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Migration, Remittances and Livelihood Systems of Farm Households in Enugu State, Nigeria

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Abstract
This study examines the effects of remittances on the livelihood of farm households in Enugu State, Nigeria. Multistage random sampling technique was used to select 120 remittance recipient households used for the study. Data collection was effected by use of structured questionnaire. Both descriptive and inferential statistical techniques were used in data analysis. The result showed that households whose heads are (1) in the middle to old age (51-70 years) and (2) not highly educated are more likely to produce migrants. Also families with large household sizes (six and above) migrated more. The most frequent channel for remittance delivery was hand carriage and both cash and non-cash remittances were received. Regression result showed that age of household heads as well as their levels of education affected migration. Other factors that affected migration are farm size and household size. The effect of remittance on families livelihood systems was found to be affected by the number of social organisations the household heads belong to, the age of household head, farm size and size of remittance that is invested.
Keywords: Remittance, livelihood, farm, households.

1.0 Introduction

Farm households produce over 70% of the agricultural output of Nigeria in their characteristic small sized plots (NISER, 2003). These households collectively form an important foundation upon which the nation's agricultural economy rests. Farm households not only provide employment and food for the country's teeming population, they also provide a more equitable basis for distribution of income as well as effective demand structure for other sectors of the economy (Dorner, 2010; Brava-Ureta & Evenson, 2011).

The livelihood framework views farm households as being dependent upon a diversity of strategies in order to generate income. These strategies are based on a set of household 'assets' including natural capital, financial capital, physical capital, social capital and most importantly human capital (Singh & Gilman, 1999; Martin *et al.,* 200; Sanderson, 2000). These together form what is generally referred to as the asset pentagon.

Bebbington (1999) and DFID (2001) in their separate studies gave a breakdown of the farm household's asset pentagon to include: (1) natural assets comprising of land, water, trees, genetic resources and soil fertility (2) physical capital consisting of the basic infrastructural facilities available to farm families (3) human capital consisting of education, skills, knowledge, health, nutrition all of which impinge on the labour or capacity of the individual family members to pursue different livelihood options (4) financial capital consisting of savings, credit and inflows like state transfers and remittances, and (5) social capital consisting of membership in various organizations and groups as well as social and professional groups.

However, efforts by farm households to improve their well being through engagement in these livelihood options tend to be distressed by environmental factors, unemployment and poverty (Barret *et al.,* 2010; Ellis, 2010; Onoja, 2012). The characteristics of livelihood components of farm households are also affected by the quantum and values of these assets possessed by the households. Thus, livelihood can be described as consisting of systematic activities or enterprises undertaken by individual households using their capabilities as well as assets to derive material or financial reward and improved status (Nzeh, 2011).

To guarantee survival, migration has become a supplementary source of livelihood and household diversification strategy (FAO, 2007). Migration, whether domestic or international, is generally a household decision and a strategy to diversify income, minimize risk, cope with economic crisis and improve livelihood and welfare (Kiiru, 2010). Remittances are positive outcomes of migration and are the portion of migrant workers' earnings or available income sent to their families back home (Khoudour-Casteras, 2007).

According to Samal (2006) and Asa (2007) remittances are positive outcomes of migration and are the portion of migrant workers earnings or available income sent to their families back home. Remittance flows to the developing countries in 2006 was USD 221 million, an amount that was twice the official development assistance to developing countries in that year (Gupta, Pattilo & Waugh, 2009). IFAD (2007) reported that the volume of remittances to developing countries increased by 10.7 per cent between 2002 and 2007 and also

predicted that over the following five years, the cumulative remittances to developing countries would exceed USD 1.5 trillion.

In 2007 Nigeria was the highest receiver of remittances in Africa and the 13th in the world (World Bank, 2008). The country accounted for 31 per cent of total remittances flow to sub-Saharan Africa in the year under consideration. However, there are evidences that remittance flows are under-reported and so that the actual amount could more than double the official formal transfer figures (Gupta *et al.,* 2009).

