Urban-Rural Pattern of Remittances and Effects on Food Security of Rural Households in Nigeria

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Table 1: Probit Regression Results

Variables	Coefficient	Marginal Effects
Cash Remittances (N'000,000)	-0.304 (0.061)***	-0.108(.00000)***
Food Remittances(N'000,000)	0.259(0.147)*	0.0922 (.00000)*
Other remittances(N'000,000)	-0.616 (0.387)	-0.220 (.00000)
Sex of Household Head (Male, base). Female	-.1833136(.0369561)***	-.0672596 (.0139)***
Age (< 31 years, base)		
31-60 years	.0874792(.0250085)***	.0313586 (.00901)***
> 60 years	-.0166225(.0302662)	-.0059428 (.01085)
Household Size (<4, base)		
4-6 member	1.092545(.0206218)***	.3567027(.00608)***
>6 Members	1.73049 (.0299832)***	.4291347(.00467)***
Educational Level (None, base)		
Primary	-.3156669 (.0222719)***	-.1162986 (.0084)***
Secondary	-.3877214 (.0268149)***	-.1454034 (.01039)***
Post Secondary	-.3795094 (.0386376)***	-.1436873 (.0152)***
College	-.6997436(.0579363)***	-.27101 (.02255)***
Marital Status (Monogamous marriage, base)		
Polygamy	-.017659 (.114286)	-.0063241(.04109)
Informal Union	-.2661846 (.114995)*	-.0999054(.04486)*
Divorced	-.2598385 (.0541222)***	-.097232 (.02102)***
Widowed	-.2560879 (.0415557)***	-.0951107 (.01594)***
Constant	-.1653511 (.0241044)***	

Source: Researchers' Computation, 2013
Figures in parentheses are the standard errors
***,**, *, represent significance at 1%, 5% and 10% levels respectively

1 Background

Food security exists when all people at all times have access to safe nutritious food to maintain a healthy and active life (FAO, 1996, 2006). This definition brings to the fore the four dimensions of food security- availability, access, utilization and sustainability. Although all dimensions are important, the prevalent problem is the situation where households do not have access to the kind of food they need for nutrition and sustainable living, (Baro, 2002). Access here presupposes the ability of the households to have purchasing power (in terms of income or assets) to take the available food within their immediate environment.

In Nigeria, as in most developing countries, remittances form a large part of the income of rural households, (Akay et al, 2012, Olowa, et al, 2013). The incidence and depth of poverty has been found to decrease with an increase in remittances from household members across the country, Olowa, et al, 2013. Foreign remittances have also been found to be welfare improving in Nigeria, (Fonta et al, 2011). Remittances have also been found to have positive effects on the wellbeing of families of individuals who have migrated from the hometowns in China, Akay et al, 2012. This study differs in exploring the effect of remittances on the food security status of rural households in Nigeria, using the food poverty line of N44346.73 of the Nigerian Harmonized National Living Standard Survey, 2009

The data, the Nigerian Harmonized National Living Standard Survey is the latest in the survey of living standards, wellbeing and poverty in Nigeria. The data contains a total of 34, 769 sample, and out of which 25,442 are rural households. The representative sample is the household head.

The study explored the relationship between the different remittances available to rural households and whether they are food poor or food secure. Specifically:
-Identify the different levels and types of remittances by the socioeconomic characteristics of the rural households.
-Determine the effects of remittances and other socioeconomic characteristics of the households on their food security level.

2 Methods

Descriptive statistics was used for the first objective. Tables and graphs were used to present the socioeconomic characteristics, remittance flow and the link between remittances and the socioeconomic characteristics of the rural households' heads. Rural Household Food Security Level; Foster, Greer and Thorbecke (1984) (FGT) class of poverty measures was adopted with slight modification using per capita food expenditure of households (FAO 2003a; Omonona and Agoi, 2007). This is defined as:

$$Pi = \frac{1}{N} \sum_{i=1}^{q} \left[\frac{Z - Y_i}{Z} \right]$$

Where,

$$Gi = \left[\frac{Z - Y_i}{Z} \right]$$

Gi= food expenditure deficiency of household i

Head count ratio (H) = q/N

Z = food security line (2/3 mean per capita food expenditure), q is the number of households below the food security line, N is the total number of households in the total population, Yi is the per capita food expenditure of household i, P is the extent at which a household is food insecure (food insecurity gap short fall index). Thus,

Food poor households = 1, if per capita food expenditure < food poverty line
Food non poor households =0, if per capita food expenditure >= food poverty line
The Probit regression

Probit regression was used to determine the effects of cash remittances and other socioeconomic characteristics on food security level of the households. The general representation of the probit is given as: $y_i = \alpha_1 + \beta_i R_i + \delta_i X_i + \mu_i$

yi is the vector of the dependent variable (food security status of household), Food poor ==1, Non Food Poor =1

α,β,δ are the vectors of parameters to be estimated

Ri is the vector of the remittances, R1 is cash remittance, R2 is food remittance, R3 is other remittances

Xi, is the vector of the socioeconomic characteristics of the household head in the sample.

