

Socio-Demographic Variables as Determinants of Choice of Non-Farm Rural Livelihood Patterns in Southeast Nigeria

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ABSTRACT

The study aimed at establishing relationship between the socio-demographic variables and choice of non-farm rural livelihood patterns in Southeast Nigeria. Three (3) specific objectives which guided the study are to: examine the socio-demographic variables of rural households in southeast Nigeria; identify the predominant non-farm livelihood patterns adopted by rural households in southeast Nigeria and establish the relationship between the socio-demographic variables and choice of non-farm livelihood patterns in the study area. A five (5)-stage random sampling procedure was used in the selection of the study samples. A structured and validated interview schedules designed in three parts by the researcher was the main instrument used for data collection. The statistical tools used in data analysis included mean, frequencies, percentages and ordered logit regression model. The results indicated that predominant non-farm livelihood patterns include: small-scale trading (mean = 3.00), remittances from migrated relatives (mean = 2.74), civil service (mean = 2.55) among others. Non-farm livelihood Patterns chosen by the households in the study area is significantly determined by household size ($p = 0.033$), age ($p = -0.006$) and marital status ($p = -0.017$). It is recommended that the various skill training and acquisition programmes in Nigeria should be reviewed and made effective by including relevant skill needs of rural people and properly targeted at members of the rural family.

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Key words: *Socio-demographic variables; Non-farm; Livelihood patterns*



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Introduction

Rural households in developing countries face various degrees of challenges in generating sufficient income to meet basic needs for survival. This condition is worsened by the global economic recession of the last century and their increasing resource-poor systems, which according to Gowing (2002), have been untouched by the process of agricultural modernization. Consequently, they rely on a combination of income and products of several and different activities to meet daily needs. This practice has persisted among rural people over the ages and is at the core of livelihood strategies, attracting the attention and advocacy among development experts and scholars in recent years. For Loubser (1995), livelihood strategy is the totality of means by which people secure a living, have or acquire in one way or another, the requirement for survival and the satisfaction of needs as defined by the people themselves in all aspects of their lives. In most rural households across the world, livelihood structures and patterns are complex and derived from a combination of interlinked income earning activities which varies enormously according to opportunities, constraints and preferences. Some studies have indicated that agriculture has remained the bedrock of rural households' economy in Nigeria while admitting diversification into other alternative sources of livelihood (Olawoye, 2000; Agumagu, *et. al*, 2006). However, LEISA (2004) noted that in many parts of the world, the capacity of agriculture to provide sustainable livelihood for new generations in rural areas is declining. But there are no statistics from the above studies to capture the centrifugal forces associated with occupational experimentations over the last two decades in Nigeria. Yet it is conceivable that livelihoods among rural households are continually drawing on a proliferating range of sources orchestrated by the phenomenal push and pull of modern times. This makes a strong case for a critical review of livelihood strategies of rural households.

In Nigerian rural setting, livelihood pattern of households cut across agricultural and non-agricultural activities. But significantly, Alimi, *et.al* (2001) noted that about two-third of rural households earn their livelihood from subsistence agriculture, either as small-scale farmers or as low-paid farm workers while the remaining one-third engage in petty services. Understandably, dependence on agriculture as the bedrock of the rural household economies arise because their access to land (a major input in agricultural enterprises) through various forms of traditional land holdings and the potential of agriculture to readily meet their physical needs (food, water, energy, shelter) and to lesser extent cash needs (goods for reciprocal exchange and inputs in production).

Livelihood patterns and trends among rural households are changing rapidly. Consequently, participation patterns are also readily apparent and spreading among household members (male, female, adults, youths and even children) with far-reaching implications. As more and more household members engage in productive activities, the male household-head's dominant role as family income earner is fast eroding. Rural women including youths and children are also earning cash through varied livelihood strategies (Amao et al., 2003; Agumagu *et. al.*, 2006; Matthews-Njoku and Adesope, 2007; Adesope *et. al.*, 2007). Consequently, out-migration of household members is rife while cracks are beginning to show in many rural Nigerian family structures. Besides, signs of social dysfunctions associated with urban areas are surfacing among rural households while child labour has reached an alarming proportion. Furthermore, internal patriarchal authority within rural households and community leaderships are challenged and questioned by youths and women. Despite the foregoing culture-bound anomalies, men and household heads accepted their wives', daughters', and sons' non-farm income-generating activities outside the home. This perhaps, might be due to certain underlying and changing socio-demographic variables that require critical inquiry. The above arguments raise the need for a research to examine the socio-demographic variables of rural households; identify the predominant non-farm livelihood patterns adopted by rural households and establish the relationship between the socio-demographic variables and choice of non-farm livelihood patterns in Southeast Nigeria.

