IMPACT OF DEVELOPMENT EXCHANGE CENTRE MICROCREDIT PROGRAMME ON POVERTY ALLEVIATION AMONG WOMEN FARMERS IN KADUNA STATE, NIGERIA

Adamu, B. D., Olaleye, R. S., Adeniji, B. O. and Ndatnisa, M. A.

ABSTRACT

Grassroots development can only be achieved through collective efforts of stakeholders in alleviating poverty among rural women. Development Exchange Centre (DEC) is a typical agent of grassroots development. This study assessed the impact of Development Exchange Centre microcredit programme on poverty alleviation among women farmers in Kaduna State, Nigeria. The study was carried out in three local government areas of Kaduna State (Sabon-Gari, Kaduna-south, and Jema'a). The study involved a simple random sampling selection of three Local Government Areas and purposive selection of two communities from each of selected LGAs. This selection was based on the intensity and concentration of DEC microcredit activities in the study area. Four hundred and twenty (420) respondents comprising two hundred and ten (210) participants and non-participants were randomly selected for the study. Primary data were collected through validated structured interview schedule and Focus Group Discussion (FGD).The result of the Foster, Greer and Thorbecke (FGT) Poverty model revealed that the incidence poverty among of participants show 0.04 representing 4% were poor while 0.96 representing 96% of the participants were non-poor. The result of the study reveal that DEC microcredit made a significant impact on poverty alleviation among the participants in the areas of poverty status ($t=16.26$, $P\leq .01$), income (t=value of 22.93, $P\leq .01$), crops output($t=14.74$, $P\leq .01$), crops yield ($t=12.14$, $P\leq .01$) and level of living ($t=28.28$, $P\leq .01$).Chow test result show that poverty status, income, crop output and level of living had their F-chow calculated greater than the tabulated F-chow at 5% level of probability, which implied DEC microcredit had impact on poverty status, income, crop output and level of living of the participants. It is thus recommended that, increase in access to credit by the farmers; Access to farm inputs at subsidized rate and the need for partnership with governments; private sectors; international donors, and philanthropy organisations; toward making reasonable contributions in poverty alleviation among rural women.

Keywords: Impact assessment, poverty alleviation, DEC, Microcredit, Kaduna State

INTRODUCTION

The issue of poverty has been a major concern to many nations, particularly, the developing countries including Nigeria. Thus poverty refers to a situation and process of serious deprivation or lack of resources and materials necessary for living within a minimum standard conducive to human dignity and well-being. Poverty connotes deprivation of the means of subsistence (Tinuke, 2012). Nigeria is the most populous country in sub Saharan Africa, with a population of about 170 million in 2012 (World Bank, 2012). The country is endowed with a variety of natural resources; a member of the Organization of Petroleum Exporting Countries (OPEC), and a leading producer of palm oil, cocoa, rubber and cassava (Nnazor, 2005). The country has the potentials to be a rich country due to all these resources, however, it is still a poor country. The per capita income of Nigeria dropped from $ 1000 in 1985 to $ 275 in 1997and to $75 in 2007. The country has a high unemployment rate(Moore, 2007). Between 69 and 70 percent of Nigerian living in rural areas are poor women. (National Bureau for Statistics (NBS)(2012). Over half the population lives on less than one US dollar per day, (IMF,2007); Nigeria's poor are predominantly rural, female, very young or old, live in the Northern part of the country and mostly depend on renewable natural resources for their livelihoods (World Bank/Department for International Development (WB/DFID), 2005). Concerned groups such as Non-Governmental Organizations, the government, Women Activists and private individuals have made significant efforts to alleviate poverty especially among women, but the problem still persists (Tinuke, 2012)

Impact of a social intervention refers to as the outputs of that organization which are related to the achievement of the programme objective (Baker, 2000),. Impact is synonymous with end, outcome or result. Measurement of impact can be done objectively and subjectively or both ways. Impact study involves the study of population, villages or communities that benefited from the project and those that did not benefit. It is a method that gives the researcher a clear difference between participants and non – participants (Baker, 2000). Development Exchange Centre (DEC) is an Non-Governmental Organisations (NGOs), established in 1987 by the Canadian University Services Oversea (CUSO) and Adult Non-formal Educational Agency,(ANFEA) in Bauchi State. A non-religious, non-political organization, providing social and micro financial services to women groups to enhance their capacity for sustainable development(DEC Women Newsletter, 2014). These women invest their loans in farming, livestock rearing/fattening, grain and petty trading.(DEC Newsletter,2014).

