

Determinants of Rural Households' Choice of Non-Farm Livelihood Patterns in Southeast Nigeria

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Abstract

The study ascertained the determinants of the choice of non-farm livelihood patterns of rural households in Southeast Nigeria. The specific objectives were to: describe the socio-economic characteristics of rural households in the study area, identify the predominant non-farm livelihood patterns adopted by rural households and ascertain available livelihood resources and estimate the determinants of the choice of non-farm livelihood patterns among households in the study area. A five (5)-stage random sampling procedure was used in the selection of 360 samples for the study. A structured and validated interview schedule was used for data collection. Data were analyzed using mean, frequencies, percentages and ordered logit regression model. Results indicated that trading (mean = 3.98), commercial cars/motorcycle services (mean = 3.91), Bicycle repairing (mean = 3.71), tailoring and weaving (mean = 3.53), were the predominant non-farm livelihood patterns of the respondents. Furthermore, human capital (mean = 2.86) and social capital resources (mean = 3.13) were their available livelihood resources. Human capital resources ($p = 0.001$) and physical capital resources ($p = 0.076$) were the determinants of respondents' choice of non-farm livelihood patterns. The study recommends that all stakeholders should intensify rural infrastructural development.

Key words: Livelihood resources; Non-farm livelihood patterns; Rural households

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1. INTRODUCTION

Agriculture provides increased on-farm and off-farm employment opportunities capable of raising incomes of the resource-poor households and their purchasing power. In this vein, World Bank (2006) noted that increased growth of the agriculture sector offers direct benefits to resource-poor families such as income and food, contributes to broader food security objectives and help to establish forward linkages with high value-added, industries as well as ties between rural and urban centres. Furthermore, on-farm activities which embrace crop and livestock farming have strong linkages with non-farm and off-farm livelihood patterns which are common among rural households (Etuk, Angba and Angba, 2015).

However, in recent times the rural livelihood architecture and pattern is changing rapidly from a predominantly farm to a more diversified but with non-farm colourations. This situation has become necessary due to dwindling productivity and pressure on arable land as well as pressure on the household to meet the emerging needs in a modern world. Non-farm livelihood patterns, which include trading, fabrication of tools, repair services, handicrafts, and arts apart from serving as stop-gaps, are expected to assist in servicing rural agricultural sector while providing the needed income to meet other household needs simultaneously.

The capacity to choose a particular livelihood or a combination of livelihoods varies markedly among individual members of a specific household and across households in a given community. However, the benefits of engaging in different livelihoods by a particular household cannot be over-emphasized. Involvement

in different livelihoods has helped to spread risks and manage uncertainties associated with single livelihood pattern primarily when such activities engaged in do not rely on the same resources. To many other households, diverse livelihood patterns serve as a measure to cope with insufficiency arising from shortcomings and failures in a significant livelihood means (Nwaogwugwu, 2017). Sometimes and often, when a favoured activity requires working capital but the individual and household have no access to ready credit, they may likely undertake some other activities to generate cash to pay for the required inputs.

Developments in the modern world have opened up new frontiers for varied livelihoods in favour of non-farm income activities. For instance, the technological breakthrough of contemporary age has helped in the diffusion of innovations, information, skills and experience, which individual members of the households are exploiting to undertake new livelihood activities. However, to diversify livelihoods into non-farm activities among rural households will likely provide all-season employment, stem the spate of rural-urban migration and its attendant consequences, increase rural income/savings and improve living conditions of household members (Adesope *et. al*, 2007).

However, the choice and decision on the number of livelihood activity to be embarked upon by household members largely depend on the availability and access of households to specific livelihood resources. The resources, which serve as inputs in livelihood activities include human resources, financial resources, natural resources, social resources, physical resources (Carney, 1998; DFID, 2000; Neefjes, 2000). The resources mentioned above combine in varying magnitude in pursuit of different livelihood patterns (farm or non-farm). Resource-poor households build their livelihood patterns around available and accessible resources. However, different households within the same locality have diverse levels of accessibility to resources and thus the type of livelihood strategy and benefits that can accrue to them. The situation has become more critical due to increasing deplorable state of rural infrastructures and its attendant negative consequences on the entire rural economy.

Despite the efforts by different stakeholders through various interventions and policies on rural development, there is still need for a renewed emphasis and call for increased effort in transforming Nigerian's rural environment for sustainable livelihood and rural wellbeing.

1.1 Statement of the Problem

Livelihood strategies in rural communities may vary from one household to another and from one community to another. Bryceson (2000) noted that the attitudes of African rural dwellers towards their livelihood activities are highly mixed, best characterized by the phrase "betwixt and between". This scenario might be in terms of choice

of livelihood activity engaged in and the variety or combination of different livelihood strategies. Relatively, it is quite common to find that some live with high expectations of material returns based on an ever-shifting livelihood base. Many others profess occupational or vocational identities that are associated with the past than the present. These variations found in rural livelihood base are sources of concern in development studies.