Methodology

The study was carried out in the southeastern States of Nigeria. The population of the study was composed of 754,702 rural household heads generated with the assistance of key informants in the study area. A sample size of 180 household heads was selected from the population through a 5-stage random sampling procedure. This involved the random sampling 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. Data were obtained by the use of a questionnaire which was structured and validated by the researcher. 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 a non-farm livelihood pattern in the study area. Data analysis was carried out using descriptive and inferential statistical tools namely: frequencies, percentage, mean and ordered logit regression.

Model Specification

The dependent variable P_{yi} is a polychotomous variable which is 1 when household is choosing a single non-farm livelihood pattern, 2 when it chooses 2 non-farm livelihood patterns and so forth till the 10th mix of non-farm livelihoods as given below:

Dependent variable = P_{yi} (probability of selecting a number of non-farm livelihoods)

The explicit form of the models is specified as:

$$Y_i = \beta_1 X_i + e_i$$

B = the vector of parameters to be estimated including the socio-demographic variables

$Y_i = 1, 2, 3, \dots, 10$ with each number representing a specific livelihood strategy. The particular non-farm livelihood number chosen are ordered from 1 to 10 livelihoods, same model was applied.

Where :

Y = non-farm livelihood patterns

X_1 = sex measured using a nominal scale in terms of male = 1 and female = 2.

X_2 = age of respondents in number years.

X_3 = marital status measured using nominal scale in terms of single = 1, married = 2, etc.

X_4 = household size as number of persons in the household.

X_5 = household composition using nominal scale in terms of couple only = 1, couple and children only = 2, couple and children and extended family = 3.

X_6 = educational level in years of attending formal education.

X_7 = major occupation measured using nominal scale in terms of agriculture = 1 and non-agriculture = 2.

X_8 = farm size in hectares.

e = error term

i = number of observation

Results And Discussion

The distribution of rural households in the study area based on the sex of the household-head is presented on Table 1. The result revealed that of the 180 household-heads surveyed 98 of them, which constitute about 54.43 %, are male while 82 (about 45.47 %) are female. This implies that male-headed households are in the majority (about 54.43%). This finding corroborates previous studies, which indicate that male-headed households are in the majority (Ajala and Oyesola, 2007). However, worth noting is the narrowing gap in the number/percentage of male (about 54.43%) and female (about 45.57%) headed households in rural areas of southeastern Nigeria. This narrowing percentage difference between male and female headed households could be as a result of increasing number of female household-heads who are likely single, widowed or divorced women or those whose husbands have migrated to towns or cities in search of better

livelihoods. This trend is likely to impose serious implications on patterns of livelihoods in such households. The result also showed that household-heads within the age groups of 51–65 years and 35-50 years accounted for about 41.73% and 39.34% respectively. These age categories in the study area appear to be associated with established, renowned, experienced and active individuals with network of livelihoods to which their households are identified with. The result further showed that an overwhelming majority of 176 respondents (about 97.77%) are married with 4 respondents (about 2.23%) single across the study area. The result has critical livelihood survival implications. As singles get married, their new status seem to confer on them a sense of responsibility, cast an aura of maturity tantamount to a quest for more and sustainable livelihood strategies to meet their expected and increasing household needs. If earlier unemployed, they might be obliged to render supportive services to their spouse's livelihood pursuit or are assisted to secure new ones. This is because in the Nigerian context, married people are cumbered with added responsibilities which may arise from both families from time to time. This therefore demands that the household has meaningful and reliable livelihood pursuits to generate needed income and resources. The result also revealed that about 32.23% of the households have household sizes of 4-6 persons, followed by household size, of 7-9 persons found in 53 households (about 29.43%), 50 households (about 27.81%) have household sizes > 9 persons while households with 2-3 persons account for the least 10.53%. This result implies that majority of the households are relatively large. This finding is in accordance with previous studies that revealed that the average rural household in Nigeria is large (Imbur. *et. al* 2008).. Such a large household size could be useful in the provision of labour requirement in support of a combination of livelihood strategies. In terms of ties and relationships that exist in the household, result indicate that majority (about 61.67%) of the households across the study area are composed of couple + children + extended family. Households which consist of couple + children only account for about 35.53% while the least are households made up of couple only (about 2.80%). This result is in accordance with Ekwe and Nwachukwu (2006).and underscores the strong ties associated with a typical Nigerian family over the ages whereby parents, children and other relations dwell together as household and supporting varied livelihood strategies for survival.

