increased income was the major determinant of income diversification while lack of credit facility was a major constraint to income diversification WMS = (2.62). The result of findings further shows that household income diversification was influenced by the age (-.038), gender (.049), marital status (-.028*) at 5% level of significance and household size (-.074**) at 10% while 50% of household income diversification was explained by the determinants of income diversification in the regression model. The study therefore recommends that provision of credit facilities should be made available and improved access to markets should be provided in the study area to promote income diversification and increase rural income.

KEYWORDS: Local Government Area, Income Diversification WMS, Descriptive and Inferential Statistical Tools

INTRODUCTION

The changing socio economic, political, environmental and climatic atmosphere in Nigeria and other developing countries generally known as “Global economic meltdown” across the globe has continued to aggravate the living conditions of most households especially those living in rural areas (Oluwatayo,2009). The accompanying increase in poverty level has led residents of these economies to search for numerous strategies to cushion the negative effects of

changes. This has led to diversification in their income which canvasses them to engage in income generating activities. Income diversification refers to the allocation of productive resources among different income generating activities, both farm and off-farm (Abdulilah and Crolerees 2001). It is widely agreed that a capability to diversity is beneficial for household at or below the poverty line, having alternatives for income generation can make the differences between minimally viable livelihoods and destitution. The tendency for rural households to engage in multiple occupations is often remarked, but few attempts have been made to link this behavior in a systemic way to rural poverty reduction policies. The farm households expands its activities in order to increase farm income or to reduce income variability by exploiting new or existing market or non-market opportunities, including waged employment in the local non-farm sector and the exploitation of natural resources (FAO and World Bank, 2001). Diversification may occur as a deliberate household strategy or as an involuntary response to crisis; and can be used both as a safety net for the rural poor or as a means of accumulation for the rural rich (Barrett, 2008). Nigeria, with a population of over 140 million, is the Africa's most populous country and continent's fourth largest economy (NPC). The economy is still basically agrarian and it is also the dominant activity in terms of linkages with the rest of the economy. In Nigeria, there is a growing interest in rural non-farm income as research on rural economics increase, showing that people's livelihood are derived from diverse sources and not as overwhelmingly dependent on agriculture as previously assumed (Bryceson, 2002). This study has provided an important understanding of the different activities that rural households are engaged in to generate income. To achieve the main objective, the study identified the socio economic characteristics of the respondents and the various activities carried out. Also the study identified the determinants of income diversification among rural households, investigated the reasons for income diversification and investigated the constraints to engagement in income diversification. The study further determined the relationship between the socio economic characteristics of the respondents, determinants of income diversification and income diversification in rural household in that the socio-economic characteristics and the selected variables considered as determinants can influence the degree to which the respondents diversify into other non-farm activities.

METHODOLOGY

The study was carried out in Surulere Local Government Area of Oyo State which has its Headquarter at Iresa Adu and situated along Ejigbo – Ogbomosho Road. Geographically, it is located in the western region of the Nigeria map, located at northeast of Oyo State and the latitude of 3⁰ North, longitude 7⁰ East of Greenwich meridian. It is around the derived savanna with cultivable fertile soil and with the annual rainfall ranges between 1270mm and 20230mm, this last for 7-10 months of the year with monthly temperature of 27⁰ C and relative humidity is 75%. It has an area of 23km². The study area comprises of ten wards namely: Oko, Mayin, Ilajue, Igbon, Iwofin, Iregba, Iresa apa, Adu, Gambari and Baaya oje. The people of Surulere Local Government are mainly agrarian with a very high percentage of the people involved in trading of farm produce. The climatic condition encourages the growth of many tropical crops like: cashew, mango, maize, yam, cassava, Sweet Potatoes, Pepper. The population for the study comprises all farmers in Surulere Local Government of Oyo State, who makes ends meet by engaging in one activity or the other. A sequential multi-stage sampling procedure was adopted for the study. The first stage involved the random selection of 3 wards from the named ten. The second stage involved the selection of 21% of the villages based on income diversification activities. The third stage involved the selection of 10 respondents from each selected villages making a total of 90 respondents as the sample size. Primary data was collected from the farmers through the administration of a well structured interview schedule. The information

collected was based on the stated objectives of the study. In analyzing the data obtained for the study, a mixed analytical method was used in this study using qualitative and quantitative analysis. This includes; Descriptive statistics (means, frequencies, percentages) which was used to determine the socio-economic characteristics of the respondents and the inferential statistical tools used were Pearson Product Moment Correlation and Multiple Regression analysis to determine the relationship between the variables.