Besides, decisions on livelihood activities among households, according to *Angba et al.*, 2012 may depend to a large extent on the availability and access to specific livelihood resources. Despite several policies and efforts aimed at improving livelihood resources through agricultural and rural development in Nigeria in recent years, the situation on the ground indicates that the vast majority of people living in rural areas face an increasing threat to livelihoods. Since social development is increasingly limited, social welfare services are not adequate and deprivation rife, the capacity to choose a particular livelihood strategy is stifled. Consequently, the standard of living among households in rural areas is on a continuous downward spiral trend. Perhaps, this to some extent may be responsible for social vices, agitations, crisis, protests and kidnapping/hostage taking cases witnessed in recent times in various parts of the southeastern states of Nigeria in an alarming proportion. Often, these incidents have been blamed on the declining access to livelihood resources and services relevant to livelihood activities of rural households in those communities. Given the preceding, it becomes necessary to ascertain the determinants of choice of non-farm livelihood strategies of rural households in Southeast Nigeria.

1.2 The Purpose of the Study

The purpose of the study is to ascertain the determinants of choice of non-farm livelihood strategies of rural households in Southeast Nigeria.

1.2.1 Objectives of the Study

The design of the study was to achieve the following specific objectives:

- (a) Describe the demographic characteristics of rural households in the study area,
- (b) identify the predominant non-farm livelihood strategies adopted by rural households in the study area,
- (c) ascertain available livelihood resources in the study area, and
- (d) estimate the determinants of choice of non-farm livelihood strategies among households in the study area.

1.3 The Hypothesis of the Study

Ho1: There is no significant relationship between available livelihood resources and choice of non-farm livelihood strategies among rural households in the study area.

1.4 Significant (Justification) of the Study

This study provided useful insight into livelihood

resources availability to rural households in Southeast Nigeria as a precursor for government, international development agencies, NGOs, etc., to reappraise the present development paradigms in Nigeria.

This study demonstrated how the interactions between livelihood resources and choice of non-farm livelihood strategies pursued by rural households. This situation will be useful for the government at various levels in Nigeria, self-help groups, town unions, etc. to recognize areas of developmental needs to direct their efforts in the provision of resources in rural areas to ensure proper decision on alternative livelihood strategies among households.

Because of government's concern for rural development, this study generated relevant data as bases for future policy formulation and a better choice of appropriate development projects in the study area necessary to increase the chances of earning a living through non-farm livelihood activities among rural households in the study area.

1.5 Scope of the Study

The design of the study was to cover only the southeast of Nigeria comprising five states namely–Enugu, Anambra, Imo, Ebonyi and Abia. It focused on households in rural communities. The study ascertained the determinants of choice of non-farm livelihood strategies of rural households in Southeast Nigeria and identified the available livelihood resources and the predominant non-farm livelihood strategies engaged by household member in the study area.

2. METHODOLOGY

The study was conducted in southeast Nigeria, situated east of River Niger. The population of the study comprised of 754,702 rural household heads generated with the help of key informants in the study area. The sample size was selected from the population using a 5-stage random sampling technique. It involved the random selection of 3 States out of the 5 States in southeast Nigeria; 3 zones; 6 local government areas; 18 communities and 10 household heads from each of the selected communities. This exercise gave a sample size of 180 respondents. Data were collected with the aid of an interview schedule which was structured and validated by the researchers. The responses were measured on a 4-point likert-type summated rating scale of agreement (strongly agree, agree, disagree and strongly disagree). The values of the scale (4, 3, 2 and 1) were summed up to obtain 10. The mean value of the sum gave 2.50, which served as the cut-off mean. This became the benchmark for accepting any item as available livelihood resource in the study area. Data analysis was carried out using descriptive and inferential statistical tools namely: frequency, percentage, mean and ordered logit regression.

3. RESULTS AND DISCUSSION

3.1 Socio-Demographic Characteristics of Rural Families in the Study Area

The result in Table 1 shows the Socio-demographic characteristics of rural families in the study area. It showed that majority of the respondents (88.6%) are males. This result is an indication that male members of the family are more prone to diversify to non-farm livelihood activities in the study area. Result further show that majority of the respondents who engage in non-farm livelihoods fall within the age distribution 40-49 years and 50-59 years with 35.2% and 22.9% respectively. These age categories constitute the active work age of most individuals in most societies. On marital status, the result revealed that majority of the respondents is married (76.2%). It is evident since involvement in non-farm livelihoods offers additional income to meet the family's welfare needs. The result also indicated that the majority of the families covered in the study (60.0%), has a family-size of 4-6 persons. On the educational level of respondents, it revealed that the majority of the respondents attained a secondary school level of education (55.2%).

