Akungba Journal of Economic Thought - Volume 10, 2018: 11 - 25

Akungba Journal of Economic Thought
ISSN: 2006-9995

EFFECT OF CREDITS FROM COOPERATIVE SOCIETIES ON NON-FARM ACTIVITIES AMONG THE RURAL DWELLERS OF ONDO SOUTH SENATORIAL DISTRICT OF ONDO STATE NIGERIA

Falona, B. O.
and
Dr. (Mrs.) Fasoranti, M.M.

Department of Economics, Adekunle Ajasin University,
Akungba-Akoko, Ondo State, Nigeria.
Email: modupefasoranti@gmail.com

Abstract

Most existing studies focused majorly on cooperative credits and farm activities to the neglect of non-farm activities. Hence, this study aimed at identifying major non-farm activities engaged in by rural dwellers, examine the cooperative societies available to rural dwellers and examine the influence of credits from cooperative societies on non-farm activities of rural dwellers Ondo South Senatorial District of Ondo State.

Multistage sampling procedure was employed to select respondents for the study. Structured questionnaires were administered on the 405 samples out of which 396 were suitable for analysis. Data were collected on demographic characteristics of respondents, non-farm activities and on cooperative societies. Data were analyzed with the aid of descriptive statistics and probit regression model.

Findings showed that the respondents engaged in multiple non-farm activities; 41% of them engaged in trading followed by artisans/technicians (35%), civil service (8%), commercial motorcycling/transporters (7%), teaching (5%), food processing (3%) and butchering (1%). Results on available cooperative societies in the study area showed that majority (41%) of respondents belonged to credit and thrift society followed by daily contribution who were (31%) of respondents while 24% and 4% of respondents belonged to multipurpose and producers' cooperative societies respectively.

Keywords: Cooperative societies, credit, non-farm activities, rural dwellers, probit model

1.0 INTRODUCTION

The status of many rural dwellers in the developing world, mostly Africa, can at best be described as fragile in term of their non-farm activities. Virtually all government initiatives targeted at improving the lives of rural dwellers have failed due to poor planning, corruption and avarice by government officials (Anele, 2007). Most rural dwellers are facing several challenges which include but not limited to environmental constraints, infrastructural deficiencies, marketing problems, technological constraints, high cost of labour and financial constraints in the pursuit of their daily non-farm activities.

The non-farm activities and quality of life of the rural dwellers in Sub-Saharan Africa is even affected further by a multiplicity of factors (Carney, 1998). These factors border on economic policies, climate, environment, socio-culture, demography, infrastructure, governance and a host of others. As a result, smallholders in the rural area lack resilience and the capacity to take advantage of emerging opportunities (IFAD, 2016). Hence, some of the rural dwellers employed credits from cooperative societies to improve their non-farm activities. Studies have also shown that cooperative societies contribute over 45 percent to the Gross Domestic Product (GDP) of the rural populace and it is estimated that at least one out of every two people in Sub-Saharan Africa derives their livelihood activities from cooperative societies (Bwana & Mwakujonga, 2013).

In most developing countries, Nigeria inclusive, farm activities have been considered as the most important income generating activities of the people living in rural areas. This unquestionable fact on rural economies and livelihood has led to the neglect of non-farm activities as another source of rural income (Senadza, 2012). Non-farm activities in the rural households have a great potential to upsurge rural employment, improving income distribution, contributing to economic growth, and poverty reduction (Katega & Lifuliro, 2014). Thus, the importance and impact of non-farm activities on the welfare of rural farm households can no longer be ignored.

In Nigeria, non-farm activities vary from one locality to another depending on where the rural dwellers find themselves and the potentials present in the area. These non-farm activities include petty trading, tailoring, commercial motorcycling, hair plaiting, basket/mat weaving, carving, carpentry, bicycle repairing, barbing, bricklaying, plumbing, butchering, teaching and a host of others. However, non-farm activities in rural areas have not yielded expected results since they are small scale in nature and face constraints that limit them to grow (Woldenhanna & Oskam, 2001). The most important of such constraint has been finance.

