Abstract

This study attempted to examine the impact of migrant remittances on the welfare of arable crop farm households. Primary data were collected from a random sample of 120 respondents comprising 60 each of migrants’ remittance receiving and non-remittance receiving households through the cost route method. Data were analyzed using frequency distribution, regression analysis and Chow’s test statistic. Results of the analyses show that sex of household head, household size, household age composition, income and sector of employment were the significant factors influencing the welfare of the remittance receiving households while sex, years of education, composition of household work force and sector of employment were the significant factors influencing the welfare of the non-remittance receiving households. The Chow’s test revealed that the remittance receiving households have higher welfare status than their non remittance receiving counterparts. Therefore, policies for enhancing migrant remittances and their optimum channeling and use were recommended.

Keywords: Migrant Remittances, Welfare, Farm Households

Introduction

Migration has become a predominant factor in international relationships and a central component of an emerging world economic globalization process. The number of regional, national and international migrants has increased in recent years. For instance, between 1965 and 1995, the number increased from 75 to 125 million (UNDP, 1999) internationally. The number of people working outside their country of birth was nearly 175 million implying that migrants were nearly 3 percent of the world population (United Nations, 2002). Migration is associated with a compensation for the shortfalls in financial resources necessary for rural development and family support (Fadayomi, et al., 1992). In most cases, people left behind in the villages look forward to remittances for their support. In essence, remittances contribute to the development of the local agricultural economy and improvement in the welfare and livelihood of the receiving households, by providing basic necessities such as food, clothing, better health and education, and thereby building human and social capital or to a smaller extent in terms of savings or business investments. Several studies have observed that migrants have been able to escape poverty and that migration has changed from being purely for survival to a strategy for accumulation of capital (Mitra and Gupta, 2002; Deshingkar and Start, 2003; Rogaly and Coppard, 2003).

In Nigeria, 70 percent of the populations live in the rural sector where farming is their primary occupation (NPC, 2006; Ogbonna, 2011). Incomes from the farms are much lower than expected to maintain the minimum standard of living essentially arising from low productivity (Nwaru, 2004; Iheke 2010), and most of the farmers and other rural dwellers can hardly feed themselves. The consequence is pervasive poverty among the populace. The national poverty incidence was 54.4 percent, whereas in the rural and urban sector, it was 63.3 and 43.2 percent respectively (NBS, 2006). Southeastern Nigeria has been reported to have a high incidence of poverty head count with an average of 79.86 percent (NBS, 2006). From a study on poverty levels and food demands in rural yam farm households in Southeastern Nigeria, Ogbonna (2011) reported that 53 percent of yam households were poor while 14 percent were extremely poor, making a total of 69 percent overall poverty level among these farmers. This is worsened by the fact that wealth is concentrated in the hands of a few people. For instance, the UNDP in 1998 documented that the three richest people in the world have assets that exceed the combined Gross Domestic Product (GDP) of the 48 least developed countries (Iheke, 2010). This tallies with
the report from Akoroda (2009) that 4000 Nigerians own 96 percent of the wealth in Nigeria; and explains the irony that Nigeria is the sixth largest exporter of crude oil and at the same time hosts the third largest number of poor people in the world after China and India (Manyong et al., 2005; Igbuzor, 2006). These translate to low standard of living or lowered welfare, with Nigeria being among the 20 countries in the world with the widest gap between the rich and the poor (Igbuzor, 2006).

A prominent response from households is out migration of members in the hope that when the migrant members settle down, they would become sources of remittances to fill up shortfalls in household finances in a way that could enable them enjoy improvements in their overall wellbeing. For instance, Muliaina (2006) reported that remittances form a significant part of household income for 85.5 percent of Samo and 93.3 percent of the Tongan households he studied. He concluded that remittances provided an income support for the households. Adams and Page (2005), from a study on poverty, migration and remittances for 74 low and middle income countries, reported that migrant remittances have a strong impact on reducing poverty in the developing world. Adams and Page (2005) and IMF (2005) reported positive and significant impacts of remittances on poverty reduction indicating that, on an average, a 10 percent increase in the share of international migrants in a country’s population will lead to a 1.6 percent decline in poverty head count.

According to de Haas (2005), migrant remittances have made possible a drastic improvement in the living conditions of millions of households in migrant-sending countries. For an increasing number of developing countries, remittances form a crucial source of foreign exchange earnings; sustaining the balance of payments for these countries. In addition, migrant sending households and countries have placed renewed hopes on migrants as potential investors in their households and the national economy. The surge in remittances has given rise to a kind of euphoria, with migrant remittances being proclaimed as the newest “development mantra” among institutions like the World Bank, governments, and development NGOs (Kapur, 2003; Ratha, 2003).

