Jagbojo et al.: Nigerian Journal of Agricultural Economics (NJAE). Volume 7(1), 2017: Pages 104-121

POVERTY STATUS DIFFERENTIALS OF NON-GOVERNMENTAL ORGANISATIONS ACTIVITIES' BENEFICIARY AND NON-BENEFICIARY FARM HOUSEHOLDS IN OGUN STATE, NIGERIA.

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Abstract

This study assessed the effect of NGOs on alleviating poverty among rural farming households. A multi-stage sampling technique was used in selecting one hundred and fifty (150) NGO members and non-members respondent farmers in Ogun State from whom primary data were collected by means of a well structured questionnaire. The data collected include household size, age of the household head, income and NGO activities. The data was analyzed using descriptive statistics, Foster-Greer-Thorbecke (FGT) index and student-t test. Results revealed that household heads of both beneficiaries and non-beneficiaries' farm families were predominantly males (90.6% and 73.9% respectively). The mean age of beneficiary and non-beneficiaries groups was 48 and 49 years respectively. More than 70% of both beneficiaries and non-beneficiaries farm household heads had access to formal education in one form or the other. About 23.4% of beneficiaries fell below the poverty line while 46.4% of non-beneficiaries fell below the line. Furthermore, poverty incidence was more prevalent among the non-beneficiaries' (0.464) than the beneficiaries (0.234) while poverty was found to be severe among non-beneficiaries (40%) than beneficiaries (8%). A significant difference existed between the poverty conditions of beneficiaries and non-beneficiaries ($p<0.01$) farm households. Hence, it can be inferred that NGOs through their operations have improved the economic situation of their beneficiaries. Therefore, agriculture affiliated NGOs need to scale up their intervention programmes.

Keywords: Farm households, NGO, Poverty, FGT index

Introduction

According to pro-poor professionals, the question on poverty and how to reduce its bad experiences and enhance well being should trigger action from relevant bodies and interest groups (IBRD, 2008; Byerlee *et al*, 2009; Cervantes-Gody and Dewbre, 2010; Bolarinwa and Fakoya, 2011) – these includes the Non-Governmental Organizations (NGOs) whose direct actions and interventions towards the achievement of the Millennium Development Goals (MDGs) can not be overlooked. NGOs can be defined as private voluntary organisations or interest group working on development (Lewis, 1999). They are private organisations that engage in activities that relieve sufferings, preserve the environment and provide basic social services by undertaking community development programmes (Cerman, 1988).

NGOs have emerged around the world in response to the fight against poverty and it has been observed that their contribution has dramatically transformed poor people's lives nearly in every country of the world (Okunmadewa, 1999; Oyuji, 2004). The number of roles played by NGOs in local, national, regional and international levels is ever increasing, most literature evaluates them in generally positive ways (Streeten, 1997; Attack, 1999; Desai, 2005) but it has to be noticed that NGOs are not magic bullets. From previous studies it was observed that there is no significant effect between NGOs and reduction in poverty and inequality given the proportional relationship between the increasing number of NGOs and the widening gap between the rich and the poor (Salamon, 1994; UNDP, 2006). This notwithstanding, NGOs can contribute significantly to household welfare. Thus, this study investigated the extent NGOs have helped in alleviating poverty among rural farming households in Ogun State.

Methodology

Study Area and Data Source

This study was carried out in Ogun State, Nigeria with headquarters at Abeokuta. The indigenes comprise mainly the Egba, Yewa, Awori, Egun, Ijebu and Remo. Primary data were collected from respondents using a well structured questionnaire from respondents who were NGO members and non-members farm households. The data include household size, age of the household head, income and NGO activities.

Sampling Technique and Sample Size

A multi-stage random sampling technique was used in the sampling of beneficiaries. In the first stage, a list of (fifty-two) registered NGOs in *Ogun* State was obtained from the *Ogun* State Ministry of Information at *Okemosan*, *Abeokuta* and from this list, thirteen NGOs were found to render assistance to rural farm households. Based on the distribution of these NGOs across the twenty LGAs in the State, two NGOs i.e. Justice for Development and Peace Movement (JDPM) and Farmers' Development Union (FADU) were purposively selected in the second stage. These NGOs were selected basically because they have their operational sites in at least four LGAs and have a wider coverage within the LGAs. The Local Government areas (LGAs) where they had their operation sites includes: *Yewa* South, *Ado-odo/Ota*, *Ifo*, *Ijebu-Igbo* and *Odeda*. In the third stage, one village was purposively selected from each LGA. Finally, fifteen households were selected at random from each village using the list of members of the respective NGOs as sampling frame. Thus making a total of seventy-five beneficiary households interviewed.