The formal credit providers such as banks and other formal financial institutions that should have stimulated the non-farm activities of the rural dwellers did not significantly do so. This is due to low level of penetration in the rural areas, primarily driven by the tendency for most bank branches to be located in areas with high population densities and high market activity. Besides, credit facilities from the formal financial sectors are often accompanied with high interest rates which make it unprofitable for the rural dwellers to employ it to finance their non-farm activities. Hence, rural dwellers employed credits from cooperative societies to fill the financial gap. Rural dwellers' preference for credits from the cooperative societies is owed to the extent of firmness and flexibility in sourcing for and repaying credits from the societies (World Bank, 2000).

Cooperative societies are community based, self-controlled and self-funded microfinance institutions (Simkhada, 2004) because they are meant to operate at the micro

level in most cases to serve the low level strata of the economy, to people who in most cases lack access to formal banking system. As a result, not a few people have come to see cooperative societies as an alternative to the regular banking since it, in most cases provides members of the group the financial incentives without the rigours usually experienced in banking halls (Adewakun, 2012).

Thus, the importance of credits from cooperative societies arises from the failure of government policies and programmes to affect the lives of rural dwellers positively in term of their non-farm activities couple with the inability of formal financial institutions to grant credit facilities to rural populace as it should be. Hence, rural dwellers aim to bridge this gap by forming themselves into cooperative societies so as to access credit to finance their non-farm activities. More specifically, credits from cooperative societies is an important driving force for promoting non-farm activities with resultant effect of improving rural dwellers wellbeing in Ondo South Senatorial District, Ondo State Nigeria.

Most of existing studies (Mavimbela, Masuku & Belete, 2010; Gomina, Sheyin & Joshua, 2015; Gomina, 2015; Odetola, Awoyemi & Ajibola, 2015; Ogunleye, Oluwafemi, Arowolo & Odegbite, 2015) focused narrowly on cooperative societies and rural farm activities to the neglect of the non-farm activities; hence, the need for this study. Apart from this, most studies examined the influence of cooperative societies on poverty alleviation among rural dwellers (Fasoranti, 2014; Adekola & Dokunbo, 2017; Kihwele & Gwahula, 2015; Kwai & Urassa, 2015; Mavimbella, Masuku & Belete, 2010) with no reference to the non-farmer sectors. The nearest study, Ayyapong, Adegel & Boafo (2015) was conducted in Ghana. Also, most previous studies employed multiple linear regressions as their analytical technique while this study employed probit regression model in estimating the influence of credits from cooperative societies on non-farm activities among rural dwellers in the study area.

This study therefore analyzed the effect of credits from cooperative societies on non-farm activities among the rural dwellers in Ondo South Senatorial District, Ondo State Nigeria.

Specifically, the study aimed to

i. identify the major non-farm activities of rural dwellers in Ondo South Senatorial District;
ii. examine the types of cooperative societies available to rural dwellers in Ondo South Senatorial District;
iii. examine the influence of credits from cooperative societies on non-farm activities of rural dwellers in Ondo South Senatorial District.

METHODOLOGY

Study Area

The study was conducted in Ondo South Senatorial District of Ondo State, Nigeria. The district is made up of six (6) Local Government Areas (LGAs). They are: Ese-Odo, Irele, Okitipupa, Ilaje, Odigbo and Ile-Oluji/Okeigbo. The people of the district are predominantly Yorubas, comprising mainly the Ikales, Ilajes, Apois and Arogbos. The people of the district have similar culture, tradition and custom with minor variations. The official languages of communication among the people are Yoruba and English while dialects which are

derivatives of the Yoruba language are spoken locally except the Arogbos which speak Ijaw language.