Migration helped households to improve or maintain their livelihoods by stimulating and feeding into local productive activities. International remittances have played a key role in facilitating agricultural investments. As long ago as the early 1970s, Bonnet and Bossard (1973) observed that remittances had made possible intensification of agriculture in the Sous region. In other migrant-sending regions, too, migrants play an important and innovative role in the development of subsistence and commercial agriculture through the purchase of land, modern agricultural equipment, such as tractors and water pumps, the introduction of new crops and techniques and the establishment of new farms. Migrants show a particular preference for investments in the development of new irrigated agriculture (Bencherifa, 1991; 1993; Bencherifa and Popp, 1990; 2000; de Haas, 2001; Popp, 1999). Schriemer and Knerr (2000) reported that remittances were actually used as a substitute for missing financial and insurance markets, especially in cases in which the migrant remains an economic part of the household and the region of origin. Dia (1992) described it as a very efficient strategy to promote agricultural investments and reduce food insecurity and income risks by families in Senegal.

Kim (2007) reported from a study on Jamaica that the proportion of remittances to total household income has also been increasing. He noted that in the early 1990s, remittances represented about 2 percent of total household income. By the early 2000s, they accounted for more than 6 percent. On an average, about a quarter of all Jamaican households received some remittances between 1995 and 2002. He concluded that while the percentage of households receiving remittances has decreased slightly since 1995, the ratio of remittances to total income has in fact increased. Acosta (2006), using El Salvador data, showed that remittances can increase the household budget and reduce liquidity constraint problems, allowing more consumption and investment. After controlling for household wealth and using selection correction techniques, remittances were found to be negatively related to child labor and adult female labor supply, while on an average adult male labor force participation remains unaffected.

Welfare refers to the economic well being of an individual, group, or economy (Iheke, 2010). For individuals, it is conceptualized by a utility function. For groups, including countries and the world, it is a complex concept, since individuals fare differently. In trade theory, an improvement in welfare is often inferred from an increase in real national income. Welfare, though not observable, could be said to represent the people’s standard of living. Household consumption expenditure on food and education is used as proxy for welfare indicator (Quartey, 2006). Arising from the important contribution of remittances to welfare, it has been argued that remittances are a safety net for relatively poor households. This financial aid seems to flow directly to the people who really needed it and does not require a costly bureaucracy on the sending side. At the micro level, some vital questions include: how far have migrant remittances enhanced the welfare of arable crop farmers? What are the socioeconomic factors that affect the welfare of these farmers with and without migrant remittances? What are the drivers of migration among the rural and suburban populace in Nigeria?

Thus, the present study was designed to examine the impact of migrant remittances on the welfare of arable crop
farm households in South Eastern Nigeria using primary data. According to Nwajuuba (2005), four states in Southeastern Nigeria (Anambra, Imo, Abia and Enugu) are among the seven most densely populated states of Nigeria, implying that the Southeast is the most densely populated Zone in Nigeria. As a result, there is an increased human pressure on finite resources and a consequent intense competition for the available natural resources in South Eastern Nigeria. Therefore, many people view migration as an alternative option for securing a livelihood and escaping from endemic poverty; studies of this nature that examine the determinants of migration and the major roles remittances from migrants play in shaping the welfare of their households and communities back home have become necessary.

**Methodology**

This study was conducted in South Eastern Nigeria, which comprises five states namely: Abia, Anambra, Ebonyi, Enugu and Imo. The area lies between latitudes 4° 20' and 7° 25' North and longitudes 5° 21' and 8° 51' East. It covers a land area of about 109,524km² or 11.86 percent of the total land area of Nigeria. The area lies mainly on plains under 200m above sea level (Monanu, 1975). The population of the area is 29,949,530 comprising 15,326,463 males and 14,623,067 females (NPC, 2006) and farming is the predominant occupation of the rural inhabitants.

A multi-stage random sampling technique was used in choosing a sample of 120 respondents comprising 60 migrant remittance receiving and 60 non remittance receiving households for detailed study. The first stage involved the random selection of 2 States, namely Abia State comprising of 17 Local Government Areas (LGAs) and Imo State comprising 27 Local Government Areas (LGAs), from the 5 States in the study area. The second stage involved the random selection of 2 LGAs each from Imo and Abia States. The third stage involved the random selection of 3 communities from the list of communities in each chosen LGA. The last stage involved the listing of migrant remittance receiving and non receiving households with the assistance of community leaders and other key informants. These lists formed the frames from which samples of 3 households each were randomly selected.