Within the selected villages, fifteen non-beneficiaries' households were also randomly selected. This was achieved by comparing the list of farmers provided by the community leader against that of the NGOs and extracting a list of non-beneficiaries from which a random sample of fifteen farming households was drawn for interview. This made a total of seventy-five non-beneficiaries. Thus, the total number of administered questionnaires was one-hundred and fifty. However, only 133 (sixty-four beneficiaries and sixty-nine non-beneficiaries) were found useful for the analysis (owing to missing data/incomplete responses) while the remaining seventeen were discarded (giving about 88% response rate).

Analytical Technique

Descriptive Statistics: This was mainly the use of frequency and percentages tables.

Poverty Measure: The Foster-Greer-Thorbecke (FGT) index which consists of head-count ratio, poverty gap and severity of poverty (Foster *et al*, 1984).

Poverty Line – this is the standard family income threshold below which the family is classified as poor. This can be regarded as the Poverty Bench Mark (PBM). For this study, Relative Poverty Line (RPL) which is the two-thirds of the mean *per capita* monthly income (₦12,272) was estimated. The RPL was used to classify the respondents as poor and non-poor. Households whose mean *per capita* monthly income fell below the RPL were classified as poor and those above this RPL were classified as non-poor.

The Poverty Indices were calculated as given below:

$$P_{\alpha} = \frac{1}{N}\sum_{i=1}^{q}\left(\frac{Z - Y_i}{Z}\right) \text{ ---------- (i)}$$

Where:
α = non-negative parameter (0, 1 or 2) reflecting social valuation of different degrees of poverty;
Y_i = per capita household expenditure of the i^{th} respondent;
q = number of respondents below the poverty line;
Z = the relative poverty line defined as two-third of the mean *per capita* household income;
N = total number of respondents.

The quantity in parenthesis is the proportionate shortfall of the i^{th} respondent's household *per capita* income below the RPL.

As the exponent (α) increases the "aversion" to poverty as measured by the FGT index increases:
i. When α = 0, the index gives the headcount ratio or the incidence of poverty which is the percentage of respondents in poverty.
ii. When α = 1, the index measures poverty depth i.e. the mean percentage shortfall of income below poverty line. In other words, it provides an estimate of the total amount of resources needed to eliminate poverty.
iii. When α = 2, the index estimates the severity of poverty.
3. Student-t Statistics: this was used to test the differences between the poverty status of beneficiaries and non-beneficiaries.

$$t = \frac{\overline{X_i} - \overline{X_j}}{\sqrt{\frac{S_i}{n_i} + \frac{S_j}{n_j}}} \text{ ---------- (ii)}$$

Where:
X_i = mean monthly *per capita* income of NGO beneficiaries;

X_j = mean monthly *per capita* income of NGO non-beneficiaries;
S_i = sample variance of NGO beneficiaries;
S_j = sample variance of NGO non-beneficiaries;
n_i = number of NGO beneficiaries;
n_j = number of NGO non-beneficiaries.

The test statistic followed the t-distribution with $n_i + n_j - 2$ degree of freedom.

Logit Regression (LR) model: This was also used for the analysis. It is a non-linear regression model used for modelling dichotomous outcome variables

The regression model is mathematically stated as:

$$L_1 = ln\frac{P_i}{1-P_i} = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \beta_5X_5 + \beta_6X_6 + \beta_7X_7 + \beta_8X_8 + \beta_9X_9$$

Where:
P_i = Poverty status (1 if poor, 0 if otherwise)
X_1 = Household monthly *per capita* income (₦)
X_2 = Age (years)
X_3 = Age square (years)
X_4 = Household size (number)
X_5 = Number of dependants (number)
X_6 = Gender (1 if male, 0 if otherwise)
X_7 = Access to formal education (1 if yes, 0 if otherwise)
X_8 = Primary occupation of household head (1 if farming, 0 if otherwise)
X_9 = NGO membership (1 if Beneficiaries, 0 if otherwise)