The district is entirely within the tropics and bounded by Ogun and Osun States in the West, Ondo Central Senatorial District in the North and North East, Edo and Delta States in the East while it extends to the Atlantic Ocean in the South. The district has an area of 6,362km^2 and a population of 1,227,545 according to Nigeria 2006 population census. The people of the district engage in non-farm activities such as petty trading, transportation services, civil service, teaching, crafts and other artisan jobs among others. The senatorial district was purposively selected for the study owing to availability of non-farm activities and relative presence of cooperative societies.

Sampling Procedure and Sources of Data

The study employed multistage random sampling technique in selecting the sample for the study. In the first stage, the senatorial district was stratified into three (3) zones based on the three federal constituencies as delineated by Independent National Electoral Commission (INEC): Ese-Odo/Ilaje, Okitipupa/Irele and Odigbo/Ile-Oluji/Okeigbo. In the second stage, a local government was randomly selected from each of the three (3) federal constituencies that made up of the district; making a total of three (3) LGAs. These LGAs are Ese-Odo, Irele and Odigbo. The third stage was random selection of three (3) communities from each of the three (3) local government areas. That is, in Ese-Odo LGA: Igbobini, Igbotu and Sabomi were selected; in Irele LGA: Ajagba, Akotogbo and Gbeleju-Loda were chosen while Odigbo, Omifon and Asewele were selected in Odigbo LGA. The final stage was random selection of forty-five (45) respondents per community giving a total of 405 respondents in all.

The study collected information from non-farm rural households in the study area through a well-structured and validated questionnaire. The questionnaire was administered on 405 randomly chosen respondents from the selected communities in the study area out of which 396 were suitable for analysis. The questionnaire was used to obtain information on demographic characteristics of the respondents, non-farm activities of the respondents as well as on cooperative societies in the study area.

Model Specification

Probit model (PM) has been used in many studies including that of Oni, Yusuf and Ogbowa (2004). The probit model uses the cumulative distribution function (CDF) to explain the behaviour of a dichotomous dependent variable. Given the assumption of normality, the probability that I^*_i is less than or equal to I_i can be computed from the normal CDF as indicated in equation 3.1 below

$P_i = P(Y=1/X) = P(I_i^* < I_i) = P(Z_i < B_1 + B_2X_i) = f(B_1 + B_2X_i)$.. ..... 3.1(a)

$I_i = B_1 + B_2X_i$.....3.1(b)

Where I_i= unobservable decision to improved non-farm activities; I* = critical or threshold level of the index, such that if I_i exceeds I_i^*, credits from cooperative societies will enhance non-farm activities, otherwise it will not. In other words, I_i^*= critical level of I_i, $I_i^* < I_i$ for that decision to be realized.

P (Y=1/X).....3.2

Equation 3.2 is the probability that non-farm activities will improve given the values of explanatory variable X's and where Zi is the normal variable i.e Z~N (0, Q2). The term "probit" was coined in the 1930's by Chester Bliss and stands for probability unit. The probit model is defined in equation 3.3 as

$Pr(y = 1/X) = \Phi(xb)$ ……..3.3

Where Φ is the standard cumulative normal probability distribution and xb is called the probit score or index.

Since xb has a normal distribution, probit coefficients can be interpreted in the Z (normal quartile) metric using probability. The interpretation of a probit coefficient is that one-unit increase in the predictor leads to increasing the probit score by "b" standard deviations. Learning to think and communicate in the Z metric takes practice and can be confusing to others. We made use of a number of tools developed by Long and Freese to aid in the interpretation of the results. The log- likelihood function for probit is

$In\ L=\Sigma_{wj} In\theta(x_j b) + \Sigma_{wj} In(1-\theta(x_j b)$ ……3.4

Where $_{wj}$ denotes optional weights.