The general form of the regression model is implicitly stated as;

$$Y = b_0 + b_1X_1 + b_2X_2 + b_3X_3 + \dots + b_nX_n$$

Where

Y= Income diversification

b0 = Constant

X1= High level of production

X2= Seasonality of produce

X3= Market access

X4= High risk management

X5= Availability of labour

X6 = Social infrastructure

X7 = Increased income

The A priori expectation is that income diversification determinants such as Seasonality of produce, Social infrastructure and increased income would have positive relationship with the dependent variable while High level of production, Market access, High risk management, Availability of labour would have negative outcomes.

Measurement of Variables

The dependent variable for this study is income diversification which was measured by the number activities the respondents diversified into, and the independent variables consist of socio-economic characteristics of respondents like Age, Educational level, marital status, primary occupation, Household size, Religion status and Farm size and the determinants.

RESULTS AND DISCUSSIONS

Socio-Economic Characteristics of the Respondent

Respondent's distribution by age as depicted in the table 1 below shows that the mean of the respondent age was 49, this implies that about half of the respondents were young and still in their active working years. It also implies that diversification of income is common among the young household heads who are more energetic and could afford to take risks associated with income diversification. Majority (60%) of the respondents were male engaging in one activities or the other in the study area. 51.1% of the respondents were practicing Islam, while 48.9% of the respondents were Christians. 63.3% of the respondents were married and still live with their wives, which implies that majority of the respondents were

married and shows that most of the respondents were responsible members who cherished the institution of marriage. The mean household size of the respondent is 5 and it can be inferred that the households whose membership is large easily diversify their income due to readily available family labor so as to earn more income that will be sufficient for the family than those with fewer members. More than half (53.4%) of the respondents had one form of formal education or the other which makes it easier for them to diversify their income to any form of occupation. Also, 57.2% of the respondents were engaged in farming activities as their major occupation while 42.8% were engaged in non-farm activities. This distribution generally reveals the relative importance of farming as the main occupation and largest employer of labour in the study area as the majority (72.2%) were cultivating between 1-3 acres of land.

Table 1: Distribution of Respondents by Socio-Economic Characteristics

Variables	Frequency	Percentage (%)
Age (years)		
<30	12	13.2
31-40	23	25.3
41-50	15	16.6
51-60	15	16.5
61-70	13	14.3
Above 70	12	13.2
Mean = 49		
Sex		
Male	54	60
Female	36	40
Religion		
Islam	46	51.1
Christianity	44	48.9
Marital status		
Married	57	63.3
Single	7	7.8
Divorced	6	6.7
Separated	8	8.9
Widowed	12	13.3
Household size		
1-5	51	56.7
6-10	39	43.2
Mean = 5		
Educational status		
Secondary completed	33	36.7
Secondary uncompleted	17	18.9
Primary completed	15	16.7
Primary uncompleted	14	15.6
Non formal education	10	11.1
Adult education	1	1.1
Occupation		
Farming	52	57.2
Non-farm	38	42.8
Farm Size(Acres)		
1-3	65	72.2
4-7	25	27.7
Monthly Income		
<10,000	9	9.9
11,000-20,000	28	31.0
21,000-30,000	14	15.6
31,000 -40,000	13	14.3
41,000-50,000	13	14.3
51,000-60,000	9	9.9
>60	4	4.4

Source: Field survey, 2015

Activities Involved of the Respondents

The result of the findings on the activities involved in table 2 below shows the on-farm and off farm activities the respondents were involved in. 45.6% of the respondents were involved in Arable cropping, 18.9% were Tree cropping, 16.7% were livestock farming, 15.6% were involved in other crop like cash crop, 4.4% were involved in Forestry and 3.3% were involved in fish farming for on farm activities. For off farm activities, the result shows that 38.6% of the respondents were involved in trading, 16.7% were hair dressing, 12.2% were involved in weaving, 7.8% were involved in other activities like mechanics, vulcanizing, bike riding, taxi driving, 5.6% were involved in fashion designing 3.3% were involved in blacksmith and 1.1% were involved in carpentry and dry cleaning respectively. This indicates that the respondent take these activities as their major activities and shows that majority of the respondents were into Arable cropping which lead to income diversification during the off-season.