Results and Discussions

Description of Households by Socio-Demographic Characteristics
Household heads of both beneficiaries and non-beneficiaries' farm families were predominantly males, 91% and 74% respectively (Table 1). The predominance of men among the household heads in the study area is in line with *a priori* expectation within the African cultural setting, particularly in the rural areas. Most of the household heads, beneficiaries (75%) and non-beneficiaries (73%) were married while only 14% (beneficiaries) and 7% (non-beneficiaries) were unmarried i.e. single with others either widowed or separated. Majority of the beneficiaries (78%) had a household size of between 5 – 8 members while that of the non-beneficiaries (64%) was within the same range. The average number of household size was six (6) and seven (7) members for beneficiaries and non-beneficiaries respectively.

Many (58%) in the beneficiary group fell within the age bracket of 31 and 50 years with a mean age of 48 years. Most (68%) of the non-beneficiaries also fell within the same age bracket with an average age of 49 years. Hence, the respondents were in their active economic age and child bearing stage. Conversely, this situation is an indication that they have the capacity to increase

their family size, a situation that can adversely affect the *per capita* income of the household and consequently worsens their poverty status.

A larger proportion of the beneficiaries (75%) and non-beneficiaries (71%) farm household heads had access to formal education in one form or the other. Majority of the beneficiaries (28%) completed their primary school education while 16% completed tertiary education. On the other hand, 28% of the non beneficiaries completed primary school education while only 6% had tertiary education. Hence, this can aid the adoption of new scientific techniques and innovations in the study area. These results agree with the profile of the rural poor in the African continent given by White and Killick (2001). No significant difference existed between the access to formal education of beneficiaries and non-beneficiaries ($p>0.01$). This may be an indication that the individual farmer's educational status is not a yard stick for NGO membership i.e. farmers do not require any form of formal educational qualifications in order to enjoy the dividends from NGOs.

The beneficiaries have a mean household size of 6 members while non-beneficiaries had 7 members (Table 1). The results also depict that a larger proportion of the sampled population have been farming for over 11years (about 59% and 64% beneficiaries and non-beneficiaries respectively). Thus, pointing to the fact that most rural dwellers engage in farming as a primary occupation and depend on agriculture-based activities as a source of livelihood (IFAD, 2007).

Description of Households by Socio-economic Characteristics

This study classified beneficiaries and non-beneficiaries by households' type of housing facility, source of water, source of electricity and toilet facilities. This is with a view to finding out the standard of living of the respondents based on available facilities.

Table 2 provides information on the housing units in terms of ownership and rent. It was revealed that 57% of the beneficiaries and 60% of the non-beneficiaries' households lived in *"face to face"* houses with only 4.7% and 10.1% of beneficiaries and non-beneficiaries respectively, living in flats. Few (6.2% and 2.9%) of both beneficiaries and non-beneficiaries live in storey buildings. Most (48.4% and 52.2%) of the beneficiaries and non-beneficiaries respectively live in housing units built with mud while the proportion of beneficiaries and non-beneficiaries who occupied buildings constructed with concrete was substantial (45.3% and 46.4% respectively). This is an indication of a growing preference for concrete walls among rural dwellers. The proportion of the respondents living in mud houses shows that the problem of poor quality of housing in rural areas of Nigeria still persists, this is an indication that rural housing has received less attention than it deserves from both the policy makers and researchers (Ogu, 2002). Approximately 42% of the beneficiaries dwelt in residences owned by their extended family while 44.9% of non-beneficiaries dwelt in family owned houses as well. Some (12.5%) of beneficiaries owned their residential houses while 14.5% of the non-beneficiaries owned their own residence. Majority (45.3% and 40.6%) of beneficiaries and non-beneficiaries respectively, lived in rented apartments.

Approximately one-quarter of both beneficiaries and non-beneficiaries (28% and 25% respectively) paid between ₦500 - ₦700 per room per month as rent (Table 2). However, a larger number (57.8% and 66.7% respectively) of both beneficiaries and non-beneficiaries do not pay

rent. This situation is possibly because the houses were inherited or collectively owned by children from the same parents who may have built the houses before their demise. These results agree with the findings that residential home ownership in Nigeria is less than 25% (Adeleye, 2008). The results from the inferential statistics adopted for this study (chi-square), indicates that there was no significant difference in the housing unit type (2.159), building material (2.136), tenure of housing unit (0.328) and rent (5.106) among beneficiaries and non-beneficiaries in the study area.