Therefore, to examine the influence of credits from cooperative societies on non-farm activities of the rural dwellers in the study area, equation 3.2 is re-specified as follows:

$Y= \beta_0+\beta_1 DC_i+\beta_2 CS_i+\mu_t$……3.5

Where;

Y=Non-farm activities (1=non-farm, 0=otherwise)

DC=Demographic characteristics, and CS= Cooperative societies

B_i-β_{ii}= regression coefficients (parameters).

DC_i=Vectors of parameters to be estimated-demographic characteristics (i=1,2,3, & 4) as defined below:

DC_1=Age (in years),

DC_2=Household size (in number)

DC_3= Household Expenditure (₦),

DC_4= year of formal education (years).

CS_i= Vectors of parameters to be estimated-cooperative societies (i=1,2,3,4,5, 6 &7) as defined below:

CS_1= training access (dummy)

CS_2= cost of healthcare access (₦)

CS_3=savings with cooperative (₦)

CS_4= credit accessed from cooperative (₦)

CS_5=Interest Charged on loan (₦/month)

CS_6= Year of participation (years)

CS_7=Number of societies belong (number)

μt= error term, which is identically and independently normally distributed with mean zero and constant variance σ^2.

METHOD OF ANALYSIS

The study used descriptive and inferential statistics (probit regression model) to analyze the information collected from respondents in the study area. Descriptive statistics that was used include frequency distribution, tables and percentages. Descriptive statistics was used to analyze and achieve specific objectives (i) and (ii) while inferential statistics (probit regression model) was employed to analyze and achieve specific objective (iii).

RESULTS AND DISCUSSION

Demographic Characteristics of the Respondents

This section presents demographic characteristics of the respondents such as sex, age, marital status, education attainment and household size.

Table 3.1: Distribution of Respondents According to Demographic Characteristics

Variables	Category	Frequency	Percentage (%)	Mean
Sex	Male	226	57	
	Female	170	43	
	TOTAL	**396**	**100**	
Age	0-30	76	19	
	31-43	149	38	
	44-56	136	34	
	57-69	35	9	
	TOTAL	**396**	**100**	**40**
Marital status	Single	33	8	
	Married	353	89	
	Widow	4	1	
	Divorce	6	2	
	TOTAL	**396**	**100**	
Education level	No education	12	3	
	Pry education	55	14	
	Sec. education	182	46	
	Tert. Education	147	37	
	TOTAL	**396**	**100**	
Household size	1-3	79	20	
	4-6	124	31	
	7-9	135	34	
	10-12	58	15	
	TOTAL	**396**	**100**	**6**

Source: Field Survey (2018)

The result in table 4.1 shows that majority (57%) of the respondents were male while the remaining (43%) were female. It means cooperative societies in the area are male dominant. The involvement of fewer rural women in cooperative societies could be owing to rural women inability to meet needed requirement like entrance fee, occupation, etc for membership. The result is similar to observation made by Kwai and Urassa (2015) who reported that majority (66.2%) of cooperative members were males as opposed to (33.8%) females

The result in table 3.1 also shows that majority (72%) of the respondents were between the ages of 31-56 years. Thus, the mean age of the respondents was 40 years. This implies that majority of respondents were still within a productive and active working age range, hence they will be able to participate effectively in non-farm activities as well as in cooperative societies. This finding concurred with the findings of Windapo and Olowu 2001,

(cited in Gomina, 2015) who revealed that productive and active persons participate more in cooperative societies and in productive activities. The result is also similar to finding of Marijan 2008, (cited in Kwai and Urassa, 2015) who reported that majority of cooperative members were mature and fall within the economically active and productive age.

The table above also reveals that majority (89%) of the respondents were married while 8%, 1% and 2% were single, widow and divorced respectively. This might be that married people have enormous responsibility by virtue of their status, which could make them engage in non-farm activities to generate funds specially to cater for their family and for joining cooperative societies as a way of augmenting the marriage responsibility.