Remittances are believed to have huge impact on the socio-economic conditions of families left behind in place of origin (Babatunde & Martinelti, 2010). Remittances have been reported to have overtaken income from agriculture in sheer size and importance, as persistent socio-economic and structural problems continue to depress the level of rural wages and availability of work (Deshingkar & Anderson, 2004; Van Der Geest, 2003).

Despite the perceived importance of remittances in enhancing income of households, the mechanisms through which remittances are transferred have not been adequately studied in Nigeria. While there is good information on international remittance very little is known about domestic remittance in Nigeria (Kiiru, 2010). In addition, accurate analysis of remittance utilization by farm households is rarely studied (Meyers, 1998).

Though a number of studies have treated the impact of remittances on development, welfare, food security, poverty and income inequality in Nigeria (Babatunde & Martinelti, 2010; Oseni & Winter, 2009; Chukwuone *et al.,* 2007), the authors were silent on the effects of remittance on farm households' livelihood in the country. In all these studies, the link between migration, remittance transfer mechanisms and their effects on farm households' livelihood has not been established empirically in Nigeria. As a result little effort has been made with respect to broad policies on how to utilize remittance for productive purposes. Concrete policies that could encourage the flow and efficient use of remittances are generally lacking (Maphose, 2007).

The synergy between migration and livelihood with respect to remittances has largely been unnoticed, whereas the combination of such perspectives could create significant empirical and theoretical cross fertilization. Hence the pertinent questions are: what are the factors that influence migration of household members?; what transfer mechanisms have been adopted?; what are the sources and uses of remittance?; how do remittances affect farm households especially in the study area? These and other related questions have been addressed by this study.

To achieve this, the study pursued a broad objective of determining the effects of remittances on the livelihoods of farm households in Enugu State, Nigeria. In specific terms the study took time to: investigate the socio-economic attributes of remittance recipient households; identify the source(s) and remittance transfer mechanisms; identify the types of remittances and uses to which they are put by farm households; determine factors that influence migration of farm household member(s) and determine the effects of remittances on farm households' livelihood.

2.0 Materials and Methods

Enugu State is the study area. The state is in the southeastern part of Nigeria with co-ordinates of longitudes $6^0$53' and $7^0$55' east and latitudes $5^0$56' and $7^0$05' north. The 2006 National Census puts the population of the state at 3,257,298 people (NPoC, 2007). The state is largely an agrarian one with above 70% of the population dwelling in the rural and sub-urban areas (NPoC, 2007). The state is divided into 17 local government areas (LGAs) and into three agricultural zones.

Sample selection was handled stepwise. From each of the three agricultural zones, two LGAs were selected. From each LGA two communities were also randomly selected giving a total of 12 communities. A list of remittance receiving households in each of the communities was prepared through the assistance of community heads. From this list ten households were randomly selected from each community. Thus a total of 120 households were selected for the study. The sampling unit was the heads of farm households.

Data were collected by use of structured questionnaire designed to capture both socio-economic characteristics of the sampling units and the remittance characteristics of the farm households. Both descriptive and inferential statistical tools were used for data analysis.

Regression analysis was used to determine the factors influencing migration of household members. The model for the regression analysis is specified as:

$$L_nY_i = a + \Sigma\beta_iX_i + \varepsilon_i \quad (1)$$

Y_i is the percentage of household size that migrated while X_i is the vector of the explanatory variables and ε_i is the error term. Based on the theory of migration (micro) the model presupposes that households have a threshold level of utility they aspire to, which is based on the cost-benefit calculation of expected returns of migration over future time period. This, however, depends on the structural characteristics of the origin and destination regions. Thus wage level, rate of unemployment, the climate, housing situation, healthcare, school system, in the origin and destination regions as well as the household specific characteristics such as age, sex, family status, educational level affect migration.