Table 3 shows that 56.2% and 40% of the beneficiaries and non- beneficiaries' households respectively sourced water mainly from wells (privately owned and public wells). Boreholes accounted for 17.2% in the case of beneficiaries and 18.8% in the case of non-beneficiaries while streams accounted for 20.3% and 31.9% of the available water source for beneficiaries and non-beneficiary's households respectively. This observation agrees with the findings that most rural dwellers do not have access to safe drinking water and that rural infrastructure in Nigeria has been neglected (IFAD, 2007). Generally, the rural dwellers have limited access to potable water (a condition that may predispose them to intestinal disorders and several water-borne diseases), hence; they depend on what nature provided them with i.e. streams and ponds.

In terms of the hygienic situation in the dwelling units with regard to toilet facilities, the results indicated that 50% (beneficiaries) and 47.8% (non-beneficiaries) of the dwelling units have pit latrine. Following is 42.2% and 42.0% of beneficiaries and non-beneficiaries respectively who use bushes/dunghill as toilet sites. Only 7.8% of beneficiaries and 10.2% of non-beneficiaries use water closets toilets in their dwelling units. (This figure is less than those with access to borehole). The unpopularity of the water closet system may be because of the unavailability of water piped into the dwelling of the bulk of the respondents.

Majority (67.2%) of the beneficiaries and (55.1%) of non-beneficiaries depend solely on Power Holding Company of Nigeria (PHCN) for electricity while 10.9% of beneficiaries and a corresponding 2.9% of non-beneficiaries use generator sets alone (Table 3). However, 21.9% and 39.1% of beneficiaries and non-beneficiaries respectively, use generators as complement power source to PHCN. This observation suggests that the use of generators is getting popular among rural dwellers, owing primarily to the inadequacy of the power sector in Nigeria, which has made it necessary for households to source alternative means of generating electricity. This problem of irregular and erratic power supply in Nigeria is a bane to the survival of small scale or cottage industries which serve as an effective tool for alleviating poverty (Bayene, 2002).

The results from the inferential statistics (chi-square), shows that there was no significant difference in the source of water (8.476) and toilet facility (0.001) among beneficiaries and non-beneficiaries. This may be because they dwell within the same locality. However, there was a significant difference in the source of electricity (5.106) between the beneficiaries and non-beneficiaries in the study area.

The income status is a reliable indicator widely used in poverty studies (Maxwell, 1999). Table 4 shows the monthly *per capita* income of the respondents in the study area. The estimated average monthly *per capita* income of the households within the study area was derived by considering not just their supposed monthly returns from sales of farm produce but other possible income generating sources of the respondents. Result show that 54.7% of the beneficiaries earn between

₦10,000 and ₦19,999 per month while majority of the non-beneficiaries (42.0%) earn less than ₦10,000 as average monthly income. This discrepancy may have resulted because of the assistance provided by the NGOs to their beneficiaries in form of credit which provides needed resources for purchasing innovations and agricultural inputs; trainings on technical know-how, improved farming/agricultural practices, hence; increasing productivity which translates into an improved income. This finding is in line with the submission of Bolarinwa and Fakoya (2011).

Description of Beneficiary Households by Benefits from NGOs' Schemes

Table 5 shows the activities of the selected NGOs and the distribution of the beneficiaries based on NGOs' activities within the study area. Majority (87.5%) of the beneficiaries had access to micro-credit from the NGOs as well as training and extension services (70.3%). This result has established that micro-finance is a commonly used strategy of poverty reduction (Akanji, 2002).

The results presented in Table 6 show the amount of credit borrowed by the beneficiaries from the micro-credit scheme of the NGOs. All (100%) of the beneficiaries within the study area enjoy some form of credit from the respective NGOs they are affiliated to (Table 6). Most (57.8%) of the beneficiaries collected credits between ₦5,000 – ₦20,000 and only 3.13% collected credit amounting to more than ₦40,000 with mean credit borrowed being ₦24,250 (Table 6). This situation may have risen because the farmers are risk averse or because the NGOs have a very limited financial capacity and unable to provide loans beyond their capability.