From table 3.1, it was also established that about 3% of the respondents had no education while 14%, 46% and 37% had primary, secondary and tertiary education respectively. In other words, 97% of the respondents had some forms of formal educational qualifications. It implies that most of the respondents know how to read and write. Thus, given that the majority of the respondents (97%) are literate, there is possibility of better usage of loans obtain from the cooperative societies all thing being equal. This supports the position of Oladipupo 1999, (cited in Ogunleye, *et al* 2015) that in addition to age; education too is an important factor in access to productive resources. This finding also corroborates Kashuliza *et al* 1998, (cited in Kwai & Urassa, 2015) who argued that people with high education are expected to have better knowledge of credit procedures and skills for running economic activities, lack of formal education might hinder prosperity of micro enterprises hence lower income generation.

In addition, table 3.1 shows that majority (65%) of the respondents had a household size of between 4-9 persons with a mean household size of 6 persons which is an indication that most of the respondents had a fairly large family. This result shows that the rural inhabitants of Ondo South Senatorial District, Ondo State Nigeria maintain a relatively sizable household which could serve as insurance against shortfalls in labour supply**.** In other words, the finding implies that respondents have more family members, hence better access to family labour**.**

Non-Farm Activities in the Study Area

Table 3.2: Distribution of the respondents according to non-farm activities

Category	Frequency	Percentage (%)
Trading	162	41
Artisans/technicians	138	35
Civil Service	32	8
Com.motorcyc./transp.	28	7
Teaching	20	5
Food processing	12	3
Butchering	4	1
TOTAL	**396**	**100**

Source: Field Survey (2018)

Analysis of the non-farm activities rural dwellers engaged in, in the study area is presented in table 3.2. Result of the analysis shows that respondents were more involved in trading (41%) follow by artisans/technicians (35%). Other non-farm activities include civil service (8%), Commercial motorcycling/transporters (7%); teaching (5%), food processing (3%), butchering (1%). This observation corroborates the findings of Oyesola (2007), Carney (1998) and World Bank (2003) that rural dwellers economic activities are diverse. The finding is also in agreement with the views of Ekong (2003) who argued that occupations in the rural areas are not all farm oriented. This study added that various forms of secondary or industrial occupations abound in the rural areas. Likewise, the finding collaborates Haggblade *et al* (2007) who defined rural non-farm activities to include all economic activities in rural areas except agriculture, livestock, fisheries and hunting.

It was also observed that trading is the major non-farm activities of the rural dwellers in the study area follow by artisans/technicians. The artisans/technicians from the field study conducted include but not limited to barbing, bricklaying, carpentry, tailoring, hairdressing, phone repairing, cobbling, plumbing, auto-mechanics, iron bending/welding, vulcanizing and painting. This finding is also in agreement with the study conducted by Ifeanyi-Obi and Matthews-Njoku (2014) who stated that farming and trading are the major livelihood activities of rural dwellers in Nigeria which implies that trading is a predominant non-farm activity of rural dwellers in Nigeria.

Types of Cooperative Societies in the Study Area

This section presents the findings and discussion of the cooperative societies available to rural dwellers in Ondo South Senatorial District Ondo State, Nigeria using descriptive statistics.

Table 3.4: Distribution of respondents according to types of cooperative societies

Category	Frequency	Percentage (%)
Credit and thrift	163	41
Daily contribution	123	31
Multipurpose cooperative	94	24
Producer cooperative	16	4
TOTAL	**396**	**100**

Source: Field Survey (2018)

Table 3.4 shows that majority (41%) of the respondents were members of the credit and thrift societies, follow by daily contribution (31%) while 24% and 4% belonged to multipurpose cooperative societies and producer cooperative societies respectively. This implies that credit and thrift cooperative societies, daily contribution, multipurpose cooperative societies and producer cooperative societies were the major cooperative societies available to respondents in the study area. This result is line with the finding of Ogunleye, *et al* (2015) who asserted that credit and thrift cooperative societies, multipurpose cooperative societies and producers cooperative are the most important cooperative societies in rural areas of Nigeria. This result is also in agreement with the

finding of Idrisa *et al* 2007, (cited in Ogunleye *et al,* 2015) that majority of cooperative members in rural areas are into credit and thrift societies.