Table 1: Socio-demographic Characteristics of the Respondents.

Variables	Frequency	Percentage
Gender		
Male	98	54.43
Female	82	45.57
Total	180	100.00
Age Categories		
35-50 years	71	39.34
51-65 years	75	41.73
66-80 years	25	13.93
81years and above	9	5.00
Total	180	100.00
Marital Status		
Single	4	2.23
Married	176	97.77
Divorced	0	0.00
Separated	0	0.00
Total	180	100.00
Household Size		
2-3 persons	19	10.53
4-6 persons	58	32.23
7-9 persons	53	29.43
>9 persons	50	27.81
Total	180	100.00
Household Composition		
Couple only	5	2.80
Couple and children	64	35.53
Couple+children+extended family	111	61.67
Total	180	100.00
Years of Formal Educational		
No Formal Education	32	17.79
1-6 years	55	30.52
7-12 years	61	33.90
13 years and above	32	17.79
Total	180	100.00
Occupation		
Non-agriculture	41	22.77
Agriculture	139	77.23
Total	180	100.00
Farm Size		
0.0045 hectare	93	51.67
0.009-0.0135 hectare	59	32.77
0.018 - 0.0225 hectare	14	7.77
0.027 – 0.0315 hectare	11	6.13
0.036 hectare	3	1.66
Total	180	100.00

On educational level, in terms of years of education of the respondents, the result revealed that the bulk of the respondents about 33.90% and about 30.53% in the study area have secondary and primary education respectively. On the other hand, groups with no formal education and 13 years and above (tertiary) of formal education constitute about 17.80% and about 17.77% respectively. The above result substantiates the practice in the study area in which individuals veer into livelihood pursuits immediately after primary or secondary school education. In any case, literacy level of household-heads is an important variable as it influences the ability of an individual to comprehend certain knowledge, attitudes and skills necessary to boost their livelihood base. Besides, it enhances awareness and access to information vital for livelihood support. The distribution of households based on their major occupation showed that about 77.23% indicated agriculture as their household's major occupation while about 22.77% were for non-agriculture. The above result is in line with previous studies which revealed agriculture as the major occupation of households in rural communities in Nigeria (Alimi et. al, 2001; World Bank, 2006). It further confirms the importance of agriculture as a livelihood base of many rural households in rural southeast Nigeria. On farm sizes, the result showed that an overwhelming proportion of households in the study area (about 51.67%) subsist on farm sizes of 1 plot of land (0.25 hectare) while households on 2-3 plots (0.5-0.75 hectare) constitute about 32.77%, those on 4 -5 plots (equivalent to 1-1.25 hectares) are about 7.77%, 6-7 plots (< 2 hectares) are about 6.13%, the least is made up of households on 8 plots and above (> 2 hectares) constituting about 1.66% of the households. This finding is in consonance with previous studies that showed most rural households subsisting on small farm sizes (Ekwe and Nwachukwu, 2006; Awoniyi, 2008). This finding could be as a result of over dependence of these households on accessing farm lands through communal and family land, whose uneconomic sizes due to partitioning among family members cannot support any meaningful livelihood. Above all, these households lack credits to purchase additional plots of land for farming purposes.