Table 2: Distribution of Respondents by the Type of Activities Involved

On Farm	Frequency	Percentage	Off Farm	Frequency	Percentage
Fish farming	3	3.3	Carpentry	1	1.1
Tree cropping	17	18.9	Black smith	3	3.3
Arable cropping	41	45.6	Hair dressing	15	16.7
Forestry	4	4.4	Dry cleaning	1	1.1
Livestock farming	15	16.7	Fashion designing	5	5.6
Others	14	15.6	Trading	31	38.6
			Weaving	2	12.2
			Others	7	7.8

- **Multiple Responses.**

Activities Diversified

Aside the major activities the respondents were involved in, table 3 below shows that 53.7% diversified their activities to livestock, 15.6% diversified to others activities like cash cropping, 10% diversified to Arable cropping, 3.3% diversify to Tree cropping and forestry respectively, 7.8% diversified to farm labour work, 5.6% diversified to fish farming while 2.2% diversified to feed mill. The table also shows that 45.6% diversified to others activities like mechanic, vulcanizing, taxi driving, bike riding 12.2% diversified to Trading, 8.9 % diversified to carpentry, 7.8% diversified to fashion designing and weaving respectively, 6.7% diversified to dry cleaning, 4.4%, diversified to black smith, 2.2% diversify to hair dressing. This indicates that respondents whose major activity was farming diversified to non farming and those that their major activities were non-farming diversified to farming activities in order to contribute to the welfare of the family and to overcome credit constraints.

Table 3: Distribution of Respondents by Income Diversification

On Farm Diversified	Frequency	Percentage	Off Farm Diversified	Frequency	Percentage
Fish farming	5	5.6	Carpentry	8	8.9
Tree cropping	3	3.3	Black smith	4	4.4
Arable cropping	9	10.0	Hair dressing	2	2.2
Forestry	3	3.3	Dry cleaning	6	6.7
Farm labour work	7	7.8	Fashion designing	7	7.8
Feed mill	2	2.2	Trading	11	12.2
Livestock farming	49	53.7	Weaving	7	7.8
Others	14	15.6	Others	41	45.6

- Multiple responses

Reasons for Income Diversification

The result of findings in table 4 below shows that 95.6% of the respondents diversified their income to provide a means to survive when the major income is not sufficient, followed by 91.1%, who diversified to overcome the risk of income fluctuation and do it as an hobby, 90% diversified to supplement insufficient income, 81.1% diversified to overcome credit constraint, 73.3% diversified as livelihood strategies, 66.7% diversified as sources of income during off seasons, 52.2% diversified to create a competitive atmosphere for agricultural labour market, while 46.7% diversified to engage family labour. This implies that the majority of the respondents diversified their income to provide a means to survive when the major income is not sufficient and to overcome the risk of income fluctuation, even as there is economic meltdown, diversification is necessary to reduce the poverty trends and to be able to earn enough to take care of the family.

Table 4: Distribution of Respondents by Reasons for Income Diversification

Reasons	Frequency	Percentage
Overcoming credit constraint	73	81.1
As an hobby	82	91.1
Engagement of family labour	42	46.7
As livelihood strategies	66	73.3
Sources of income during off seasons	60	66.7
Supplement insufficient income	81	90.0
Overcoming the risk of income fluctuation	82	91.1
Provision of means to survive when the major income is not sufficient	86	95.6
Creating competitive atmosphere for agric labour market	47	52.2

Multiple Responses

Determinants of Income Diversification

Table 5 below revealed the determinants of income diversification. Majority (98.9%) of the respondents agreed that increased income was a major determinant for income diversification. Followed by accessibility to market (91.1%), seasonality of produce (87.8%) and high level of production (80%).

Table 5: Distribution of Respondents by Determinants of Income Diversification

Determinants	Frequency	Percentage
High level of production	72	80
Seasonality of produce	79	87.8
Market access	82	91.1
High Risk management	50	55.6
Availability of labour	41	45.6
Social infrastructure	41	45.6
Increased income	89	98.9

Multiple Responses

Constraints to Income Diversification

Table 6 below shows that various constraints were identified to income diversification in the study area. According to the findings, Lack of credit facilities was a very serious constraint that the majority of the respondents were facing with a weighted mean score of 2.62. Followed by unavailability demand for product (2.44), poor transportation (2.43), inadequate storage facilities (1.97) and Unavailability of land (1.82). This implies that the major constraint to income diversification in the study area were lack of credit facilities and low demand for products.