Table 7 depicts the forms of utilization for credit received from NGOs. About one-quarter (21.25%) of the respondents spent the loan obtained to cater for their households i.e. domestic needs which could range from payment of children's school fees to purchase of food and other household items (Table 7). More than half (59.38%) of the respondents used the loans for farm production operations while 9.38% used the loan for other projects such as building projects and setting up businesses for alternative income source (Table 7). This result suggests that although the loans given to the farmers by the NGOs are sometimes used to address other needs of the farmers, the largest percentage of the respondents invest the loans received in farming enterprise operations thus enhancing increased farm profitability.

A poverty line of ₦12,272.49 was estimated. Households whose mean *per capita* monthly income fell below the line were classified as poor and those above this line were classified as non-poor. Table 8 shows that about 24% of beneficiaries fell below the poverty line while about 46% of non-beneficiaries fell below the line. Using the FGT estimate, poverty incidence was more prevalent among the non-beneficiaries' (0.464) than the beneficiaries (0.234). This means that approximately 46% of the non-beneficiaries and 23% of the beneficiaries were actually poor. Overall, the incidence of poverty among the respondents is 0.353 (35%).

The beneficiaries had a P_1 value of 0.218 whereas for the non-beneficiaries the P_1 value was 0.506 (Table 9). In other words, households that have received assistance from NGOs will require ₦2,679 monthly (i.e. about 22% of the PBM) while the non-beneficiaries would require ₦6,212 monthly (i.e. about 51% of the PBM) to close their poverty gap. The disparity in the poverty gaps is an indication that the beneficiaries are relatively well-off than their non-beneficiary counterparts. This difference may be attributed to their affiliation with NGOs. Thus this finding agrees with the

findings of Robinson (1992) that NGOs are able to raise the economic status of the poor. Table 9 also reveals that poverty severity was more pronounced within the non-beneficiary households (0.404) than the beneficiary households (0.083). However, across all households, P_2 was 0.301 i.e. about 30% (Table 9). These findings are in line with the submission of NBS (2009) that rural poverty in Nigeria is high.

The t-test was used to determine the difference between the poverty conditions of beneficiaries and non–beneficiaries. Results on Table 10 shows that a significant difference exists between the poverty condition of beneficiaries and non-beneficiaries ($p<0.01$). Thus, significant difference exists in poverty status of NGOs' activities beneficiaries and non-beneficiaries.

Factors Influencing Poverty among Beneficiaries and Non-Beneficiaries Households

Table 11 presents the result of the LR model used to estimate the determinants of poverty among the respondents. The two categories of poverty namely non-poor and poor groups formed the dependent variable as ordered 0 and 1 respectively while eleven explanatory variables were considered in the model. From the nine explanatory variables included in the model, six were statistically significant at various levels significance.

They are age, age squared, gender, primary occupation of household head, number of dependants and household size. The likelihood ratio for chi-square of 107.867 ($p<0.01$) reveals that the model is statistically significant.

The age of the household head was negatively related ($p<0.1$) to the poverty status of the household head (Table 11). This shows that the older a household head was, *ceteris paribus*, the higher the likelihood of the household being non-poor. This situation may be attributable to the longer years of experience of older farmers. Most of the households' heads may have engaged in farming activities over time and have gained mastery on the technical know-how required to increase productivity compared to their younger counterparts, hence resulting in increased income of the farmer and subsequently higher income *per capita*.

Age squared on the other hand had a positive ($p<0.1$) relationship with household poverty status (Table 11). This implies that as the household head becomes older the poverty status becomes correspondingly higher but afterwards, the poverty status begins to reduce. This is because the older farmers reach a stage in their life where their economic activities begin to dwindle and may later become incapacitated by virtue of old age and thus the likelihood of their households being poor increases. This situation could be more severe for the head if he is the sole bread winner of the family and does not have other income sources or forms of security at old age. This observation is in line with life-cycle hypothesis which postulates that demographic variables affect welfare (Ando and Modigliani, 1963).