Microcredit plays an important role in increasing women's employment in micro enterprises and improving the productivity of women's income generating activities. With regard to overcoming gender inequality, provision of micro credit to women is expected to play effective

role in enhancing their self-confidence and status in the family as independent producers and providers of valuable cash resources to the household economy.Kaduna state being one of the poorest state in north- west of the country(WB/DFID, 2005. DEC programme aimed at improving the standard of living of the rural women and indeed alleviating their poverty. DEC microcredit took-off in Kaduna State with quest to providing social and micro financial services to women groups and youth in various communities to enhance their capacity for sustainable development. Despite DEC microcredit involvement in providing social and micro financial service in the study area, no systematic effort has been made so far to investigate its impacts on poverty status, income, crop yield, output and level of living of the target women farmers. The result is that there is a dearth need of basic information about the impact of DEC microcredit. Therefore, the questions which this research sought to answer are:

i. What is the poverty status among DEC women participants and non-participant in the study area?
ii. What is the impact of DEC microcredit on poverty status, income, crop output, crop yield and level of living among participants and non-participants in the study area and
iii. What are the constraints encountered in accessing DEC microcredit by participants in the study area?

The aim and objective of the study is to assess the impact of DEC microcredit on poverty alleviation among women farmers in Kaduna State. The specific objectives are to:

i. determine the poverty status among DEC women participants and non-participant in the study area
ii. determine the impact of DEC microcredit on poverty status, income, crop output, crop
iii. yield and level of living among participants and non-participants in the study area; and
iv. identify the constraints encountered in accessing DEC microcredit by women participants in the study area.

Hypothesis
Ho: There is no significant difference between the poverty status, income, crop output, crop yield and level of living) of theparticipants and non-participants.

METHODOLOGY
Study area
The study was carried out in three local government areas of Kaduna State (Sabon-Gari, Kaduna-south, and Jema'a). These LGAs were randomly selected out of nine LGAs participating in DEC microcredit programme in state. Kaduna State is in North-West Nigeria. Located between Latitudes 9° and 12°N and Longitudes 6° and 9°E of Greenwich Meridian. The mean annual rainfall is between 1500mm and 2000mm North and South respectively. The state has an estimated population of 6,066,562(out of an estimated female population is 2,954, 534(48.7%). (National commission for mass literacy Adult and Non-formal education, 2008). The state cover an area land mass of about 45,786 km², Federal Office of Statistics (FOS, 2006). It isestimated that the population will increase to 359,752 by 2014 based on the National Population Commission (NPC) annual growth rate of 3.2%.

Sample size and sampling technique
Multi-stage technique was employed in selecting the respondents. The first stage involved simple random selection of one local government area from the three senatorial districts that participated in DEC microcredit. This was followed by purposive selection of two villages, each from the three selected Local Government Areas. This selection was based on the intensity and concentration of DEC microcredit activities in the study area. The third stage was random selection of the DEC microcredit programme women from the sampling frame of DEC beneficiaries register lists. In the fourth stage, four thousand, two hundred and six (4,206) was taken because the farmers in the study area were homogeneous in their mode of operations. A total population of four hundred and twenty (420) comprising two hundred and ten (210) DEC microcredit women participants and non-participants respectively was selected for this research work.

Method of data collection
Primary data was used for this study; the data was collected through the use of structured questionnaire from the women farmers' participants and non-participants. Data was collected on socio-economic variables (age, educational level, farm size, farming experience and non-farm activities of the respondents); farm output, yield, food and non-food expenditure; respondents perception of poverty,income, level of living and problems faced by DEC participants.

