Journal of Economics and Sustainable Development
ISSN 2222-1700 (Paper) ISSN 2222-2855 (Online)
Vol.9, No.20, 2018

Poverty Level Between Remittance-Receiving and Non-receiving Households and the Effect of Poverty on Different Zones, Quintiles, Sex, and Sectors in Nigeria

Gloria Ifeyinwa ONAH Kalu I. UGBOR*
Department of Economics, University of Nigeria, Nsukka-Nigeria

Abstract
This study examines the difference in poverty level between remittance-receiving and non-receiving households and the effect of remittances on different zones, quintiles, sex, and sectors in Nigeria, using household data from the Nigerian National Living Standard Survey. A linear regression model was employed for estimating counterfactual per capita household expenditure without remittance, while Probit regression model was adopted to examine the effect of remittances on poverty, to know the difference between remittances receiving and non-receiving households. In other to correct for selection bias that could lead to an inconsistent estimate, since migrants were not randomly selected from the pool of households, Heckman selection model, – two-step estimates were used. Empirical results showed that poverty level between remittance-receiving and non-receiving households differ. Remittances led to poverty reduction in households. A mixed result was, however, found on the effect of remittances on different zones, quintiles, sex, and sectors. On the basis of the above, the study recommended that remittance-receiving households do not over depend on remittances and working less, which could negatively affect the development of their own financial and economic resources, despite the evidence that remittances contribute to poverty reduction. The government can as well facilitate and encourage expatriate Nigerians in sending remittances to their households. In respect to this, issuance of remittance bonds would be a right step.
Keywords: Poverty, Remittances

1. Introduction

Poverty is the greatest challenge especially in the developing countries and poverty reduction and equality in the distribution of income has remained a major objective of developing countries. The World Bank (2009) stated that approximately 2.8 billion people in the World live on less than $2 per day and 1.4 billion on less than $1 per day. Poverty limits economic development and fall in economic opportunities (strengthened by inequality) is perceived to have increased the level of poverty among individuals or households.

The incidence of poverty also varies between regions and the income inequality level across the globe. The highest levels of poverty and inequality in income over the years have been recorded in the Sub-Saharan African countries. UNDP (2013) posits that the index of human development in the Sub-Saharan African region increased from 0.366 in 1980 to 0.475 in 2012. The rate of increase is very poor; in fact, Ogbeide&Agu (2015) stated that it is the worst since 1980 as compared to other regions. According to them, the life expectancy rate of the region was the lowest at 54.9, as well as the mean years of schooling at 4.7. The region is also characterized as the region with the highest number of youths and the highest number of youth unemployment of 50% as of 2012. In sub-Saharan Africa, about 14.6 million children (one in every five children) live in absolute poverty as at 2007 data (World Bank, 2009).

Absolute poverty (income less than $1 per day) in sub-Saharan Africa increased from 288 million in 1981 to 516 million in 2001, increasing from 42 % to 47 %which is about 13% of the world's total poor population. In 2006, 34 of the 50 nations on the UN list of least developed countries are in Sub-Sahara Africa and a more sobering statistic is that about 14.6 million children (simply, one in every five) live in absolute poverty following the 2007 data (World Bank 2009; and Ogbeide&Agu, 2015).

In Nigeria, widespread and severe poverty is no longer strange. It is evidenced by a lack of food, clothes, education and other basic amenities. Severely poor individuals do not have the most basic necessities of life to an extent that their survival is a wonder to people. The poor are exposed to several health issues because they do not have basic health amenities and competent medical practitioners (Ucha, 2010). As of 1960, about 15% of the population of Nigeria was poor, which further increased to 27.2 per cent in 1980 to 54.7 per cent in 2004. In 2010, the poverty rate increased to 60.9 per cent (NBS 2006, 2012; and UNDP 2009). Almost 100 million people are living on less than $1 per day in 2012.Despite the recorded increasein economic growth rate, the proportion of Nigerians living in poverty is increasing almost every year. In the north-west and north-east regions of Nigeria, poverty rates were recorded respectively at 77.7% and 76.3%, compared to the south-west at 59.1%. The 2016 National Bureau of Statistics report showed that about 112 million Nigerians (equivalent to 67.1per cent) of the country's total population of 167 million people are living in poverty (Ahiuma-Young, 2016). The ranking based on Human Development Index (HDI) according to the World Bank (2011) placed Nigeria at 156th position among