Table 1
Socio-demographic characteristics of rural families in the study area

Variables	Frequency	Percentage
Sex		
Male	93	88.6
Female	12	11.4
Age		
20-29 years	24	22.9
30-39 years	14	13.3
40-49 years	37	35.2
50-59 years	24	22.9
60 years and above	6	5.7
Marital Status		
Single	19	18.1
Married	80	76.2
Divorced	-	-
Widow/Widower	6	5.7
Family size		
1-3	2	1.9
4-6	63	60.0
7-9	34	32.4
10-12	4	3.8
13 persons and above	2	1.9
Educational level		
No formal education	4	3.8
Primary	27	25.8
Secondary	58	55.2
Tertiary	16	15.2
Major occupation		
Civil service	11	10.5
Farming	19	18.1
Trading	21	20.0

To be continued

Continued

Variables	Frequency	Percentage
Artisan	54	51.4
Farming Experience		
1-5 years	17	16.2
6-10 years	7	6.7
11-15 years	7	6.7
16-20 years	59	56.2
21 years and above	15	14.3

3.2 Non-Farm Livelihood Patterns among households in the Study Area

Results in Table 2 are the non-farm livelihood patterns engaged by members of the rural families in the study area. As indicated on Table 2, Trading (mean = 3.98), commercial cars/motorcycle services (mean = 3.91), Bicycle repairing (mean = 3.71), tailoring and weaving (mean = 3.53), traditional health attendants (mean = 3.37), local birth attendants (mean = 3.35), painting and beautification (mean = 3.34), mason (mean = 3.34), carpentry (mean = 3.33), carving/basket (mean = 3.28), electrical works and services (mean = 3.20), food vending (mean = 3.19), baking (mean 3.17), , welding and metal works (mean = 3.14), civil service (mean = 3.11), shoemaking/repairing (mean = 2.87), barbing/hairdressing (mean = 2.86) are the non-farm livelihood activities engaged by rural families in the study area. The above findings corroborate with previous studies that found the non-farm livelihood patterns among rural households in Nigeria (Nwaogwugwu and Matthews-Njoku, 2014; Mathews-Njoku, E.C. and Nwaogwugwu, 2015). The above non-farm livelihood patterns may have persisted in the study area since most of them could serve as either permanent adaptive strategies to the failure of farm livelihood patterns or coping strategies to cushion the shocks or stress when alternative livelihood patterns fail.

Table 2
Non-farm livelihood activities of respondents

Variables	Mean	Remark
Trading	3.98	Accept
Commercial motorcycle services	3.91	Accept
Bicycle repairing	3.71	Accept
Tailoring/Weaving	3.53	Accept
Traditional health attendant	3.37	Accept
Local birth attendant	3.35	Accept
Painting and Beautification	3.34	Accept
Mason	3.34	Accept
Carpentry	3.33	Accept
Carving/Basket making	3.28	Accept
Electrical works an services	3.20	Accept
Food vending	3.19	Accept
Baking	3.17	Accept

To be continued

Continued

Variables	Mean	Remark
Welding and metal works	3.14	Accept
Civil service	3.11	Accept
Shoemaking/Repairing	2.87	Accept
Barbing/Hairdressing Services	2.86	Accept
Pottery	1.50	Reject

Note: Any mean score <2.50 imply disagreement with any of the items; any mean score > 2.50 imply agreement with any of the items.

3.3 Livelihood Resources Available to Rural Households in the Study Area

Results in Table 3 revealed the livelihood resources accessible to households in the study area. Given the responses on the various items on human capital resources, the respondents rated human capital resources (Grand mean = 2.86) as available livelihood resources in the study area. The above results, therefore, are indicative that rural households in the study area have access to the human capital resource. The results showed that social networks that constitute the social capital resource in the agricultural transformation process are available to rural households in the study area since responses on item cluster gave a grand mean score = 3.13. Also, reactions on item clusters on physical resources gave a Grand mean score = 1.79 indicating that social amenities and infrastructures in rural communities in the study area are inadequate and inaccessible to support non-farm engagements of the households in the study area. Also, with a grand mean score = 2.33 realized from responses on items on financial resources, it is indicative that rural households have limited access to financial capital resources to support their livelihoods. The results of natural resources gave a grand mean score of 3.09, indicating that rural households have access to natural capital resources to support livelihoods.