An adapted version of the above model was explicitly specified to capture the effects of some household

variables on the rate of migration. The modified household migration model was specified thus:

$$Nmhsize = \beta_0 + \beta_1 Age + \beta_2 Gen + \beta_3 Hsize + \beta_4 Edu + \beta_5 Inc + \beta_6 Frms + \beta_7 Ins + e \quad (2)$$

Where:

Nmhsize	=	Number of household size that migrated
Age	=	Average age (years)
Gen	=	Gender (1 if male, 0 otherwise)
Hhsize	=	Household size (No of persons)
Edu	=	Level of Education (years)
Inc	=	Income (₦)
Frms	=	Farm size (hectare)
Ms	=	Insecurity (No. of months)
β_0	=	Constant intercept
β_1 to β_7	=	Parameters of independent variables
e	=	Error term.

Similarly the effect of remittance on farm household livelihood was obtained by estimation of the household livelihood function as follows:

$$Y_i = f_i(A_i) + \varepsilon_i \quad (3)$$

Where:

ε_i = Error term which is assumed to be independent and normally distributed
Y_i = Return on activity
A's = A vector of explanatory variables including migrant remittances, representing Individual household in the sample.

The explicit form of the equation is as follows:

$$Roactivity = a_0 + a_1 Agehead + a_2 Hhsize + a_3 Genhead + a_4 Educ + a_5 Fmsize + a_6 Renatinvt + a_7 Assoc + a_8 Lstock + a_9 Saving + \varepsilon \quad (4)$$

Where:

Roactivity	=	Return on activity (₦)
Agehead	=	Age of household head (years)
Hhsize	=	Household size (persons)
Genhead	=	Gender of household head (1 = if female, 0. Otherwise)
Educ	=	Level of education (years)
Fmsize	=	Farm size (hectares)
Remittinvt	=	Remittance invested (₦)
Assoc	=	Number of associations belong to (= 1 if >3)
Lstock	=	Livestock (head)
Saving	=	Value of savings (₦)
Banit	=	Amount borrowed (₦)
a_1 to a_9	=	Parameters of independent variables
ε	=	Error term

3.0 Results and Discussion

3.1 Socio-economic Characteristics of Remittance Receiving Households

Some typical socio-economic characteristics of the households understudy were examined. These included the age of household head, the household size, the level of education and gender of the household head as well as his/her marital status.

More than 50% of the household heads fall between the ages of 51-70 years (Table 1A). Within this age there is an expected decline in agricultural productivity following a consequent decline in quality and quantity of labour this age category can offer. It, therefore, seems that this age group needs support for agricultural activities which remittance resources can provide.

The study showed that majority of the households (59.1%) had household size of seven and above (Table IB) implying that the higher the household size the higher the tendency of household members to migrate.

Households whose heads attained only primary education migrated most while the higher the level of education of the household heads the less the migration of its members (Table 1C). Thus the level of education of the household head may have implications for poverty levels that have been confirmed to induce migration (Chukwuone, 2007).

Male headed households slightly produced more migrants than female headed ones, though the margin of the difference is not wide enough (Table 1D). It might seem that gender of household head had insignificant

influence on the urge to migrate.
Households where husband and wife live together produced more migrants in the study (Table 1E) though households headed by widows produced a good number also. It might be that most of the households where both husband and wife are alive and live together are still in active child bearing age with high ratio of dependent relatives. Families with many dependent relations are more likely to produce migrants.