177 nations as compared to the 151st position in 2002, whereas, the ratio of the richest 10 percent is to the poorest 10 percent was 16.3 with Gini index from 42.9 in 2004 to 44.7 in 2010. The poor economic condition has caused an increase in migration of Nigerians to other countries.

People migrate from the country of origin (Nigeria) to another country with the view of acquiring skills and to improve the living standard. In Nigeria, migration especially by the youths to other countries has been seen to be a solution to economic problems resulting from the macroeconomic instability, corruption and poor management of resources (Chukwuone, 2007; Quartey, 2006). Both unskilled and skilled Nigerians migrate mainly to Western Europe, the United States and the Persian Gulf states. Similarly, there has been considerably amplified the magnitude of remittancesfor many other developing countries over the years.

Remittances are now a rising source of external funding for developing countries. They are the second largest source of foreign capital in developing countries next to Foreign Direct Investment (FDI).Remittances can be a part of the "family welfare system" that enable households to smooth their consumption, alleviate liquidity constraints and provide a form of mutual assistance (Manuel, Lindsay, and Schnieder, 2006). It can boost the creditworthiness of a country and, therefore, enhance its access to international capital markets for financing infrastructure and other development projects (Ratha, 2007).According to the World Bank (2014), Remittancesreached up to$182 billion in 2004, 5.7 per cent above their level in 2003 and $436 billion in 2014.

Nigeria remains the single largest recipient in sub-Saharan Africa.Given the rising poverty level and migration of people to other countries and, therefore, increasing remittance in Nigerian it becomes imperative to ask: Is there any difference in poverty level between remittance-receiving and non-receiving households? What is the effect of remittances on different zones, quintiles, sex, and sectors?Indeed, the focus of this study is to determine if there is any difference in poverty level between remittance-receiving and non-receiving households and its effect on different zones, quintiles, sex, and sectors in Nigeria.

Although a number of country-specific studies and even across country studies have focused on the effect of remittances on poverty reduction, very little attention has been paid to analyzing the difference in poverty level between remittance-receiving and non-receiving households and its effect on different zones, quintiles, sex, and sector. The findings of this study would provide a good policy framework to tackle the poverty problem and checkmate migration which especially the youths have seen to be a solution to the economic problems of the country.

We divided this paper into five sections. Following this introductory section is section two, which reviews related literature. Section three is built on the methodology of this study, whilesection four presents the results of the study. The study is summarized in section four with policy recommendations also provided in the section.

2. REVIEW OF RELATED LITERATURE

2.1. Theoretical Issues

2.1.1. The Concept of Poverty

The concept of poverty is defined in various ways by authors because of its multi-dimensional effect on the individuals or households.Poverty is defined as the economic situation of individuals whereby they do not have sufficient income to obtain certain minimal levels of health services, food, housing, clothing and education needed for a better standard of living (Ogbeide&Agu, 2015; and World Bank, 2011). The definitions and measures of poverty can be grouped into two. These are "income poverty" and "lack of basic need poverty".Poverty is described as income poverty if a poor individual does not have sufficient money to ascertain a given level of standard of living. Lack of basic need poverty, on the other hand, is described as poverty resulting from lack of basic needs like food, shelter and clothing(Ogbeide&Agu, 2015).In this study, poverty is defined in line with the income perspective of poverty following Ogbeide&Agu (2015). This definition is used in this study because it is easy to measure and for the fact that it has international measuring standard like the $1 and $2 per day.