Household size positively ($p<0.1$) influenced the likelihood of household being poor (Table 11). That is, the higher the number of persons within a household, the higher the likelihood of the household being poor. This is so because a households' income *per capita* does not correspondingly increase as the household size increases and subsequently, the family would have to adjust by spreading resources thinly. Larger households are usually characterized by polygamy; a custom of having multiple wives, which amounts to more children and hence a larger household

than in a monogamous setting. This result conforms to the expected occurrence as poor households tend to include more members (IBRD, 2008).

Household's dependency level had a positive effect ($p<0.01$) on the likelihood of household being poor (Table 11). This agrees with *a priori* expectation since high dependency rate is hypothesized to increase poverty which is due to the fact that dependant's lower household's *per capita* income. The sex of the household head had negative effect ($p<0.01$) on the likelihood of the household being poor (Table 11). This means that female headed households were less likely to be poor which is contrary to *a priori* expectation since male headed households were expected to have a higher likelihood of belonging to the non-poor category. However, this result could be due to the fact that men were more likely to have greater financial commitments in the family (both immediate and extended family) and tend to be more ambitious than the female folk. This is reflected in their aspiration to own their own houses as well as acquire other assets. These tendencies and desires compete for their income as well as raise their expenditure. This is because a fraction of their income may have to be set aside monthly, thus resulting in a financial crunch within homes headed by males. Female on the other hand, having less financial commitments to bear, tend to have more income at their disposal and therefore female headed households were less likely to be poor.

The primary occupation of the household head had a negative effect ($p<0.1$) on household poverty status (Table 11). This indicates that the likelihood of household being poor reduces as the household head take up non-farming vocations as primary occupation. This may be because farming is subject to high risk and when farming fails, they have no alternative means of income. It might also be due to the fact that most farmers do not own their farmlands and use communal land for farming which means the land has to be shared; and also given the fact that the households were resource-poor smallholders, returns from the farm were insufficient to cross the PBM. This situation may limit their productive capacity and hence worsen their poverty status in contrast to those who took up non-farm activities as their primary occupation who might have a higher income threshold and, hence, the likelihood of being non-poor. This finding is similar to that of Alain *et al* (2005) that non-farm income has a significant impact on poverty among rural farmers.

Table 12 shows the marginal probability effects of respondents' socio-economic variables on poverty status. It reveals that households head being one year older increased the likelihood of household being non-poor by 3.5 percent. Age square on the other hand shows that at a certain stage an additional increase in the age of the household head increased the likelihood of household being poor by 0.36 percent (Table 12). An increase in household size by an additional member increased the likelihood of a household being poor by 15.7% (Table 12). Furthermore, female headed household had 6.4 percent likelihood of being non-poor than male headed households (Table 12). An increase in the number of dependents by one person increase the likelihood of household being poor by 5.9 percent (Table 12). Households with heads taking up farming as primary occupation had 7.3 percent increased likelihood of being poor than households with heads having non-farm primary occupation (Table 12).

Conclusion and Recommendations

This study primarily focused on farmers who are assisted by non-governmental organisation and examined their poverty status vis-à-vis other farmers who are not benefitting from the NGOs within the same study area. From the results gathered, the study concludes that disparity existed between the poverty status of NGOs' activities beneficiaries and non-beneficiaries. Although there was no significant difference in terms of educational status of household heads, housing types, housing facilities and water source and electricity source, the differences that exists in the measure of poverty incidence, gap and severity of both groups is an indication that the beneficiaries households were more well-off compared to their non-beneficiaries counterpart by virtue of their affiliation to the NGOs. However, loan use by some of the beneficiaries farmers may be a case of misplaced priorities as these credit(s) were provided with a view to improve their production capacity or invest in other income generating activities. Obviously NGOs are playing a positive and significant role in reducing poverty among rural farmers and through their operations have improved the economic situation of their beneficiaries in the study area.

The disparity existing between the poverty incidence of the beneficiaries and non-beneficiaries is an indication that NGOs affiliated with agriculture are positively affecting the lives of their members, hence in order to improve farmers' welfare, there is need for NGOs to:

i. intensify services (preferably extension operations) for relatively younger and less experienced farmers because these categories of farmers are not as well off compared to the aged ones.
ii. scale up their intervention programme by building synergy with the government and private sector in order to reach a larger number of farmers.
iii. step up awareness building on reproductive health knowledge that could empower household heads to make quality decision regarding their household size.