Data were collected by the cost route approach (a method where the researcher followed the farmers’ activities from the beginning of the cropping season to the end, recording information pertaining to the farmers’ activities, making sure all relevant data were recorded as the farmers do not usually keep records) using structured questionnaire and interview schedules. By this, the respondents were visited forth nightly by the help of trained enumerators attached to each study location. Data analysis involved the estimation of a welfare function for each of the two groups of households (equation 1) and then the pooled data of the two groups (equation 2) by the ordinary least squares following Okojie (2002), Iheke (2010) and Ufomadu (2011) as:

\[
\text{Log PCE}_i = f(X_{1i}, X_{2i}, X_{3i}, X_{4i}, X_{5i}, X_{6i}, X_{7i}, X_{8i}, X_{9i}, D) = \sum_{e}^1 (\sum_{e}^2 (\sum_{e}^3) + (k_1) - k_2) / (k_1 + k_2)
\]

Where Log PCE is the log of per capita household expenditure (expenditure on food, clothing, health care, education, housing and security) per adult equivalent (AE) and was derived as (Okojie, 2002; Iheke, 2010; Ufomadu, 2011):

\[
AE = 1 + 0.7 (n_1 - 1) + 0.5n_2
\]

\(n_1\) is the number of adults aged 15 years and above; \(n_2\) is the number of children aged less than 15 years; \(X_1\) is the age of household head (years); \(X_2\) is the years of education of the household head; \(X_3\) is the hectarage of total household land holdings (proxy for physical asset endowment of household); \(X_4\) is the age composition of household (measured by the fertility index i.e. ratio of the number of children aged fewer than 15 to all other household members); \(X_5\) is the sex of household head (a dummy which assumes the value of unity for men and zero otherwise); \(X_6\) is the household size; \(X_7\) is the composition of household workforce (measured by the share of adult household members employed); \(X_8\) is the total household income (N); \(X_9\) is the primary sector of employment (a dummy which assumes the value of unity for farming and zero otherwise); and \(D\) is the dummy variable representing household type which takes the value of unity for migrant remittance receiving households and zero for non remittance receiving households. Equation 1 was estimated for two the household groups: migrant remittance receiving and non remittance receiving households while equation 2 was estimated in the first instance without \(D\) and in the second instance with \(D\).

Following Johnston (1972), Thamodaran et al. (1982), Onyenweaku (1997) and Iheke and Nwaru (2008), the Chow’s test for welfare change (structural shift in welfare function) was given by:

\[
F^* = \frac{[\sum e_3^2 - (\sum e_1^2 + \sum e_2^2)] / (k_1 - k_2)}{(\sum e_1^2 + \sum e_2^2) / (k_1 + k_2)}
\]

where in (4) \(e_3\) and \(k_3\) are the error sum of squares and degrees of freedom respectively of the pooled sample of migrant remittance receiving and non remittance receiving households, \(e_1\) and \(k_1\) are the error sum of squares and degrees of freedom respectively of the sample of migrant remittance receiving households, \(e_2\) and \(k_2\) are the error sum of squares and degrees of freedom respectively of the sample of non-remittance receiving household.
For the test for homogeneity of slope, the Chow’s F statistic is calculated as follows:
\[
F^* = \frac{[\sum e_2^2 - (\sum e_1^2 + \sum e_2^2)] / [k_4-k_1-k_2]}{(\sum e_1^2 + \sum e_2^2) / (k_1+k_2)}
\] (5)

Where in equation (5), \(\sum e_2^2\) and \(k_4\) are the error sum of squares and degrees of freedom respectively for the pooled sample with a dummy variable, \(D\), specified as unity for remittance receiving households and zero for non-remittance receiving households, while other variables were as previously defined.

For the test for differences in intercepts, the Chow’s F statistic is calculated as follows:
\[
F^* = \frac{[\sum e_1^2 - \sum e_4^2] / [k_1-k_4]}{\sum e_4^2 / k_4}
\] (6)

where all the variables are as defined in equations (4) and (5). The theoretical value of F is the value that defines the critical region of the test at the chosen level of confidence (Koutsoyiannis, 2001). If the calculated F exceeds the tabulated F value, then the intercepts are assumed to be different between the households. This test is conditional on a common slope, so the test for differences in slopes is performed first before testing for differences in intercepts (Onyenweaku, 1997).