2.1.2 Theories of Poverty

Two main theories of poverty which classified poverty on the basis of cause according to Ogbeide&Agu (2015) are the individual/cultural theory of poverty and the structural/economic theory of poverty.

2.1.2.1 individual/cultural theory of poverty

This theory is credited to Oscar Lewis in 1966.This theory sees the individuals as the cause of their poor state. The theory describes the reason for poverty as inherited and individual actions like being lazy, not educated, teen parent, single female-headed family among others, which put them in a condition of not been able to compete for socio-economic opportunities. Such individual attitudes to put them in poverty, form a way of life and/or culture for them and are shifted to their next generation which develops to "vicious cycle of poverty" (Ogbeide&Agu, 2015; and Jordan, 2004).

2.1.2.2 Structural/Economic Theory of Poverty

A key proponent of this theory is Rainwater Lee. This theory is of the view that poverty comes from the structure of the economy. That is, the structure of the economy determines the poverty level of individuals in the society. Factors that could cause poverty include different levels of employment and the nature of the distribution of income.

Therefore, if an individual is poor it is not because he is not working hard but it is because the opportunity to work is not available. He his poor because of the economic situation that does not provide his own share of the income and inequitable distribution of income (Ogbeide&Agu, 2015; and Jordan, 2004).

2.1.3 The Concept of Remittances

Juthatip (2007) defined remittances as a transfer of money by a foreign worker to his or her home country. It is the flow of financial resources taken place from the cross-border movement of nationals of a country. According to Ilahi&Jafarey (1999), remittances are repayments made to the family who finances migration to a new place. Similarly, Cox and Uretha (1998) described remittances as a framework of exchange, whereby migrants made payments to family members for services like caring for relatives or parents or property. Remittances are viewed to have caused inequality among households and distortions in the macro-economy particularly countries that have very low GDP. The positive or negative effect of remittances on the receiving or migrant-producing communities is, however, is controversial.

2.1.4 Theories of Remittances

2.1.4.1 Neoclassical Economic Theory of Migrants' Remittances

This theory views wage differentials as the cause of migration, pointing out that the net flow of migrants is from low wage areas to high wage areas. This theory was extended to the household level by the new economics of migration. It is stated that migration is a way of reducing risk through the diversification of sources of income, and act as an insurance against local shocks with market failure. Remittances could play an important role depending on the decision made at the household level.

2.1.4.2 Dual Labour Market Theory

This theory posits that the reason for migration is the needs of receiving countries, foreign workers. It also explains the different mechanisms through which remittances could either increase or decrease inequality.Cattaneo (2005) identifies two views of international remittances in the labour-sending economy. First, he sees remittance as an economic development mechanism and, second, remittance is viewed to be as an "illness"that makes the economy weak.

Transfer of remittances occurs under the conditions of asymmetric information, whereby a longdistance separated the remitter and recipient of the transfer. This could likely result to issues of moral hazard where the latter could probably be reluctant in taking part in the labour market, limiting job search and reducing labour effort (Chami, Fullenkamp&Jahjah,2003).

Motivation to remit involves risk sharing and altruism, which is the act of income increase, consumption and standard of living of an individual. The risk-sharing school of motivation to remit describes remittance as instalments of individual risk management. Whereas, the altruism or livelihood school describes remittances as an obligation to the household and remittances are forward out of affection and responsibility towards the household members at home (Rapport &Docquier, 2005; and Vanwey, 2004).

2.1.5 Remittances and Poverty Linkage

Remittances impact on poverty directlythrough an increasein recipient income. Also,remittances indirectly determine poverty in the recipient country by affecting growth, inflation, exchange rates, and capital access. This is in addition to indirect influence to the income of households through labour supply changes of individuals remaining behind; working capital constraints relaxation, which broaden income from entrepreneurial or farming activities as well as multiplier effects on household income.