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Table 1: Socio-demographic characteristics of households

Demographic Characteristics	Beneficiary		Non-beneficiary	
	Frequency	Percentage	Frequency	Percentage
Gender				
(a) Male	58	90.6	51.0	73.9
(b) Female	6	9.4	18.0	26.1
Marital Status				
(a) Single	9	14.1	5	7.2
(b) Married	48	75.0	50	72.5
(c) Widowed	7	10.9	14	20.3
Total	***64***	***100***	***69***	***100***
Age				
(a) 20-30	5	7.8	2.0	2.9
(b) 31-40	14	21.9	21.0	30.4
(c) 41-50	23	35.9	21.0	30.4
(d) 51-60	7	10.9	9.0	13.0
(f) > 61	15	23.4	16.0	23.2
Total	***64***	***100***	***69***	***100***
Mean	***48.47***	**-**	***48.61***	**-**
Formal Education				
(a) Yes	48	75.0	49	71.0
(b) No	16	25.0	20	29.0
Total	***64***	***100***	***69***	***100***
Educational level				
(a) Primary school	18	28.1	19	27.5
(b) Junior Secondary school	9	14.1	5	7.2
(c) Senior Secondary school	10	15.6	20	29.0
(d) Tertiary	10	15.6	4	5.8
(e) Not completed primary	5	7.8	5	7.2
(f) No formal education	12	18.8	16	23.2
Total	***64***	***100***	***69***	***100***
Chi-square	***7.47***	***Prob: 0.188***		
Household size				
(a) 1-4	3	4.7	5	7.2
(b) 5-8	50	78.1	44	63.8
(c) 9-12	11	17.2	16	23.2
Total	***64***	***100***	***69***	***100***
Mean	***6.80***		***7.45***	
Farming experience (yrs)				
(a) 1-5	3	4.7	2	2.9
(b) 6-10	6	9.4	12	7.4
(c) 11-15	21	32.8	21	30.4
(d) 16-20	17	26.6	23	33.3
(e) > 21	17	26.6	11	15.9
Total	***64***	***100***	***69***	***100***

Table 2: Distribution of households by housing type, tenure of housing unit and monthly rent of the housing unit.

Description	Beneficiaries		Non-Beneficiaries	
	Frequency	**Percentage**	**Frequency**	**Percentage**
Housing unit type				
(a) Flat	3	4.7	7	10.1
(b) Face-to-Face	57	89.1	60	87.0
(c) Storey building	4	6.2	2	2.9
Total	**64**	**100.0**	**69**	**100.0**
Chi-square	**2.159**	**0.340**	**-**	**-**
Building material				
(a) Block	29	45.3	32	46.4
(b) Brick	4	6.2	1	1.4
(c) Mud	31	48.4	36	52.2
Total	**64**	**100.0**	**69**	**100.0**
Chi-square	**2.136**	**0.344**$^{+}$	**-**	**-**
Tenure of housing unit				
(a) ownership	8	12.5	10	14.5
(b) Rent	29	45.3	28	40.6
(c) Family house	27	42.2	31	44.9
Total	**64**	**100.0**	**69**	**100.0**
Chi-square	**0.328**	**0.849**$^{+}$	**-**	**-**
Monthly Rent (₦)				
(a) 0	37	57.8	46	66.7
(b) 500	8	12.5	6	8.7
(c) 700	10	15.6	11	15.9
(d) 1000	7	10.9	2	2.9
(e) 3000	2	3.1	3	4.3
(f) 3500	0	0	1	1.4
Total	**64**	**100.0**	**69**	**100.0**
Chi-square	**5.106**	**0.403**$^{+}$	**-**	**-**