Table 6: Distribution of Respondents by Constraints to Income Diversification

Constraints	Very Serious	Serious	Not a Constraint	WMS	Rank
Poor transportation	53(58.9)	23(25.6)	14(15.6)	2.43	3 rd
Unavailability of land	25(27.8)	24(26.7)	41(45.6)	1.82	5 th
Lack of labour	19(21.1)	22(24.4)	49(54.4)	1.67	7 th
Poor social infrastructure	20(22.2)	24(26.7)	46(51.1)	1.71	6 th
Inadequate storage facilities	29(32.2)	29(32.2)	32(35.6)	1.97	4 th
Lack of credit facilities	63(70.0)	20(22.2)	7(7.8)	2.62	1 st
Low demand for product	53(58.9)	24(26.7)	13(14.4)	2.44	2 nd
Poor information	20(22.2)	18(20.0)	52(57.8)	1.64	8 th

Multiple responses

Test of Hypotheses

The result of the Pearson Product Moment Correlation as shown in the table 7 below shows that marital status, age and gender were significant at 5% while household size was significant at 10%. This implies that there is a significant relationship between the marital status, age, gender, household size and income diversification of the rural households, which indicates that married respondents with larger household size were more involved in income diversification in the study area and the older the respondents the lower their income diversification ability. Therefore, household income diversification was influenced by the age, gender, marital status and household size.

Table 7: Relationship between the Socio –Economic Characteristics of the Respondents and Income Diversification of the Rural Households

Variables	Correlations	Remark
Age	-.038*	significant
Gender	.049*	significant
Religion	.201	Not significant
Marital status	.028*	Significant
Household size	.074**	Significant
Year spent in school	.131	Not significant

Source: Field survey, 2015

Test of Hypothesis

From the table 8 below, the R square value of .050 is calculated. This implies that 50% of the income diversification is explained by the determinants included in the regression model.

Regression Model Equation

$$Y = B_0 + B_1X_1 + B_2X_2 + B_3X_3 + \dots + B_nX_n$$

Where

Y= Income diversification

B₀= constant

X₁= High level of production

X₂= Seasonality of produce

X₃= Market access

X₄= High risk management

X5= Availability of labour

X6 = Social infrastructure

X7 = Increased income

R2= 0.50

Adjusted R2 = -.031

Y= 1.031-.027X1 +.101X2 -.285X3 -.091X4 -.026X5 +.056X6 +.152X7.

t -value = (-.202) (.613) (-1.559) (-.804) (-.217) (.418) (.310)

From the equation above, three of the coefficients that is, seasonality of produce, social infrastructure and increased income have positive signs which means that an increase in any of the determinants will increase the income diversification of the respondents.

Table 8: Relationship between the Determinants of Income Diversification and Income Diversification of the Rural Household using Multiple Regression Method

Determinants	Coefficients				
	B	Std. Error	Beta	t	Sig.
(Constant)	1.301	.543		2.935	.019
High level of production	-.027	.135	-.023	-.202	.043
Seasonality of produce	.101	.165	.071	.613	.04
Market access	-.285	.183	-.174	-	.023
High Risk management	-.091	.113	-.097	1.559	.024
Availability of labour	-.026	.120	-.028	-.804	.828
Social infrastructure	.056	.116	.060	-.217	.632
Increased income	.152	.490	.034	.418	.057
				.310	

Source: Field survey, 2015

Model Summary

Table 9

Model	R	R.Squre	Adjusted	Std. Error of
			R Square	the Estimate
1	.224	.050	-.031	.476

Source: Field survey, 2015

CONCLUSIONS

This study concludes that about half of the respondents were young and still in their active working years and most of the respondents were male engaged in one activity or the other in the study area. The respondents whose major activity was farming diversified into non farming and those that their major activities were non-farming diversified into farming activities, but most of the respondents generate income from farming activities. Major reason for diversifying their income was to provide a means to survive when the major income is not sufficient while poor transportation was the major constraint to income diversification and household income diversification was influenced by the age, gender, marital status and household size of the respondents. Also an increase in production level, seasonality of produce, access to market, risk

management and income will increase the income diversification of the respondents as they were identified as the major determinants.

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