Results presented on Table 2 showed the non-farm livelihood patterns among rural households in southeast Nigeria. The result showed civil service (mean = 2.55) as a non-farm livelihood pattern among rural household. It may be validated in view of the increasing employment opportunities created in various local government areas, rural cottage industries and other service centres in the study areas. Besides, a good number of government and non-governmental agencies have in recent years targeted rural households in their skill acquisition and training programmes for capacity building of many rural beneficiaries. These efforts may have been responsible in improving their chances for civil service employments as shown in the result. Furthermore, petty trading (mean = 3.00) is shown as a non-farm livelihood pattern in the study area. Previous studies with similar findings corroborate this present result (Olawoye, 2000; Mathews-Njoku and Adesope, 2007). In fact, petty and small-scale articles of trade ranging from candies and beverages to other food items as well as non consumables in the study area are common sights among rural households. While these items of trade are easily available to meet the household needs, sales from such items also provide ready income to meet other household requirements, Petty trading appear lucrative because of small initial investible capital required for a start, which households could afford through their menial savings. Also tailoring and weaving (mean = 2.50) was indicated as a livelihood strategy in the result. This appears to be one of the age-long livelihood bases that have persisted in rural economies despite transformations in modern times. Tailoring and weaving seem to sustain the interest of men and women from resource-poor households and makes minimal and affordable demand in the course of its skill training. Above all, the service it renders in rural areas has made it an indispensable livelihood base. In another result, remittances from relatives (mean = 2.74) were shown as a veritable non-farm livelihood pattern in the study area. Previous survey by Bryceson (2000) supports this present finding. This further underscores the place of extended family relationship in Africa and Nigeria in particular. Indeed, many rural household members are sustained through incomes remitted to them from migrated and non-resident relations. The above findings conform to Reardon *et al* (1998) that about 36 per cent of total rural incomes in West Africa come from non-farm activities.

Table 2: Non-Farm Livelihood Patterns adopted by Rural Households.

Variables	Mean	Remark
Civil service	2.55	Accept
Saloon operators	2.48	Reject
Carpentry and furniture making	2.06	Reject
Building/masonry	2.24	Reject
Small-scale trading	3.00	Accept
Tailoring and weaving	2.50	Accept
Transport services	2.33	Reject
Food vending	2.26	Reject
Music/entertainment	2.07	Reject
Remittance from migrated relatives	2.74	Accept

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

The value of the slope coefficient represents the mean change in the probability of choosing more non-farm livelihood patterns in response to a unit change in the value of the explanatory variable (the socio-demographic characteristics). The result on Table 3 revealed that household size with a partial coefficient had an estimated coefficient of 0.50. This implies that an additional member in the household results in increase in tendency to choose extra number of non-farm livelihood pattern by about 50 per cent. This coefficient is significant at 1 percent given its z-value of 2.73 and a p-value of 0.006. Also, age showed an estimated negative coefficient of -0.21 at 1 per cent given z-value of -2.13 and p-

value of 0.033. This implies that the choice of more non-farm livelihoods decreases with increase in the age of household members. In other words, the younger but matured and economically active the household members are, the more they tend to choose and participate in more and varied non-farm livelihoods than older household members. This finding has relevance in the productivity and active years of individuals since old age is associated with retirement from active labour, decreasing strength and vitality.

Table 3: Ordered Logit Regression Model estimating the relationship between socio-demographic variables and the choice of Non-farm Rural Livelihood Patterns in South east Nigeria.

Variables	Coefficient	z-statistics	Probability
Education	-0.046	-1.313	0.189
Household size	0.503***	2.731	0.006
Sex	0.210	-0.709	0.478
Age	-0.211**	-2.128	0.033
Occupation	-0.649	-1.521	0.128
Household composition	0.340	1.379	0.168
Marital status	0.885**	2.385	0.017
Pseudo R-squared	0.029		
LR statistics	24.019		
Prob. (LR statistics)	0.001		

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

The result in Table 3 further revealed marital status as having an estimated coefficient of 0.88 (approximately 0.90), significant at 5 per cent given its z-value of 2.39 and p-value of 0.017. The implication is that as members of the household get married, the tendency to choose extra non-farm livelihoods increases by about 90 per cent. For the goodness of fit, the model had a relatively low Pseudo-R² value 0.029. However this does not invalidate the model's fitness as the log likelihood ratio estimated was high (24.019) and statistically significant at 1 per cent (p-value = 0.000). Therefore, the number of non-farm livelihood patterns chosen by the households in the study area is significantly influenced by household size, age and marital status.

Conclusion

Based on the findings, it is concluded that rural households in the study area adopt a combination of various non-farm livelihood patterns. Also, the number of non-farm livelihood patterns chosen by the households at any particular period is influenced by socio-demographic variables of household size, age and marital status.

Recommendation

Based on the findings, it is recommended that the various skill training and acquisition programmes in Nigeria should be reviewed and made effective by including relevant skill needs of rural people and properly targeted at members of the rural family.

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