μ is the vector of the error term in the equation.

3 Results

The socioeconomic representation of the rural households reveals that there are more male household heads (86.6%) than female (13.4%). Most of the household heads are married (either in monogamous or polygamous relationships). Most rural household heads do not have any form of formal education (53.6%), followed by primary education (23.6%); college degree graduate make up only about 6% of the rural households. The result also shows that the average age of rural household head is 48 years old, with household size of 5 members. Average per capita expenditure on food is given as N559, 917.6, while the food poverty line is N44, 346.73. The mean cash, food and other remittances are N15, 277.25, N2367.58 and N959.16 respectively, while total remittance is on the average of N18, 603.99. On the whole, cash remittances flow more to rural households than other types of remittances.

Remittance patterns based on selected socioeconomic characteristics are presented in Figures 1-3. Figure 1 shows that female headed households receive more cash and food remittances than male headed households. In terms of age category of household heads, household heads within the 30 to 60 years age bracket receive more remittances followed by those who are at least 30 years old, (Fig 2). Figure 3 show that households with at least 3 members receive more remittances than other household size categories.

The probit regression, presented in Table 1 shows the effect of remittances and other socioeconomic characteristics of the rural households on their food security level. Cash remittance is seen to significantly reduce the probability of the rural household being food poor by a factor of -0. 3.04, while food remittances actually increase the probability of being food poor. Being in female headed households reduces the probability of being food poor than being in male headed households. This is obvious since female headed households receive more remittances than male headed households. The larger the household size, the higher the probability of the household being food poor. Increased educational attainment of the household head increasing reduces the probability of being food poor.
The marginal effects show the result of a marginal change in the independent variable and their effects on the dependent variables. It is seen that a marginal increase in cash remittance will significantly reduce the probability of being food poor for rural households. Other results follow the same pattern as the explanation of the coefficient above.
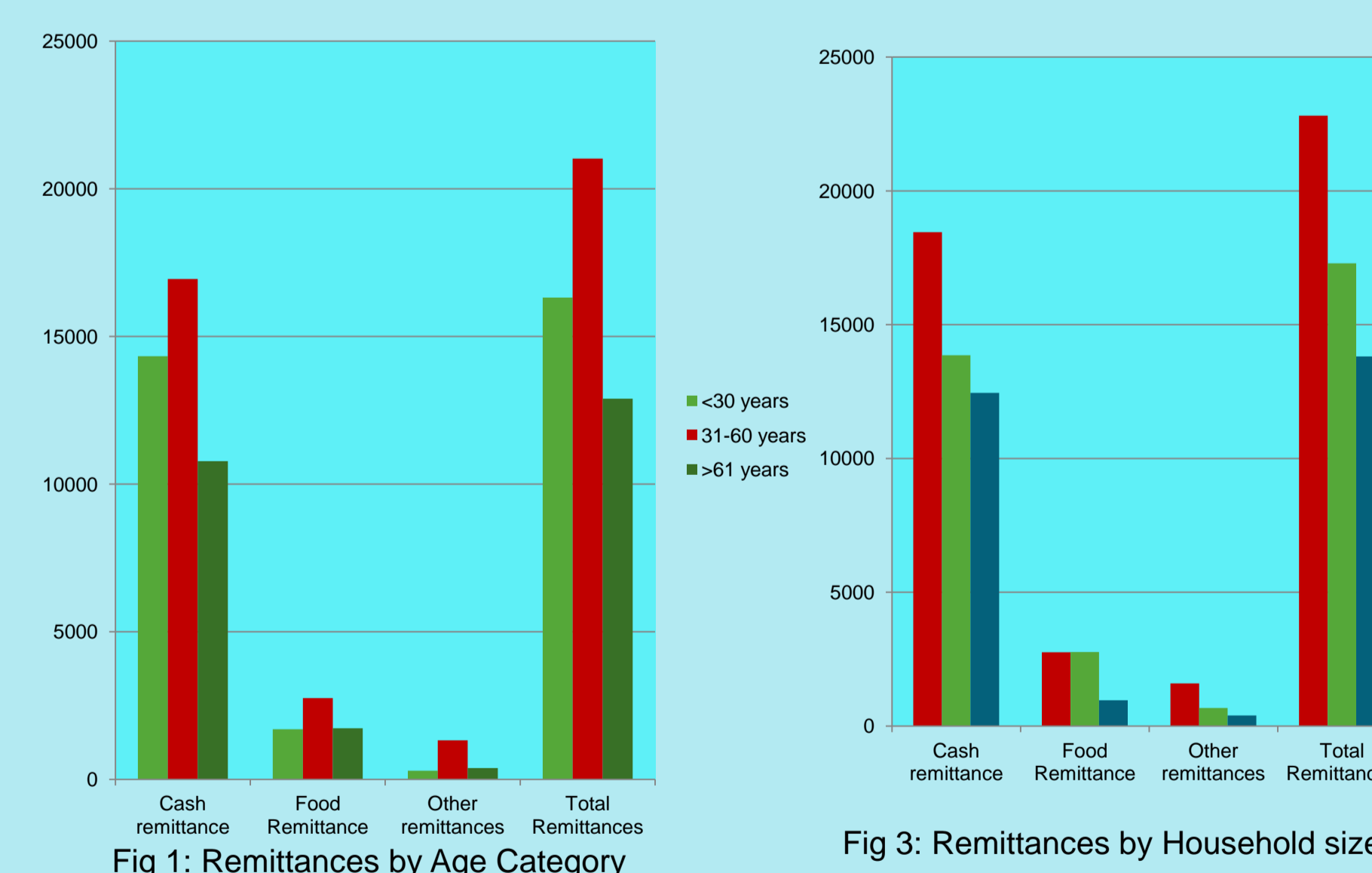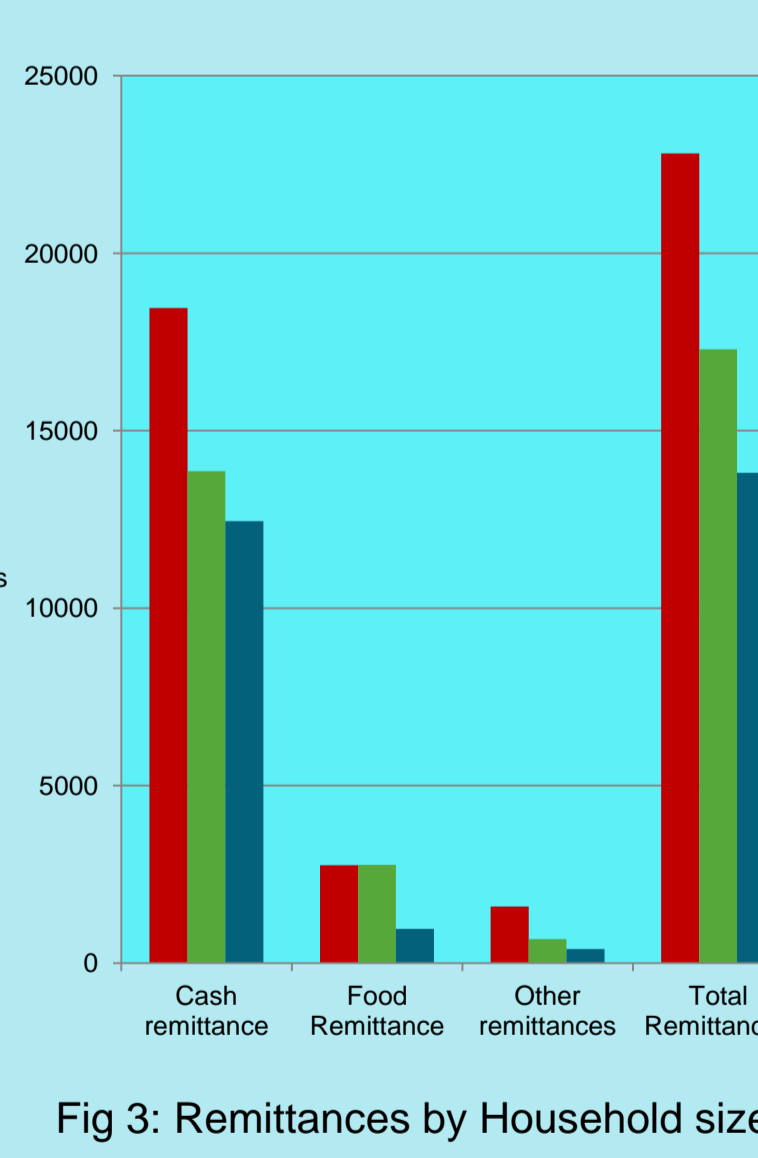