Remittances from migrants could likely bring welfare gain that is substantial or poverty. Remittances augment the income of households of recipients directly. It generates financial resources for poor households, and determine the level of poverty and welfare by way of the multiplier and macroeconomic effects. It as well enables unskilled poor people to get more appropriate access to various social services (Muhammad & Naveed, 2009; and Dilip&Sanket, 2007). Remittances from migrants boost human capital investment by households, especially the poor. Migration of individuals or members of households who precedes the receipt of remittances could have disruptive effects on family life, with potentially negative outcomes on children educational attainment.

2.2 Empirical Studies

Wurku&Marangu (2015) studied the impact of remittance on poverty in South Africa. It was found that remittances non-receiving households had a higher headcount ratio compared to remittance-receiving households. Also, the likelihood of remittance non-receiving households being in a state of poverty was found to be higher than remittance-receiving households. The poverty gap was found to be higher among remittance-receiving households than remittance non-receiving households, whereas the two groups of households had the same poverty severity level. In another study, Bouoiyou&Miftah (2014) examined the effect of migrants' remittances on poverty and inequality using a survey data obtained in rural areas of the region Souss-Massa-Draa in Morocco. Counterfactual income of remittance-recipient households corresponding to a hypothetical value of its average income without remittances was estimated by the authors, which was used to compare the current income. The findings of the study showed that remittancessignificantly reduce poverty rate and vulnerability of non-poor households. The

study also found that that inflows in remittance increased inequality in income compared to the no-migration counterfactual condition. The impact of foreign remittances on household poverty in Pakistan was examined by Iqbal (2013) using Household Integrated Economic Survey data. The findings showed that remittances enhance income per capita by 45 per cent. It was also found that remittances reduce the probability of households getting under the poverty line by 30 per cent. The distributional impact of remittances across two regions (Nedroma and Idjeur) in Algerian emigration was examined by Margolis, Miotti, Mouhoud&Oudinet (2013), using a survey of 1,200 households. It was found that the remittancesreduce poverty by nearly 13 percentage.Remittances affected very poor families in Idjeurpositively, but the effect was found to be much less in Nedroma.Ratha (2013) in Egypt found that households that receive remittance had higher incomes and greater expenditure and, had a lower probability of suffering extreme poverty than households that do not receive remittance.Using a nationally-representative household survey data, Waheed, Awoyemi, Shittu &Olowa (2013) examined the impact of domestic remittances and foreign remittances on poverty in rural Nigeria. The findings of the study showed that the level, depth and severity of poverty in Nigeria was reduced by both forms of remittances. It was reported that the reduction in poverty is more if domestic (as against foreign) remittances are added to household income.In Nigeria, Chukwuone, Amaechina, Enebeli-Uzor, Iyoko&Okpukpara (2012) examined the impact of remittances on poverty using a logit model and propensity score matching. The authors use data from the 2004 Nigerian National Living Standard Survey. The study found that remittances reduce poverty by 11.14 per cent, while poverty gap dropped by 9.7 per cent as a result of the internal remittances. Javid, Arif& Qayyum (2012) examined relationship between remittances and poverty in Pakistan using time series data covering the 1973-2010 sample period. The findings of the study showed a strong statistically significant impact of remittances on poverty and remittance. Using urban household survey, Beyene (2011) examined the effect of international remittances on poverty and inequality in Ethiopia. The findings of the study showed that remittance significantly reduces poverty. The study also found a reduction in the headcount ratio from 30% to 25%, whereas the poverty gap and the squared poverty gap ratios were respectively found to have reduced from 6.6% to 5.2% and from 2.2% to 1.7%. The poverty status of households after receiving remittances was studied by Arif (2010). The findings were that poverty among recipient households was reduced by remittance, and significant difference existed between pre and post-migration perceived economic status of households. In Mali,Gubert&Mesplé-Somps (2010) examined the effects of migrants' remittances on poverty and inequality using a sample of 4,494 households. The result confirmed that remittances and migration led to a significant reduction in poverty and had an equalizing effect on income distribution in the country. The study also found less Gini index level for migration abroad unlike that gotten from the non-migration framework.