Analytical technique
Data were analyzed from the field using descriptive statistics, Foster, Greer and Thorbek (FGT) index, Pair t-test andchow test. FGT was used to achieved objective i while pair t-test and chow test were applied to achieved objective ii

FGT poverty model (Foster, Greer and Thorbecke model)
This was used to determine the poverty status of the farmers. The Foster, Greer and Thorbecke (FGT) measures of poverty are widely used because they are consistent and additively decomposable (Foster et al., 1984). Poverty head

count index, poverty gap index and squared poverty gap index were computed to measure the incidence, depth and severity of poverty of the DEC participants and non-participants. A relative poverty line was constructed based on theMean Per Capita Household Expenditure (MPCHE) of the farmers.The General Foster, Greer and Thorbecke (FGT) poverty index

(Pαi) can be expressed as:

Poverty gap index/intensity of poverty = Depth of poverty

$$P_\alpha = \left(\frac{1}{n}\right) \sum_{i-1}^{x} \left(\frac{L - Ci}{L}\right) \quad \text{------------ (1)}$$

P_α = PG for poverty gap or depth $\alpha = 1$
L = poverty line
C = Average consumption expenses for adult equivalent/person
i = Individual person
n = Total number of person
q = number of person with average consumption expenses per adult equivalent lower than poverty line
= Headcount Ratio or incidence = number of people below poverty line in a given population = poor
= to % pop below the poverty line

$$P_o = \frac{1}{N} \sum_{\Sigma -1}^{N} 1(yi < z) \quad \text{------------------ (2)}$$

P_o = Proportion of poor people in the population
N = Total population
Np = Number of people below the poverty line
Z = Z = Poverty line (two-third of Mean Per Capita Household Expenditure (MPCHE) of DEC participants and non-participants)
Yi = Total HH expenditure for i^{th}
I = 1 = Poor household; 0
Otherwise 0 = non-poor household

Paired t-statistics
Paired t-test was used to analysed objective ii
Paired t-statistics is often used to test significant difference between two populations (Frank and Althorn, 1994). The difference between the mean of the socio-economic characteristic, impact of DEC microcredit on poverty status, income, crops yield, output and level of living among participants and non-participants. The paired t-statistics model is specified as follows:

$$t_{p1} - t_{p2} = \frac{X_1 - X_2}{\sqrt{\frac{P_q(N_1 + N_2)}{N_1 N_2}}} \quad \text{-------------------- (3)}$$

Where:
T_{p1} = 2 calculated paired t-value
X_1 = mean value of non poor respondents
X_2 = mean value of poor respondents
P_q = expected value of co-variance of participants and non-participants.

N_1 and N_2 = corresponding sample size of participants and non-participants respectively.

Chow test statistics
According to Dougherty (2007), chow test statistics is often used in program evaluation to determine whether the program has impacts on different subgroups population. The chow test statistics is an application of the F- distribution test it requires the sum of squared errors from three regressions, one from each sample group and one for the pooled data. If chow calculated is greater than the critical value. Then there was DEC impact on participants otherwise no impact. This was used to test the general hypothesis.
The model is specified as follows:

$$F - Chow = \left[\frac{RSS_0 - (RSS_1 + RSS_2)/K}{RSS_1 + \frac{RSS_2}{n_1} + n_2 - 2K} \right] \quad \text{---------- (4)}$$

Where
RSS_0 = sum of squared residual from the pooled data.
RSS_1 = sum of squares from the first group (i.e. participants)
RSS_2 = sum of squares from the second group (i.e. non participants)
n_1 and n_2 = are the number of observations in each group
K = total number of parameters
The variables were measured by either single or composite measure technique. The single measure technique uses only one question or indicator to measure the domain of a concept. The composite measure on the other

RESULTS AND DISCUSSION
Poverty Status of DEC Participants and Non-Participants in Kaduna State, Nigeria
Determination of poverty line
The result in Table 1 gives a clear presentation of the estimation ofthe poverty line that was used to determine the poverty status ofthe farmers in the study area. The poverty line formed the basis forfurther analysis. The Foster-Greer-Thorbecke (FGT) class ofpoverty measures was employed to estimate the poverty status of the participants and non-participants in the study area. Following the adoption of Foster,Greer and Thorbecke measures, households' total expenditure wasused to determine households' poverty status. The result presentedin Table 1 shows the households food and non-food expenditure,total expenditure, Per capita and mean per capita householdexpenditure and the poverty line. The poverty line was constructedas two-thirds of the mean per capita household expenditure(MPCHE) of all households. This approach has been used byseveral researchers and institutions (NBS, 2005;

Oni and Yusuf,2008) as a measure of welfare. Households were then classifiedinto their poverty status based on the poverty line.Hence, non-poor households were those whose per capitaexpenditure was above or was equal to two-third of the mean percapita expenditure of all households while those whose per capitaexpenditure was below two-third of the mean per capitaexpenditure were classified as poor. Based on this, the poverty lineconstructed as two-third of the mean per-capita expenditure of all participants and non-participants households was ₦159.880. This implies that households whosemonthly per capita expenditure fell below ₦159.880 wereclassified as poor while households whose per capita expenditureequaled or was above the poverty line were classified as non- poor.