Fig 1: Remittances by Age Category
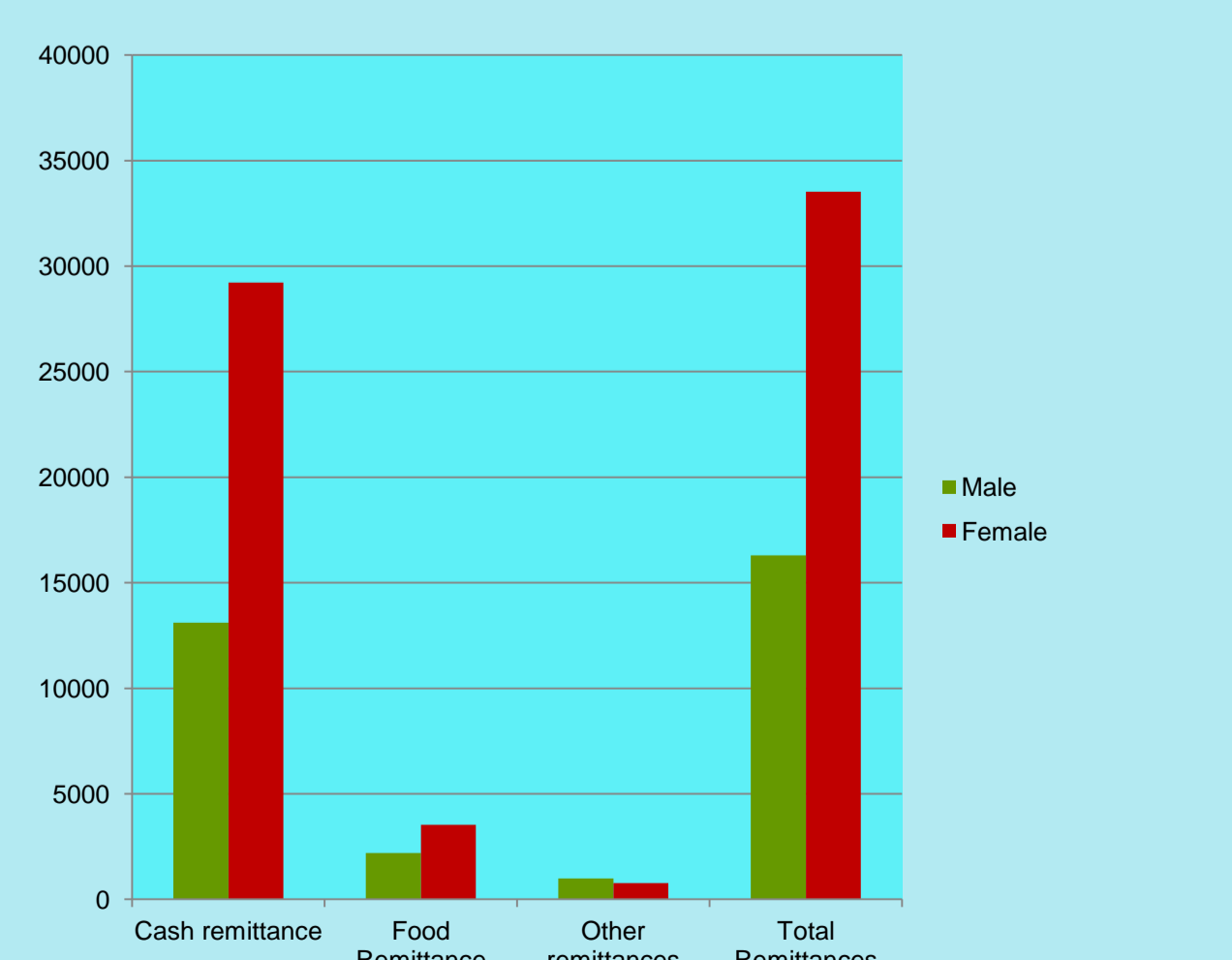

Fig 3: Remittances by Household size

Fig 2: Remittances by Sex of Household Head

4 Conclusion

-The study reveals that the pattern of remittance flows from urban to rural households involve more of cash remittances than other types of remittances.
-Cash remittance is found to significantly decrease the probability rural households' being food poor
-Education significant reduces the probability of being food poor, while increased household size significantly increases the probability.
- Policy recommendations is geared towards improving rural infrastructure, human capital (in terms of education) and ensure more formal flow of remittances that will be useful in building rural community in order to ensure more sustainable welfare and food security.

5 References

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