Results and discussion

Summary statistics of the variables influencing the welfare of the households:

The summary statistics of some of the variables influencing the welfare of the migrant remittance receiving and non-remittance receiving households were presented in Table 1. The Table revealed that the remittance receiving households were relatively older, cultivated more farm land, produced greater output and had higher income than the non-remittance receiving households. The remittance receiving and non remittance receiving households spent approximately the same number of years on formal education and had an average of 6 and 7 persons per household, respectively. It is expected a priori that farm size would be positively related to output. This explains the increased output achieved by the remittance receiving households and the concomitant increase in income.

Welfare of the households

The estimated welfare functions were all statistically significant at 1 percent level of probability, indicating the goodness of fit of the estimated models. The coefficients of multiple determination indicate that 73.82 percent, 69.69 percent, 63.63 percent and 65.67 percent of the variations in welfare for the remittance receiving households (RRFH), non-remittance receiving households (NRRFH), pooled data and the pooled data with a dummy variable respectively were explained by the variables included in the models.

Sex of household head was significant at 1 percent level of probability and positively related to welfare of the households. This implies that male headed households have higher welfare than female headed households. Etim, et al. (2011) reported that gender of the household head was a significant determinant of poverty and that female headed households were worse off than their male counterparts. Ukoha et al. (2007) equally reported a positive but insignificant relationship between sex of household head and welfare. It has been observed that the basic factors reinforcing gender dichotomy and differences in welfare status remain that of inequitable access to resources in the face of increasing population pressure because women farmers are competing with men farmers for the same basic resources in a mostly patriarchal entitlement system (World Bank, 1998 and Akanji, 1999). For instance, researchers have reported that men have greater access to land and cultivated more land than their women counterparts which invariably led to greater output and income (Iheke and Nwaru, 2008 and 2009). Another factor that may be important is that male-headed households do not often lack the female spouse while the female-headed households do lack a male spouse, thus reducing the number of potential adult laborers in the household.

![Table 1. Summary statistics of some socio-economic characteristics of the remittance receiving (RRFH) and non-remittance receiving (NRRH) households](image_url)
Household size was significant at 1 percent and negatively related to welfare for the remittance receiving households while it was insignificant for their non-remittance receiving counterparts. This suggests that larger households are more likely to have reduced welfare, which is consistent with economic theory. In Southeastern Nigeria, where this study was conducted, the extended family system is strong and greatly in force. Extended family members would see migrant remittances from even fourth or fifth uncles or cousins as reasons for clustering in the homes of the migrants. This would not be the case with non-remittance receiving households; hence the coefficient for household size was insignificant. Nwaru (2004) noted that an additional member of the household would mean an additional mouth to feed and an additional body to house, clothe and care for. Moreover, Ukoha et al. (2007) and Etim, et al. (2011) noted that the larger the household size, the more difficult it may be for the household to meet the basic requirements such as education for children, proper nutrition and adequate housing, all of which tend to reinforce poverty in households that fail to cope with them. This could result when most of the household members are not working or are made up of the young and the elderly and resources are channeled towards their education and care.

Household age composition was significant at 10 percent level of probability and positively related to household welfare for the remittance receiving households while it was insignificant for their non-remittance receiving counterparts. This result implies that household welfare increases as the age composition of the household increases. This is consistent with Ukoha et al. (2007) and the life cycle hypothesis, which postulates that demographic variables affect consumption and welfare. Yanda and Williams (2010) noted that 22 percent of the households in their study reported that their members emigrated to other areas in search of their fortunes and that the dominant migrating age was 19 to 30 years (10.2 percent); other migrating age groups being 7 to 18 years (6 percent), 31 to 45 years (5.4 percent) and 45 and above (0.6 percent).

While education was positive but insignificant for the remittance receiving households, it was significant at 1 percent and positively related to welfare for the non-receiving households. This means that as the households acquire more education, their welfare increases. This conforms to a priori expectations and the reports from Iheke (2010) and Etim, et al. (2011). Education of members affords households the opportunity for better jobs, increases one's efficiency and productivity, leading to increased income with a concomitant increase in welfare (Nwaru, 2004). This is necessary for the non-receiving households that do not have inflow of external financial assistance. Yanda and Williams (2010) reported that low level of education and preponderance of non-formal education among respondent households explained emigration as youths emigrate to seek manual labour employment elsewhere.

Composition of household work force measured by the number of people working in each household is positively related to welfare and significant at 1 percent probability level for the non-remittance receiving households. It is however, negative and insignificant for the remittance receiving households. The positive relationship implies that as the number of people working in each household increases, household welfare increases as a result of diversified sources of income. This is consistent with a priori expectations and Ukoha et al.
(2007) and Iheke (2010). For the migrant remittance receiving households that have inflow of external financial assistance capable of augmenting household needs, members may not need to work so hard, especially considering the drudgery associated with farm work. For the non-migrant remittance receiving households, members may need to work harder not considering the drudgery associated with farm work in order to meet welfare needs. This scenario might be considered a disincentive to entrepreneurship in the rural economy.