3.2 Remittance Characteristics of Respondents

The study also investigated the remittance characteristics of the households with respect to source of remittances, relationship with the source of remittances, channels through which remittances are sent, frequency of remittances, amount and types of remittances as well as remittances utilization.
Most (86.7%) of the remittances in the study fell under the category of internal remittances (Table 2A). Some households received both internal and external (international) remittances. The study indicated that male children migrated most (81.7%) over and above other categories of family members (Table 2B). This is in consonance with men playing the role of bread winners. Social expectations on male children are also higher probably leading to their higher rates of migration.
Hand carriage constituted the main channel (70%) for delivery/receipt of remittances (Table 2C). Banks also ranked high. It is clear that households use more than one type of channel as the multiple responses indicate.
Quarterly receipt of remittances was the one mostly reported in the study (Table 2D). Bi-monthly receipts also ranked high.
Amount remitted ranged between ₦1,000 and ₦50,000 (Table 2E). The most frequent amount (55%) received fell within ₦1,000 to ₦10,000 range. This might appear meagre but it means a lot for an impoverished family.
Both cash and non-cash materials are remitted (Table 2F). Family consumption accounts for 74.2% of remittance utilization (Table 1G). Agricultural production ranks second (56.7) while a good percentage is also devoted to human capital development with respect to payment of siblings' school fees or cost of their apprenticeship.

3.3 Factors Influencing Migration of Household Members

The outcome of the regression analysis intended to identify the factors that influenced the migration of members of households in the survey (Table 3) showed that age, income and educational attainment of household heads and household size had significant effects on migration.
Age of household head significantly ($P < 0.10$) influenced migration. This is in agreement with the earlier submission (Table 1A) where survey summary indicated that the older the household head the higher the tendency for household members to migrate.
Household size had a positive and significant ($P < 0.01$) effect on migration. This agrees with the earlier result (Table 1B) that households with higher household size tend to migrate more. This may be necessitated by the need to maintain siblings back home.
Level of education of household heads also significantly ($P < 0.05$) affected migration though inversely. This means that households whose heads had lower educational attainment are more likely to migrate unlike those whose household heads attained higher levels of education. It could also mean that the higher the level of education of the household heads the more likely they are able to earn more income. With more income at the disposal of the family the less the family members are likely to migrate.

3.4 Determination of Effects of Remittances on Household Livelihoods

The regression result showed that social group membership had negative but significant effect ($P < 0.01$) on utilization of remittances for livelihood purposes (Table 4). This could be because the more the social groups household heads join the more they spend to maintain their status in these social groups thereby leaving less for livelihood purposes. The size of remittance invested in agricultural production also had significant effect ($P < 0.01$) on the family's livelihood. Also significant ($P < 0.05$) is size of farm cultivated by household. This is in agreement with the earlier submission on level of remittance money invested in agriculture. Other variables that are significant are age of household head ($P < 0.10$) and level of education of household heads ($P < 0.10$).

4.0 Conclusion and Recommendations

4.1 Conclusion

Remittances were found to be a crucial source of income to the families of migrants in this study. Migrants were mainly internal and not the international types and the bulk of remittances received were in cash. Majority of the migrants were male children of the households and the average size of remittance received in the study was ₦10,000 received at least four to six times a year. The study also showed that hand carriage was the most widely used channel for internal remittance transfers. Remittances were mostly used for meeting pre-existing household needs/expenses such as consumption needs, debt payment and agricultural production. Factors that influenced migration in the study included age, education, household size and income of household heads. Use of remittances to finance membership in social groups, farm size, education and age of household heads significantly influenced the effects of remittances on farm household's livelihood.

4.2 Recommendations

Since remittances have become important sources of income for farm households there is the need to put in place policies that will encourage uninterrupted flow and productive investment of remittances.

With the large number of internal migrants in the study who depend on hand carriage to remit, there is the need to improve the security for this mode of remittance transfer. Otherwise a more vigorous campaign to increase patronage of formal transfer channels need to be put in place.

In view of the increasing importance of remittances (internal and international) there is the need for both the origin and destination countries to put in place formal and systematic way of accounting for remittance flows. By this way the contributions of remittances to national income can be gauged.