Table 1: Determination of poverty line

Items	Participants	Non-participants
Household food expenditure	230283.708	152766.367
Household non-food expenditure	184729.51	71300.94
Household total expenditure	415013.222	224067.310
Per capita household expenditure (PCHE)	104033.467841	66717.225510
Mean Per capita household expenditure (MPCHE)	292.228842	187.407937
2/3 MPCHE (Poverty line)	159.8800	159.8800

Source: Field Survey, 2015

Poverty indices of participants and non-participants households

The result presented in Table 2 shows the values for the poverty measures, (poverty headcount (H), poverty gap and severity of poverty). Based on the poverty line, households were classified into their poverty status as either non-poor or poor as presented in Table 2. The headcount index (incidence of poverty) computed for the study area was 0.4 for proportion of participants households' whose per capita expenditures fell below the poverty line was 4%. The table shows that 96% of participants households in the study area are non- poor while non-participants whose per capita expenditure fell below the poverty line was 0.48 in the study area. This implies that 48%% are poor while 52% are non-poor. The result is in line with the findings of Nwaobiala, 2014). Determinant of poverty levels among IFAD and non IFAD participating farmers in Abia State, Nigeria. The result indicated that, the incidence of poverty otherwise known as the head count ratio (Eze,2007) was 0.333% for Abia IFAD farmers and for non IFAD farmers. This implies that 33.33% and 45.21% of IFAD and non IFAD farmers respectively were poor because their incomes fell short of the means household expenditure used as the poverty line. Poverty gap (depth) represents the depth of poverty, it is the mean distance that separates the population from the poverty line. Poverty gap was 0.04 for participants and 0.48 for non-participants, and this implies that the poor of participants and non-participants households require 4%and 48% respectively of the poverty line to get out of poverty group. It is a measure of the poverty deficit of the entire participants and non-participants. This findings agrees with the findings of (Nwaobiala, 2014). Who assessed the poverty depth among IFAD participating farmers, showing that the poverty gap of IFAD farmers was 0.2187 percent and 0.3259, meaning that IFAD and non-IFAD farmers requires 21.87% for farmer and 32.59% respectively of poverty lines to get out of poverty. Poverty severity value was 0.12 and 0.42; this implies that the severity of poverty among the poor participants and non-participants households in the study area was 12% and 42%. The poverty severity takes into account not only the distance separating the poor from the poverty line, but also the inequality among the poor. The result conforms to the findings of Asogwa et al. (2012) who reported a poverty gap of 0.27 and poverty severity of 0.15 in a study on poverty and efficiency among farming households in Nigeria.

Table 2: Poverty measures for the farm households

Items	Participants	Non-participants
Poverty line (N)	159.8800	159.8800
Poverty headcount	0.4	0.48
Poverty gap	0.04	0.48
Poverty severity	0.12	0.42
Poor (%)	4	48
Non-poor (%)	96.	52

Source: Field Survey, 2015

Impact of development exchange centre microcredit programme on participants and non-participants among women farmers in Kaduna state, Nigeria

The result of impact on poverty status, income, crop output, crop yield and level of living of Kaduna State DEC participants and non-participants women farmers is presented.

Poverty status

The result of the pair t-test in Table 3 reveals that the mean poverty status of participants was 0.96 and 0.04 for non-participants. The mean difference was significant with a t-value of 16.26 in favour of participants. This finding implies that DEC microcredit has alleviate the poverty status of participants i.e. there is increase in their income, crop output, yield and level of living.

Income

Income generated from the sales of farm produce from both groups of farmers in Table 3 indicates that the mean annual farm income of participating farmers was N653, 039.00 while that of non-participating farmers wasN201, 045.10. The means difference was significant with a t-value of 23.8372 in favour of participants. This implies that the participants had higher income than the non-participants. This study is in line with Kiva (2005) who reported that the income of Grameen members was 43% higher than incomes of non-programme villages, and that implies there was an impact of the program on participants' income.