The impact of remittances on poverty in Africa had also been examined by Anyanwu&Erhijakpor (2007) using a panel of 33 African countries. It was found that the level, the depth and the severity of poverty in Africa dropped (by 2.9%) because of transfers of international migrant's remittances, which increased by 10%. The study by Gupta, Pattillo &Wagh (2007) focused on 76 developing countries of which, 24 are in the sub-Saharan African region. The findings of the study showed that an increase in remittances as a percentage of GDP by 10 per cent leads to a reduction in poverty headcount and the poverty gap by 1 per cent. Also, Banga&Sahu (2011) examined the impact of remittances on poverty in the 77 developing countries. It was found that remittances affected poverty significantly in the countries of the recipients.

3 METHODOLOGY

3.1 Source of the Data

The data are obtained from the Nigeria National Living Standard Survey (NLSS) 2013. It is a large sample size data from a nationally-represented household survey (usually conducted every five years), whereby the representative sample was interviewed. It is made up of information on household characteristics of individuals that are relevant for this study.

3.2 Model Specification

Model for Difference in Poverty Level Between Remittance Receiving and Non-receiving Households

In order to determine the difference in poverty between remittance receiving and non-receiving households, we consider the counterfactual per capita expenditure/income the household would have had if the migrant had stayed at home. This is necessary in order to state the true effect of remittances on poverty reduction, as stated by Pablo et. al., (2007), non-remittance income reported by households with migrantwould be a good representation of the situation of the family prior to migration. In an actual sense, information about the income of the household before the migrant left is required, which is not available directly from the household survey. But as an alternative, Acosta et al (2007) infer the counterfactual per capita income level for households with remittances basedon a reduced-form specification for the determinant of income among households without remittances. This is specified as follows:

$$LogY_i = a_0 + a_1X_i + a_2H_i + \mu_1 \quad . \quad . \quad . \quad (1)$$

Y_i = per capita non-remittance household expenditure
X_i = vector of household characteristics (including household number, household size, sector, zone, and quintiles)
H_i = a set of characteristics of household head (including sex, age, educational level attended, occupation, and marital status)
u_1 = error term
a_i= coefficients (i = 1, 2, 3, - - -)
per capita household expenditure rather than income data or per capita household income is used in this paper. This is because poverty is better identified with expenditure rather than income data, as expenditure provides a more accurate measure of an individual's welfare over time. Also, income data is prone to measurement error, particularly as regards underreporting of income, which is prevalent in Nigeria (Chukwuone, 2007).

An Ordinary Least Square(OLS) estimation of equation (1) will be inconsistent if u is not independently and identically distributed (iid). That is, if migrants are not randomly selected from the pool of households, estimates of equation (1) based on the sample of households without migrant or remittances could suffer selection bias.To control this possibility, we employ the Heckman correction model, a two-step statistical approach proposed by Heckman (1979). In the first step, we formulate a model, based on economic theory, for the household propensitynot to migrate or not to receive remittances. The general standard specification for this relationship is aProbitregression model.

Probit model can be obtained from an underlying latent variable model that satisfies the classical linear model assumptions. Let y* be an unobserved or latent variable determined by:

$$Y^* = \beta_0 + \beta_1 X_1 + \beta_2 H_1 + \beta_3 R_1 + \mu_2 \quad y = 1(y^* > 0) \quad . \quad . \quad . \ (2)$$

where
R1= Remittances (total amount of cash and non-cash items received by an individual from the migrant members of the families or friends)
The notation 1 (.) is introduced to define the binary outcome. The function 1 (.) is called the indicator function, which takes on the value one (1) if the event in the bracket is observed, and zero (0) otherwise. Thus,

$$y = (1 \; if y^* > 0 = Observed)$$
$$y = (0 \; if y^* \leq 0 = Unobservedormissing)$$