Table 3.4: Benefits and Challenges of Cooperative societies in the Study Area

Category	Frequency	Percentage (%)
Accessibility to loan	355	90
Provision of prod. input	12	3
Marketing of products	8	2
Gaining higher status	4	1
Sense of belonging	9	2
Entrepreneurial training	8	2
TOTAL	396	100

Source: Field Survey (2018)

The major benefits derived from cooperative societies as showed in table 3.7 are accessibility to loan (90%), provision of production input (3%), marketing of products (2%) gaining higher status (1%), sense of belonging (2%) and entrepreneurial training (2%). This shows that accessibility to loan is the major benefit derived from the cooperative societies by respondents in the study area. This result is in agreement with the findings of Fasoranti (2014) and Ogunleye, *et al* (2015) who opined that accessibility to loans is the major benefit derived by cooperators from the cooperative societies.

Table 3.8: Challenges facing cooperative societies

Category	Frequency	Percentage (%)
Poor economic situation	95	24
Low capital	91	23
High default rate	87	22
Poor management	71	18
Low level of education	48	12
Undue government interference	4	1
TOTAL	**396**	**100**

Source: Field Survey (2018)

Challenges facing cooperative societies as revealed by table 3.8 were poor economic situation (24%), low capital (23%), high default rate (22%), poor management (18%), low level of education (12%) and undue government interference (1%). This implies that poor economic situation, low capital, high default rate couples with poor management were the major challenges militating against cooperative societies in the study area. This result is in line with the findings of Ogunleye, *et al* (2015) and Churk (2015) that identified low capital, poor management and high default rate as major problems facing cooperative societies. The

finding is also in support of the assertion of Chikaire *et al* 2011, (cited in Adekola & Dokubo, 2017) who identified poor management, lack of capital, corruption, inadequate government supportive role, delay in payment of loans by members, lack of commitment on the part of members as major challenges militating against cooperative societies in rural areas.

3.5 Regression Results and Discussion

This section presents the findings and discussion of influence of credits from cooperative societies on non-farm activities of rural dwellers in Ondo South Senatorial District Ondo State, Nigeria using probit regression model.

Table 3.9: Probit regression results of the influence of cooperative societies' credits on non-farm activities

Variable	Coefficient	Standard error	p-value	Marginal effect
Age	0.0010	0.0052	0.848	-0.009
Household size	0.3058***	0.0793	0.000	0.046
Household expenditure	0.6870	0.7080	0.332	0.001
Year of education	0.0199	0.0240	0.406	0.011
Training accessed	0.1308	0.0847	0.123	0.035
Cost of healthcare	-0.0001	0.0001	0.137	0.000
Saving with cooperative	0.7860**	0.3560	0.027	0.021
Credit accessed	0.0067*	0.0035	0.058	0.014
Interest on Loan	-0.0011***	0.0003	0.001	0.071
Year of participation in coop.	0.0003	0.0035	0.936	0.006
No. of coop. participated in	0.1607***	0.0535	0.003	0.055
Log likelihood	-172.84			
Pseudo R^2	0.28			
LR Chi^2	136.7			
Probability level	0.0000			

Source: Field survey (2018)

NB: *Significant at 10%, **Significant at 5%, ***Significant at 1%

Table 3.9 shows the results of influence of cooperative societies' credits on non-farm activities of rural dwellers in Ondo South Senatorial District, Ondo State Nigeria. The results in the table showed that the Log likelihood was -172.84 while the Pseudo R^2 and LR Chi^2 were 0.28 and 136.7 respectively, which means all the regressors have a significant impact on non-farm activities. The probability of the entire model was 0.0000. The parameters indicated that the model was fit and the entire model was significant at 1percent alpha level of probability.