Crop output

The result in Table 3 shows that the mean number of crops grown of participants was 2.53333 and 2.57619 for non-participants. The mean difference was not significant with a t-value of -0.3523. This result indicated that there was no difference between participants and non-participants in term of numbers of crops grown. The total crops output shown in Table 3 revealed that the mean total crops output of participants was 437,807 (tonnes) and 145,571 (tonnes) for non-participants respectively. The mean difference was significant with t-value of 14.7442 in favour of participants. This study corroborates Usman (2016) who stated, that 990.16 and 6,609.96 were the output (tonnes) in the treated communities before and after the intervention while 632.52 and 990.69 were the output (tonnes) in the control communities before and after the intervention.The credit received has increased their agricultural productivity in term of crop yield, output, income and thereby alleviating the poverty of rural women.

Crop yield

The respondents' distribution according to their mean crop yield inTable 3, reveals that the mean crop yield of participants was 7,846 (tonnes) and 3,048 (tonnes) for non-participants. The mean difference was significant with a t-value of 12.1413 in favour of participants. Furthermore the result of total land area cultivated in Table 3 shows that the mean of total land area cultivated of participants and non-participants was significant with a t-value of 1.7583 in favour of participants. This result is in agreement with the findings of Nwaobiala (2010) where Agip Green River Project farmers farm output were significantly higher than the non-GRP farmers in Rivers State, Nigeria.

Level of living

Level of living refers to all things contributing to the quality of human existence, this include material possessions of farmers such as radios, television, bicycles, motorcycles, cars, livestock and other valuables by participants and non-participants in the state were statistically compared.

The result in Table 3 shows that the mean annual household expenditure for participants was 242,694 and 87,950 for non-participants, the mean difference was significant with a t-value 24.288; mean value of total assets for participants was 279,437 and 78,074 for non-participants with a t-value of 8.902 and the mean value for level of living of participants was .80950 and -.80951 for non-participants with a t-value of 28.288. The finding revealed that DEC had a significant impact on the life of participants. The variables were household expenditure, asset value and level of living. This finding is in line with Madukwe *et al* (2015) who conducted a research on the impact of the United State Agency for International Development rice project phase 1 on rice farmers in Anambra and Ebonyi State.The result of their finding reveals that there was significant change (x^2 = 52.00, p≤ .5) in the standard of living, before and after the commencement of the project. This implies that there is significant change in the standard of living of the project participant farmers (PPFs) from low to high. It is therefore concluded that the project had positive impact on improved standard of living of the PPFs.

Table 3: Result of paired t-test for the difference in poverty status, income, crop output, crop yield and level of living of DEC Participants and Non-participants women farmers in Kaduna State, Nigeria.

Variable	Respondents	N	X	SE	SD	T	df	p-value	Sig.
Poverty	Participants	210	.66666	.032607	.472530	16.26	418	0.000	***S
Status	Non-partici	210	.66666	.017254	.250039				
Income									
Annual	Participants	210	310095.	1154.53	167267.	15.16	418	0.000	***S
income Per	Non-partici	210	116990	5373.43	77868.4				

152

Variable	Respondents	N	X	SE	SD	T	df	p-value	Sig.
Head									
Total HH income	Participants	210	653038.	17295.1	250630.	23.83	418	0.000	***S
	Non-partici	210	201045.	7773.22	112644.				
Crop output									
Crops grown	Participants	210	2.53333	.072432	1.04964	- 0.3523	418	.7248	NS
	Non-partici	210	2.57619	.097739	1.41637				
Total crop output	Participants	210	437807.	18960.7	274766.	14.74	418	0.000	***S
	Non-partici	210	145571.	5773.78	83670.1				
Crop yield									
Average crop yield	Participants	210	7846.26	383.795	5561.72	12.14	418	0.000	***S
	Non-partici	210	3047	94.3045	1366.60				
Level of living									
Annual household Expenditure	Participants	210	242,694.	5561.38	80592.0	24.28	418	0.000	***S
	Non-partici	210	87,949.9	2873.66	41643.3				
Total Value assets	Participants	210	278,437	21124.8	306127.	8.9018	418	0.000	***S
	Non-partici	210	78.073.8	8088.51	117213.				
'Level of living	Participants	210	.809509	.0525435	.761428	28.28	418	0.000	***S
	Non-partici	210	-.809509	.022691	.328832				

Asterisk indicate significant *** = 1; ** = 5% and * = 10% levels of probability respectively.