Assumed thatμ_2 is independent of X_1 and H_1 and has the standard normal distribution. In respect to that,μ_2 is symmetrically distributed above zero, as:

$$1 - \emptyset(-G\beta) = \emptyset(G\beta) \quad . \quad . \quad . \quad (3)$$

where
G = vector for explanatory variables
β = vector for unknown parameters
$\emptyset$= the cumulative distribution function of the standard normal distribution
From equation (2), we derive the response probability for y as:

$$pr\left(y = {}^{1}/_{X_1}, H_1, R_1\right) = \Pr\left(y^* > {}^{0}/_{X}, H, R\right) = \Pr\left[\mu_2 > -{}^{(\beta_0 + \beta_1 X_1 + \beta_2 H_1 + \beta_3 R_1)}/_{X_1}, H, R_1\right] = 1 -$$
$$\emptyset(-\beta_0 + \beta_1 X_1 + \beta_2 H_1 + \beta_3 R_1) = \emptyset(\beta_0 + \beta_1 X_1 + \beta_2 H_1 + \beta_3 R_1) \quad . \quad . \quad . \quad (4)$$

In equation (3), it was assumed that G is a vector for explanatory variables and β is a vector for unknown parameters. In equation (5) below, we substitute G with explanatory variables and parameters with β. This implies that:

$$Pr\left(y = {}^{1}/_{G}\right) = \emptyset(G\beta) \quad . \quad . \quad . \quad (5)$$

where
y = 1(for no migration or no remittance received)
y = 0 (for migration or remittance received)
In step 2, we add to equation (1) a variable called inverse mill ratio that is derived from the Probit model:

$$LogY_i = \varphi_0 + \varphi_1 X_i + \varphi_2 H_i + \varphi_3 R_1 + \varphi_3 \lambda_i + \varepsilon_i \quad . \quad . \quad . \quad (6)$$

where:
λ_i= inverse mill ratio, which is the ratio of the probability density function over the cumulative distribution function of a distribution, defined as:

$$\lambda_i = \frac{\vartheta(\beta_0 + \beta_1 X_1 + \beta_2 H_1 + \beta_3 R_1)}{1 - \emptyset(\beta_0 + \beta_1 X_1 + \beta_2 H_1 + \beta_3 R_1)} \quad . \quad . \quad . \quad (7)$$

with

$$\theta\lambda_i = E\left({}^{\mu_1}/_{\mu_1} > -\beta_1 X_1 + \beta_2 H_1 + \beta_3 R_1\right)$$

whereμ_1 is the error component in the expenditure equations and $\vartheta$is the density function for a normal standard variable. Controlling for λ_i allows the remaining unexplained component ε_i, to have the usual iid properties.

Model for the Relationship between Remittances and different Zones, Sex, Sector, and Quintiles

On the other hand, to capture the effect of remittances on different zones, quintiles, sex, sectors, we adopt a dummy

variables regression model following Gujarati (2004) as:

$$Y = \Psi_0 + \Psi_1 D_1 + \Psi_2 D_2 + \Psi_3 D_3 + \Psi_4 D_4 + e_I \quad . \quad . \quad . \quad (8)$$

where Y is Remittances;D_1 is Sector with 1 for urban and 0 for rural; D_2 is sex with 1 for male and 0 for female, D_3 is quintiles with 1 for quintiles 2, 3, 4, 5 and 0 for quintile 1; and D_4 is zone with 1 for South-South and south-east, and 0 otherwise.