Table 3
Livelihood resources available to rural households in southeast Nigeria

Variable	mean	Grand mean
Human resources		
Your household rely on manual labour for all your farming and other income-generating activities	3.31	
Your household supply all the labour required by the household.	3.14	
You have enough economically active males in your household.	2.92	
You have sufficient economically active female adults in your household	2.47	2.86
Your household members are trained in vocational skills	3.13	
Your household members have technical skills	2.35	
Your household members are trained in intergenerational knowledge in herbal medicine.	2.73	

To be continued

Continued

Variable	mean	Grand mean
Social capital resources		
You or any member of your household is registered with a co-operative society.	2.87	3.13
You belong to at least one trade association.	2.80	
Your household participates in informal savings/credit groups.	2.95	
All the adult members of your household belong to various units of the village/ community council.	3.26	
Every member of your household is a member of a religious	3.67	
You belong to the existing age grade association.	3.22	
Physical capital resources		
All season motor-able road network.	2.37	1.79
Adequate transportation facilities.	1.25	
Access to at least one personal mobile telephone line.	3.22	
Clean drinking water.	2.17	
Access to free healthcare and public health facilities for your household.	2.26	
Affordable healthcare services through the hospital.	2.24	
Free education beyond primary school.	1.57	
Access to the constant electric power supply in your house.	1.61	
Your distance to functional, daily market is less than 1 kilometer from your house.	2.58	
Financial resources		
Your primary source of building up cash is through esusu (contribution clubs).	2.80	2.33
Access to savings with the bank and other formal institutions.	2.28	
Banking services located in your community	2.32	
Access to formal sources of credit for starting a business.	2.08	
Additional cash either from relatives away from home	2.84	
Accessible government incentives and interventions	1.60	
Access to improved varieties of crops and livestock.	2.38	
Natural resources		
Your farming activities are done in your own farmland	3.12	3.09
You also have additional land acquired through other holdings.	3.01	
You have unhindered access to forest products (mushrooms, game animals, firewood, etc) in communal lands.	3.14	

Note: Grand mean score <2.50 imply disagreement with any of the items; any grand mean score ≥ 2.50 indicate agreement with any of the items.

3.4 Livelihood Resources as a Determinant of Choice of Non-Farm Livelihood Patterns in the Study Area

The result from Table 4 indicates that human capital resource showed an estimated coefficient of 0.40, which implies that an additional member in a household results in an increase in the tendency to choose an extra number of non-farm livelihood pattern by 40 per cent. This coefficient is significant at 1 per cent given its z-value of

3.909, which had a p-value of 0.001. This result implies that the number of livelihood pattern chosen by rural households strongly depends on the availability of more members. This suggestion is because most households draw upon the services of its members (male, female, adult, youth and children) in pursuit of their livelihood activities daily. Also, the result showed that physical capital resources have a coefficient of 0.16 (approximately 0.20), which implies that the availability of more physical resources such as rural infrastructures and social amenities increases the tendency to choose an extra number of non-farm livelihoods by about 20 per cent. The coefficient is significant at 1 per cent given its z-value of 1.776 and p-value of 0.076. For the goodness of fit, the model had a relatively low pseudo-R squared value of 0.050. However, this does not invalidate the model's fitness because the log-likelihood ratio estimated is high (46.583). Therefore, human and physical resources are strong determinants of the choice of non-farm livelihood patterns among rural households in the study area.

Table 4
Ordered logit regression model estimating livelihood resources as a determinant of choice of non-farm livelihood patterns in the study area

Variables	Coefficient	z-statistics	Prob. value
Financial capital	-0.044	-0.453	0.651
Human capital	0.407***	3.909	0.001
Natural capital	0.072	0.332	0.740
Physical capital	0.161**	1.776	0.076
Social capital	0.023	0.166	0.868
Pseudo R-squared	0.050		
L.R. statistics	46.583		
Prob.(LR-statistics)	0.000		

***= partial slope coefficient's z-value significant at 1%; ** = partial slope coefficient's z-value significant at 5%; * = partial slope coefficient's z-value significant at 10%.

4. CONCLUSION, RECOMMENDATION AND FUTURE RESEARCH

4.1 Conclusion

Based on the findings, there is a conclusion that rural households in the study area engage in different non-farm livelihood patterns. Also, the available human and physical resources influence the number of non-farm livelihood patterns chosen by the households.

4.2 Recommendations

Based on the findings, the following recommendations are made:

- Government and non-governmental agencies in Nigeria should sustain its human capital development efforts on the members of the rural household since livelihoods depend on the availability of members of the household.

- Rural infrastructural development should be intensified sustainably by all stakeholders.

4.3 Future Research

This research employed a Logit regression analysis to determine the choice of non-farm livelihood patterns of rural households in Southeast Nigeria. Future research should be done in other regions and a comparison made. Also, the inferential statistics should involve a combination of more robust statistical tools to ensure a more reliable conclusion.

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