Result of Chow test analysis of the impact of dec microcredit on poverty status, income, crop output, crop yield and level of living among dec participants and non-participants

The chow test statistics was applied to ascertain DEC microcredit impact on poverty status, income, crop output, crop yield and level of living among DEC participants and non-participants. The application of the chow test statistics involved obtaining the residual sum of squares from regression analysis which involved participants and non-participants separately and pooled as the third regression. If F-chow calculated value was greater than table value then impact was from DEC microcredit otherwise impact was outside the project.

The result in Table 3, show the F- chow calculated value for poverty status was 13.26 while that of tabulated F-value was 3.84, the difference was significant. Also for income, the F- chow calculated value of 9.84 and tabulated F-value was 3.84. The different was significant. The crop output had F- chow calculated value was 14.86 and tabulated F- value was 3.84 the difference was

significant. As regard to crop yield, the F- chow calculated value was 2.31 and tabulated F-value was 3.84. The different was not significant. Similarly for the level of living, F- chow calculated value was 8.37 while tabulated F-value was 3.84, the difference was significant. The analysis shows that four variables (poverty status, income, crop output and level of living) had their F-chow calculated greater than the tabulated F-chow at 5% level of probability, which implied that DEC microcredit had impact on poverty status, income, crop output and level of living of the participants. The hypotheses were also tested and it was discovered that all the variables were significant at 1% level of probability. Therefore, the null hypotheses were rejected and the alternate accepted. It can be concluded that the Development Exchange Centre Microcredit had positive impact on the participants. These results again supports the findings of Jiriko(2012) who reported that the participation in Project Agape Microcredit(NGO) had significantly impacted the life of participants by alleviating their poverty; improved their income, crop output and level of living.

Table 4: Chow test showing the impact of DEC microcredit on poverty status, income, crops output, yield and level of living among DEC participants and non-participants in Kaduna State, Nigeria

Variable	RSS	RSS1	RSS2	N1	N2	F-chow	F-crit.
Poverty Status	411310937.615	74800.091	75686.358	208	208	13.26803	3.840
Farm Income	3134337589.865	765967.779	712419.891	208	208	10.2916	3.840
Non- farm Income	4773063542.406	609257.022	731406.948	208	208	17.28308	3.840
Total Income	2946588572.930	752302.369	699965.905	208	208	9.849127	3.840
Crops Output	4423926620.712	771567.460	673169.427	208	208	14.86423	3.840
Average Crop yield	657499376.603	698780.978	679355.500	208	208	2.315917	3.840

Variable		RSS	RSS1	RSS2	N1	N2	F-chow	F-crit.
Monthly	HH	342441956.417	767696.696	737403.117	208	208	1.104374	3.840
Expenditure								
Annual HH		2765646629.821	656430.680	771516.606	208	208	9.402327	3.840
Expenditure								

Source: Field Survey, 2016

Constraints Encountered by participating in Accessing DEC Microcredit Programme

Table 8 indicates that 81% of participants reported that there was severe inadequate access to credit. Gilbert (2006) posited that despite the enhanced and visible roles assumed by women due to the microcredit schemes, there were operational lapses; the loan given to the women were inadequate to start and run any viable income generating activity.

Table 8: Distribution of respondents according to constraints encounter by DEC participants, N=210

Participants	Less severe		Severe		Very severe		Not severe	
Variables	Freq	Percent	Freq	percent	Freq	percent	Freq	Percent
High interest rate	2	1.0	38	18.1	7	3.3	163	77.6
Inadequate inform	2	1.0	39	18.6	7	3.3	162	77.1
Bureaucracy	2	1.0	50	23.8	16	7.6	142	67.6
Inadequate credit	2	1.0	170	80.9	30	14.3	8	3.8

Source: Field Survey, 2016

CONCLUSION AND RECMMENDATION

Development Exchange Centre programme made a significant impact on the socioeconomic life of participating rural women by alleviating their poverty, increased in income, crop output, crop yield and improvement in the level of living of the participants. The findings recommended that: DEC microcredit programme should be extended to others Local Government areas of the state; amount of credit should increased, provision of farm inputs at subsidized rate; government, private sectors, international donors, and philanthropic organization should contribute towards alleviating the poverty of rural women farmers in the state and the country at large.

REFERENCES

Asogwa, B.C., Umeh J.C. & Okwoche, V.A. (2012). Poverty andEfficiency among the Farming Households in Nigeria: A Guide forPoverty Reduction Policy. Journal of Economic Theory, 4(1): 6-10.