Given that the error term satisfies the usual OLS assumption, then, taking the expectation of equation (8) would yield:

$$\left.\begin{aligned} E\left({}^{Y_i}/_{D_1} = 1, D_2, D_3, D_4 = 0\right) &= \Psi_0 + \Psi_1, \quad for\ sector \\ E\left({}^{Y_i}/_{D_2} = 1, D_1, D_3, D_4 = 0\right) &= \Psi_0 + \Psi_2, \quad for\ sex \\ E\left({}^{Y_i}/_{D_3} = 1, D_1, D_2, D_4 = 0\right) &= \Psi_0 + \Psi_3, \ for\ quintiles. \\ E\left({}^{Y_i}/_{D_4} = 1, D_1, D_2, D_3 = 0\right) &= \Psi_0 + \Psi_4, \ for\ zones \\ E\left({}^{Y_i}/_{D_1} = 0, D_2 = 0, D_3 = 0, D_4 = 0\right) &= \Psi_0 \end{aligned}\right\} \quad . \quad . \quad (9)$$

4 Results

4.1 The Difference in Poverty level between Remittances receiving and non-receiving Households

In determining the difference in poverty between remittance receiving and non-receiving households, we consider the counterfactual situation of households without remittances and the result is presented in Table 1 below:

Table 1: Counterfactual Situation of Households without Remittances. Dependent Variable Log Per Capita Household Expenditure

Variables	Coefficients	t-statistics	p-value
Household Characteristics			
Sector	-1931.644	3.04	0.002
Household number	8.393	0.99	0.323
Household size	-654.619	-6.29	0.000
Zone	-2331.064	-14.08	0.000
Quintiles	14150.64	68.37	0.000
Constant	7077.41	2.84	0.004
Characteristics of Household Head			
Sex	-6760.265	-7.47	0.000
Age years	56.0145	2.92	0.003
Marital status	1798.434	11.46	0.000
Occupation	759.178	-5.55	0.000
The highest level of Education attended	605.441	3.73	0.000

Source: Authors' Computation

As shown the Table 1, household number, quintiles, age years, marital status, and the highest level of education attended have positive effects on per capita household expenditure. Whereas, Household size, zone, sector, sex and occupation, have a negative effect on per capita household expenditure. Except for household number, all the other variables are statistically significant at the 5% level.We also estimated the effect of remittances on poverty between receiving and non-receiving households and the result is reported in Table 2 below.

Table 2: Effect of Remittance on Poverty between Receiving and Non-Receiving Household. TheDependent Variable is Poverty, measured by Log of Per Capita Household Expenditure

Variables	Coefficient	z-statistics	p-values
Household Characteristics			
Sector	.72458	3.14	0.002
Household number	-.00748	-1.69	0.090
Household size	-.000297	-0.01	0.994
Zone	.48675	7.92	0.000
Quintiles	-3.5169	-11.09	0.000
Constant	10.956	7.88	0.000
Characteristics of Household Head			
Sex	.049552	0.21	0.833
Age years	.00545	0.88	0.377
Marital status	-.00325	-0.07	0.941
Occupation	-.032457	-0.85	0.398
The highest level of education attend	.020322	.033	0.742
Remittances	9.75	3.44	0.001
Log-likelihood ratio -166.53259			
Pseudo R2 0.8352			

Source: Authors' Computation

The result showed that remittances have a positive effect on poverty reduction. Specifically, it showed that any increase in remittances reduces the likelihood of being poor in remittance-receiving households than in non-remittance receiving household by 9.8%. All the other variables show no significant effect on poverty reduction, except quintiles which show 3.5% negative effect on poverty. The only sector, zone, quintiles and remittances are significant at the 5% level. The model fit is good with Pseudo R^2 value of 0.8352 (83.52%).