Household income was significant and positively related to household welfare for both household groups, implying that as household incomes increase, household welfare increases. This is consistent with a priori expectations and the Keynesian consumption function and the permanent income hypothesis of Friedman which posit a positive relationship between welfare and income. According to the permanent income hypothesis, which distinguishes between transitory and permanent components of income, households will spend mainly the permanent income while the transitory income is channeled into savings with marginal propensity to save from the income approaching unity. This agrees with Etim, et al. (2011), Ukohe et al. (2007), Avery and Kannickel (1991) and Koskela and Viren (1982). Policies that remove constraints in agricultural production and increase income will improve welfare. Intervention in real terms in key areas of agricultural production where farmers need assistance both collectively and individually to overcome constraints in production through appropriate policies are therefore needed.

The major sector of employment has a negative relationship with household welfare for the two groups of households and was significant at 1 percent probability level for the remittance receiving households and at 5 percent for the non-remittance receiving households. This result implies that households whose major sector of employment is agriculture have lower welfare than others whose major sector of employment is not agriculture. This result agrees with Ogbonna (2011), who reported that the sector of economic activity affects ones consumption and those households whose occupations fall within manufacturing, industry and services are better off than food crop farmers. In essence, households that have off-farm employment are likely to be better off than households without off-farm employment, particularly due to the seasonality of agriculture in the region. For instance, Yanda and Williams (2010) observed that in response to shrinking resources and increasing competition for same, pastoralists in Simanjiro District of Manyara Region of Tanzania were forced to change their livelihood patterns to include some off-farm activities such as petty trading in order to augment for their welfare needs.

The result of the pooled data with a dummy representing household type was significant at 1 percent level of significance and positive. This implies that remittance receiving households have higher welfare than their non-remittance receiving counterparts. This might be as a result of the multiplier effect of remittance on their consumption, investment and income. According to de Haas (2005), migrant remittances have made possible a drastic improvement in the living conditions of millions of households in migrant-sending countries.

Tests for structural shift in welfare function and differences in welfare

The results of the statistical tests for structural shift in welfare function and differences in welfare were summarized and presented in Table 3. The calculated Chow’s F statistic for welfare effect was significant at 1 percent. The result confirms that there is significant difference between the welfare functions of the remittance receiving and non-remittance receiving farm households. In other words, the remittance receiving households are associated with structural modifications of their welfare parameters, implying that the welfare functions of the households differ. The result of the test for homogeneity of slopes in the welfare functions of the remittance receiving and non-remittance receiving farm households shows that the calculated Chow’s F statistic was statistically significant at 1 percent. The result confirms heterogeneity of slopes or factor biased welfare functions.

The calculated Chow’s F statistic for the test for differences in intercept is significant at 1 percent. This result confirmed heterogeneity of intercepts for the remittance receiving and non-remittance receiving households and welfare advantage for the remittance receiving households derivable from the use of remittance income. This confirms the result of the pooled data with dummy variable representing house-
hold type which revealed that remittance receiving households have superior welfare relative to the non-remittance receiving households.

Conclusion

Results from this research present some evidence on the relative welfare of migrant remittance receiving and non-receiving farm households. The remittance receiving households were found to have higher welfare than the non receiving households. Since these two household groups live and operate in the same socioeconomic environment, the only difference being the inflow of remittance funds, it would then be concluded that migrant remittances contribute positively to the enhancement of the welfare of the receiving households. Definitely, at the macro level, the multiplier effects should occur at the community level; benefitting the remittance receiving and non-remittance receiving farm households. That is, where migrant remittance funds were spent on goods and services sold by both household groups, the effect of more money in the local economy due to the spending of remittances could spur additional employment of resources and thus yielding additional income and more consumption. For the farm households, this could be through remittances playing key roles in facilitating agricultural investments, innovative roles in modernizing agricultural production and local productive processes, and helping households to improve or maintain their livelihoods and hence reducing household poverty.

Therefore, economic policies to increase the flow of remittances and to harness their full development potentials should be in place. At the macro level, policies that make for a friendly economic environment through sound macro-economic policies, including stable exchange rates, basic physical infrastructure, improved market integration, reliable financial and other institutions, transparent legal system and good governance would be helpful. In essence, conditions that can prime the economy for development and equip it adequately to benefit from this external stimuli should be put in place through appropriate policies. This is particularly important if remittances are to be attracted and used as development capital.

Endnotes

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References


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