Baker, J. (2000). *Evaluating the Impact of Development Projects on Poverty: A Handbook for Practitioners. Directions in Development*, World Bank, Washington D.C 20Pp.

Development Exchange Centre, (2014). Newsletter About Dexcentre. Retrieved September 26, 2014.from www.dexcentre.org/newo/about.php.

Dougherty, C. (2007). *Introduction to Econometrics*. CRC press, pp. 146.

Eze, C.I.(2007). Poverty Profiles and Determinants of Expenditures of Rural Women Households in Nigeria *The Nigerian Journal of Development Studies* 6(1).187-204

FOS (2006). Federal Office of Statistics, 2006 National Census.

Foster, J., Greer, J. & Thorbecke, E. (1984) A class of decomposable poverty measures. Econometrica, 52(5): 761-766.

Frank, H. and Althoen, S.C (1994). Statistics, Concept and Application. Pp 439-440.

Gilbert, A. (2006). Rural Women and Microcredit Schemes. Cases from the Lawra District of Ghana. MSc Thesis. Mastergaradsoppgrave. In: Indigenous Studies. University of Tronso. http://hdl.handlenet/10037310

International Monetary Fund, (2007). Nigeria: Poverty Reduction Strategy paper-progress Report. IMF Country Report, August.

Jiriko ,R.K. (2012).Impact of Project Agape Microcredit(NGO) on Trading, Income and Level of Living of Women Agricultural Traders in Nasarawa State. Unpublished Phd Dissertation, Department of Agricultural Economics and Rural Sociology, Ahmadu Bello University, Zaria

Kiva, (2005). About Microfinance.

Moore, K.A., Jekielek, S.M., Hair, E.C. & Scarupa, H.J. (2007). Mentoring: A Promising Strategy for Youth Development.Child Trends Research Brief. Retrieved May 4, 2008 from:http//www.childtrends.org/Files//Child_Trends-200201_RB_Mentoring.pdf

National Bureau for Statistics, (2012).Nigeria Poverty Profile.3-29. Retrieved july

13,2012 from www. Nigerdeltabudget.org/National%20of%20 Poverty%Profile%20.

National Commission for Mass Literacy, Adult and Non- Formal Education (NMEC), (2008). The Development and the State of Adult Learning and Education, National Report of Nigeria 11. Retrieved April 12,2012 from www.unesco.org/../Nigria.

National Population Commission, (2006). Census Bulletin, Kaduna, Kaduna State.

Nnazor, R(2005).Adult education in Nigeria: The consequence ofneglect and agenda for action.*International Education Journal*, 6(4), 530-536.Shannon Research Press.

Nwalleji, H.U; Madukwe AE; Agwu AE; and Mathew – Njoku E. (2016). Impact of the United States Agency for International Development Rice Project Phase I on Rice Farmers in Anambra and Ebonyi States, Nigeria. *Asian Journal of Agricultural Extension, Economics & Sociology 9(4): 1-11.*

Nwaobiala,C.U and Ogbonna, M.O.(2014). Analysis of Poverty Profiles of Participating and non-participating Rural Farm Women in Fadama III Development Project in Gombe State, Nigeria. *International Journal of Agriculture and Rural Development(IJARD) 17(2):1762-1767*

Nwaobiala,C.U.(2010).Effects of Green River Projects on Cassava Famers Production in Ogba/Egbema/Ndoni LGA of Rivers State, Nigeria. *Global Approaches to Extension Practice (GAEP) Journal 6(2) 18-23.*

Oni, O.A. & Yusuf, S.A. (2008) Determinants of Expected Povertyamong Rural Households in Nigeria. AERC Research Report 183,September

Tinuke, M.F.(2012). Women and Poverty Alleviation in Lagos, Nigeria.*British Journal of Humanities and Social Science. 3:2*

Usman, A.G.(2016). Impact of Selected Community and Social Development Project Microcredit Projects on Income and Agricultural Production of Beneficiaries in Niger State Nigeria. An M.Sc Thesis submitted to the Postgraduate School Federal University of Technology Minna; Niger State, Nigeria.

World Bank. (2012). *World development report 2012: Poverty.* Oxford: Oxford University

World Bank/DFID (2005). Country Partnership Strategy for the Federal Republic of Nigeria. June 2