Note: +Probability level

Table 3: Distribution of households by major household utilities

Description	Beneficiaries		Non-Beneficiaries	
	Frequency	Percentage	Frequency	Percentage
Source of Water				
(a) Public tap	4	6.2	7	10.1
(b) Public borehole	11	17.2	13	18.8
(c) Public well	26	40.6	25	36.2
(d) Private well	10	15.6	2	2.9
(e) Stream	13	20.3	22	31.9
Total	**64**	**100.0**	**69**	**100.0**
Chi-square	**8.476**	**0.760**$^{+}$	**-**	**-**
Toilet facility				
(a) Pit latrine	32	50.0	33	47.8
(b) Water closet	5	7.8	7	10.2
(c) Bush	27	42.2	29	42.0
Total	**64**	**100.0**	**69**	**100.0**
Chi-square	**0.001**	**0.985**$^{+}$	**-**	**-**
Source of electricity				
(a) PHCN	43	67.2	38	55.1
(b) Generator only	7	10.9	2	2.9
(c) PHCN and Generator	14	21.9	27	39.1
(d) None	0	0.0	2	2.9
Total	**64**	**100.0**	**69**	**100.0**
Chi-square	**9.033**	**0.029**$^{+}$	**-**	**-**

Note: +Probability level

Table 4: Distribution of households by average monthly *per capita* income

Income(₦)	Beneficiaries		Non-Beneficiaries	
	Frequency	Percentage	Frequency	Percentage
< 10,000	5	7.8	29	42.0
10,000-19,999	35	54.7	25	36.2
20,000- 29.999	8	12.5	11	15.9
30,000-39,999	11	17.2	1	1.4
> 40,000	5	7.8	3	4.3
Total	**64**	**100.0**	**69**	**100.0**

Table 5: Distribution of beneficiaries' households by NGOs activities

Activity	*Frequency	Percentage
Micro-credit	56	87.5
Training and extension services	45	70.3

*Multiple responses

Table 6: Distribution of beneficiaries' households by credit obtained from NGOs

Amount (₦)	Frequency	Percentage
5,000 -10,000	10	15.62
10,001 – 15,000	16	25.00
15,001 – 20,000	11	17.19
20,001 – 25,000	9	14.06
25,001 -30,000	8	12.50
30,001 – 35,000	4	6.25
35,001 – 40,000	4	6.25
>40,000	2	3.13
Total	64	100
Mean	**24,250**	-

Table 7: Distribution of beneficiaries' households by credit use

Variable	Frequency	Percentage
Household	20	31.25
Production operations	38	59.38
Other projects	6	9.38
Total	**64**	**100**

Table 8: Poverty status among beneficiaries and non-beneficiaries farming households

Category	Beneficiaries		Non-beneficiaries	
	Frequency	Percentage	Frequency	Percentage
Poor	15	23.4	32	46.4
Non-poor	49	76.6	37	53.6
Total	**64**	**100**	**69**	**100**

Table 9: Poverty measurement by FGT model

Category	P_0	P_1	P_2
Beneficiary	0.234	0.218	0.0826
Non-Beneficiary	0.464	0.5062	0.4040
All households	**0.353**	**0.4143**	**0.3014**

Table 10: Differentials in Poverty Profile of Beneficiaries and Non–beneficiaries

	Category	Standard Deviation	N	t-value
Poverty incidence	Non-beneficiary	0.50234	69	-2.827+
	Beneficiary	0.42696	64	
Poverty gap	Non-beneficiary	0.39057	69	2.693***
	Beneficiary	0.19330	64	
Poverty severity	Non-beneficiary	0.68943	69	1.781***
	Beneficiary	0.12956	64	

*+ Chi-square value, ***P<0.01*

Table 11: determinants of poverty among beneficiary and non-beneficiary's households

Variables	Coefficients	Standard Error	t-ratio
Constant	3.5992	3.1526	1.1417
Age	-0.1721*	0.1143	-1.6750
Age square	0.0017*	0.0011	1.6545
Educational Status	-0.02192	0.13092	-0.16748
Household size	0.75872***	0.1139	6.6617
Number of dependants	0.2835***	0.0976	2.9036
Gender	-3.1014***	0.8024	-3.8650
Household income	-0.02803	5.5073	0.0058
Primary occupation	-3.5247***	0.8425	-4.1835
NGO Membership	-0.3427	0.46752	-0.7330
Log Likelihood	**107.867*** **	**-**	**-**
Pseudo-R^2	**37.417**	**-**	**-**

***Sig. at 1%, **Sig. at 5%, *Sig. at 10%

Table 12: Marginal probability effects of poverty status determinants

Explanatory Variables	**Marginal Effect**
Age	0.0358
Age square	0.0036
Household size	0.1579
Number of dependent	0.0590
Gender	0.0646
Primary occupation	0.0734