The table also shows that household size ($p \leq 0.01$), savings with cooperatives ($p \leq 0.05$), amount of credit accessed ($p \leq 0.10$) and number of society belonged ($p \leq 0.01$) had positive and significant influence on non-farm activities in the study area while interest on loan ($p \leq 0.01$) had negative and significant influence on non-farm activities in the study area. However, age, level of formal education, household expenditure, training accessed, cost of

health care accessed and year of participation in cooperative societies were insignificant at 10% level of probability.

Post estimation marginal effect showed that an increase in the cooperators' household size by a unit would increase income from non-farm activities by 4.6 percent. Also, an increase in the amount saved in a cooperative society by one naira (₦1) would raise income from non-farm activities by 2.1percent. Moreover, an increase in credit accessed by one naira (₦1) would raise income from non-farm activities among the cooperative members by 1.4percent. In addition, an increase in number of cooperative societies cooperators participated in by a unit would raise income from non-farm activities by 5.5percent while an increase in interest on loan by 1unit would decrease income from non-farm activities 7.1percent.

The coefficient of household size had positive value and statistically significant. It means that household size had a positive and significant influence on non-farm activities of the respondents, implying that the more the number of people in the respondent's household, the more the income from non-farm activities. That is, the relatively large household size may likely enhance the family labour supply, hence supporting favourably, productive capacities of the respondents to improve non-farm activities. This conforms to *a priori* expectation and confirmed by previous works conducted by Ovwigho (2014) and Gomina (2015) who found out that household size positively and significantly influenced the means of livelihood of cooperative societies' members.

The finding of the study also showed that coefficient of saving with cooperative was found to be positive and statistically related with respondents' non-farm activities. This implies that increased level of saving with cooperative societies will lead to improvement in non-farm activities of the respondent, all other things being equal. This finding is in tandem with the earlier finding of Kwai and Urassa (2015) who asserted that saving induce investments (non-farm activities) which will eventually lead to more income.

The result of study further revealed that coefficient of credit accessed had positive value and statistically significant. It means that credit accessed had a positive and significant influence on non-farm activities of the respondents, implies that households which use cooperative credit have higher probability of improvement in their non-farm activities than households which do not use credit from cooperative societies. The result of the study therefore strongly suggests that rural dwellers access and use of credit play important role in promoting non-farm activities. This finding is in agreement with the study done by Adugna,2000 (cited in Kihwele & Gwahula, 2015) who commented that credits from cooperative societies enable rural dwellers overcome their liquidity constraints and undertake some investments leading to increased income and self-employment. Hussain and Mahmood (2012) using logistic regression model also supported this finding that there is relationship between levels of credit and increase in income of cooperative societies' members.

The finding further showed that coefficient of number of cooperative societies cooperators participated in was found to be positive and significantly related to the respondent's non-farm activities, implying that the more the number of cooperative societies the cooperators belongs to, the more the income from non-farm activities. This might be as a result of respondents who received credit from every cooperative society they belong to, which in turn invested in non-farm activities. However, the coefficient of interest on loan was found to be negative and significantly influenced non-farm activities in the study

area. This means that interest on loan and income from non-farm activities are inversely related. The implication of this is that an increase in interest on loans, increase the cost of borrowing, which discourages cooperators to increase investment spending on non-farm activities; hence, reduces income from non-farm activities. This conforms to the *a priori* expectation that interest rate and income from investment are inversely related and the finding is in line with the study conducted by Oni *et al* (2004) who opined that the higher the level of interest rate charged by non-formal financial institutions, the lower the probability of rural households' demand for credit.

In view of what emerged from this study, it is important for the Nigeria government to formulate appropriate policies that will improve those variables that have been found to have significant effects on non-farm activities.