We also estimated the Heckman selection two-step model specified in equation (6) and the estimates are reported in Table 3 below:

Table 3: Estimates of Heckman Selection two-step Model. The Dependent Variable is Poverty, measured by Log the of Per-Capital Household Expenditure

Variable	coefficient	t-statistics	p-value
Characteristics of Household			
Sector	0.18833	21.10	0.000
Household number	0.00047	3.14	0.002
Household size	0.00962	7.98	0.000
Zone	0.01988	10.38	0.000
Quintiles	0.01373	3.32	0.001
Characteristics of Household Head			
Sex	0.10217	9.89	0.000
Age years	0.00336	14.21	0.008
Marital status	0.00305	1.52	0.120
Occupation	0.01595	9.43	0.000
The highest level of education attended	0.03405	16.62	0.000
Remittances	4.02	10.36	0.000
Inverse mill ratio (Lambda)	0.067612	7.42	0.000
Rho 0.74659			
Sigma 0.09056106			
Lambda 0.67612			

Source: Authors' Computation

The result showed that poverty in remittances receiving householdssignificantly reduced by 4.02% more as a result of remittance than non-receiving households. This means that the likelihood of being poor is less in remittance-receiving households than non-remittance receiving households. All the variables are significant at the 5% level except marital status. The inverse mill ratio which acted as its own instrument is statistically significant. The coefficient of lambda has a z-statistics of 7.42 and,it is not significant.

4.2 The Effects of Remittances on Different Zones, Quintiles, Sex and Sector

The estimates of the effect of remittances on different Zones, Quintiles, Sex and Sector are reported in Table 4 below:

Table 4: Estimates of the Effect of Remittances on Different Zones, Quintiles, Sex and Sector. Dependent Variable is Remittances

Variable		Coefficient	t-statistic	p-value
Sector		750.663	0.38	0.706
Sex		1464.691	0.8	0.416
Quintiles				
Quintile 2		4311.197	1.55	1.121
Quintile 3		480.4828	0.18	0.857
Quintile 4		3625.636	1.38	0.167
Quintile 5		1122.646	0.44	0.659
Zone 1: South-south		3162.646	1.60	0.111
Zone 2: south-east		-1211.402	-0.62	0.535
Constant		10080.19	3.72	0.000
Actual Remittances for:				
Quintile 2	10831			
Quintile 3	11545			
Quintile 4	14391			
Quintile 5	10561			
Zone 1	13706			
Zone 2	11203			
Male	13243			
Urban	8869			

The benchmark categories are rural, female, quintile 1, south-west, north-central, north-east and north-west. The actual remittances for quintile 2, 3, 4 and 5, zone 1, and zone 2, male and urban are obtained by adding differential remittances value (see equation 9).

Source: Authors' Computation

The result shows that the effect of remittance on rural, female, quintile1, South West, North Central, North East and North West is about 10080.19. urban is higher by 750.663, the male is higher by 1464, quintile 2 is higher by 4311.197, quintile 3 is higher by 480.4828, quintile 4 is higher by 3625.636, quintile 5 is higher by 1122.646, south-south is by 3162.646, while south-east is lower by 1211.402.None of the coefficients of the variables is significant at the 5% level, which means that remittances have more effect on rural, female, quintile 1 and south-west, north-central, north-east and north-west.

5 CONCLUSIONS

The difference in Poverty level between remittance-receiving and non-receiving households and the effect of remittances on different zones, quintiles, sex, and sectors has been examined in this study.In this study, we considerhow remittances can have a negative effect on households by reducing the motivation of recipients to be more industrious, venturesome and enterprising and positive effect by helping to smooth consumption and improving the standard of living. Econometric models such as linear regression model for the counterfactual situation of households without remittances, Heckman correction model, a two-step statistical approach and Probit model were employed. A significant difference existed between remittance-receiving and non-receiving households.Remittances also yield positive contributions to poverty reduction. Household characteristics and characteristics of household heads are also determinants of the poverty level of households. The result was a mix as regards the effect of remittances on different zones, quintiles, sex, and sectors

It recommends that remittance-receiving households do not over depend on remittances and working less, which could negatively affect the development of their own financial and economic resources, despite the evidence that remittances contribute to poverty reduction.The government can as well facilitate and encourage expatriate Nigerians in sending remittances to their households. In respect to this, issuance of remittance bonds would be a right step. Also, receiving households should diversify their investment options especially those in rural areas, by using the higher share of their remittances on business activities other than farming.

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