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Table 1: Socio-economic Attributes of Remittance Recipient Households

	Frequency	Percentage
A. Age of household head		
Age		
≤ 40	19	15.8
41 – 50	27	22.5
51 – 60	35	29.2
61 – 70	32	26.7
> 70	7	5.8
Total	120	100
B. Household Size		
No		
5	23	19.2
6	26	21.7
7	18	15.0
8	18	15.0
9	17	14.2
10	10	8.3
≥11	8	6.6
Total	120	100
C. Level of education of household head		
Level of Education		
No formal education	29	24.2
Primary education	53	44.2
Secondary education	20	16.6
Tertiary education	18	15.0
Total	120	100
D. Gender of household heads		
Gender		
Male	68	56.7
Female	52	43.3
Total	120	100
E. Marital status of household heads		
Marital status		
Married	68	56.7
Widowed	44	36.7
Separated	8	6.6
Total	120	100

Source: Field Survey, 2012

Table 2: Remittance Characteristic of Respondents

A. Sources of remittances		
Source	**Frequency***	**Percentage***
Internal remittance	104	86.7
External remittance	28	23.3
B. Relationship with source of remittance		
Relationship		
Daughter	35	29.2
Son	98	81.7
Husband	15	5.8
Wife	7	12.5
C. Channel through which remittances are received		
Channel		
Hand carriage	84	70.0
Bus companies	13	10.8
Bank	69	57.5
Western Union	12	10.0
Money Gram	7	5.8
D. Frequency of remittance		
Period		
Monthly	21	17.5
Bi-monthly	34	28.3
Quarterly	37	30.8
Semi-annually	20	16.7
Annually	8	6.7
Total	**120**	**100**
E. Amount of remittance received		
Amount (₦/year)		
1,000 – 10,000	66	55.0
11,000 – 20,000	18	15.0
21,000 – 30,000	20	16.7
31,000 – 40,000	8	6.7
41,000 – 50,000	4	3.3
> 50,000	4	3.3
Total	**120**	**100**
F. Types of remittance received		
Types of Remittance		
Cash and non-cash remittance	83	69.2
Cash remittances	37	30.8
Total	**120**	**100**
G. Remittance utilization		
Uses		
Consumption	89	74.2
Agricultural production	68	56.7
Clearing of debt	43	35.8
Land/housing	24	20.0
Human capital	57	47.5

*Multiple responses
Source: Field Survey, 2012.

Table 3: Factors Influencing Migration of Household Members

Variables	Coefficient	Standard error	t-value	P>/t/
Constant	0.432	0.875	0.494	0.622
Age of household head (years)	0.022	0.012	1.782*	0.077
Gender of household head	-0.052	0.268	-0.173	0.847
Household size (persons)	0.175	0.052	3.373***	0.001
Level of education of household head (yrs)	-0.061	0.029	-2.116**	0.031
Income (₦)	-1.665	0.265	-6.283***	0.003
Farm size (hectare)	0.118	0.272	0.434	-0.477
Insecurity (No. of months)	0.017	0.167	0.104	0.917

***, ** and * = significant at 1%, 5% and 10% levels respectively
$R^2 = 0.505$ F-value = 4.916
Source: Field Survey, 2012.

Table 4: Effects of Remittances on the Livelihood of Farm Households

Variables	Coefficient	Standard error	t-value	P>/t/
Constant	24276.87	36354.82	0.67	0.506
Age of household head (years)	672.61	403.56	1.667*	0.086
Gender of household head	-15490.39	10494.03	-1.48	0.143
Household size (persons)	641.29	1954.76	0.33	0.743
Education of household head	1906.47	1119.31	1.70*	0.091
Farm size (hectares)	4189.27	1719.38	2.44**	0.049
Remittance invested (₦)	1.8398	0.4316	4.26***	0.000
Savings (₦)	0.0709	0.1685	0.42	0.674
Livestock (heads)	1024.85	1417.9	0.72	0.471
Social groups (number)	-17572.5	5000.58	-3.51***	0.001

***, ** and * = significant at 1%, 5% and 10% levels respectively
$R^2 = 0.598$ F-statistics = 4.72
Source: Field Survey, 2012.