CONCLUSION AND RECOMMENDATIONS

Evidence from this study showed that respondents were engaged in multiple non-farm activities; and the major non-farm activities in the study area are trading, artisans/technicians, commercial motorcycling/transporters, civil service, food processing and butchering with trading and artisans/technicians being the most dominant and leading ones. Also, based on the findings of this study, some respondents participated in more than one cooperative society and were represented in various forms of cooperative societies in the study area. Majority of the respondents belonged to credit and thrift cooperative societies while others belonged to daily contribution, multipurpose cooperative societies and producer cooperative societies.

As the estimation results of probit regression model revealed, household size, saving with cooperative, credit assessed, number of cooperative societies participated in and interest on loan significantly influenced non-farm activities in the study areas. Based on the findings of this study, one can safely conclude that there is a significant relationship between credits from cooperative societies and non-farm activities in the study area and the following recommendations were made:

More funds needed to be made available to rural dwellers for adequate empowerment so that their non-farming activities will be better enhanced. That is, rural dwellers should be supported financially by the government and financial organizations through provision of loans at a negligible or no interest rate.

Since most of the cooperators carrying on non-farm activities on a small scale due to small loan size available to them as credit, it is recommended that cooperative societies should source for more funds/funds from formal financial institutions and make it available to members at a minimal interest rate, so that rural dwellers could expand production and embark on large scale production. Government should also increase the supply of credit to cooperative societies so as to enable them give enhanced credit to members.

The government at all levels should provide enabling environment especially in rural areas so as to facilitate establishment of more bank branches in rural areas. This will complement effort of cooperative societies in giving loans to their members and will go a long way in making rural dwellers have access to more credits at a reasonable interest rate; hence, improve non-farm activities in the rural areas.

REFERENCES

Adekola, G., & Dokubo, C. (2017). Co-Operative Societies and Poverty Reduction among Members for Community Development in Rivers State, Nigeria: *European Scientific Journa*l, *13* (8), 250-259.

Adewakun, A. (2012, October 31). Cooperative as tool for enhancing financial inclusion, African Newspaper of Nigeria, PLC. pg 3.

Anele, D. (2007, January 29). A Brief Note on the Condition of Rural Areas in Nigeria. *Vangurd Newspaper,* P. 15-16.

Bwana, K., & Mwakujonga, J. (2013). Issues in Savings and Cooperative Societies Development in Kenya and Tanzania. The Historical and Development Perspectives: *Developing Countries Studies*, *3* (5), 142-151.

Carney, D. (1998). Sustainable Rural Livelihoods: What Contribution Can We Make? Conference Proceedings of the International Development's National Resources Advisers' Conference, July 1998 Pp 428-434.

Ekong, E. E. (2003). An Introduction to Rural Sociology Second Edition. Dove Publishers Limited, Pp58-90.

Fasoranti, M.M. (2010). The influence of Micro-Credit on Poverty Alleviation Among Rural Dwellers, A Case Study of Akoko North West Local Government Area of Ondo State, Nigeria. *African Journal of Business Management* 4(8): 1438-1446.

Fasoranti, M.M. (2014). Contributions of Cooperative Movement to Alleviation of Poverty among Rural Women: A Case Study of Oriade Local Government Area of Osun State Nigeria. *Developing Country Studies, 4* (15), 52-61**.**

Gomina, A. (2015). Impact analysis of savings and Credit Cooperative Societies in Combating Poverty among Crop Farmers in Three Local Government Areas of Niger State, Nigeria. A Thesis Submitted to the School of Postgraduate Studies, Ahmadu Bello University, Zaria, in Partial Fulfillment of the Requirements for the Award of Master of Science Degree of Agricultural Economics. Department of Agricultural Economics and Rural Sociology, Faculty of Agriculture, Ahmadu Bello University, Zaria, Nigeria.

Gomina, A., Sheyin, E.A., & Joshua, J. (2015). Analysis of the Impact of Savings and Credit Cooperative Societies on Output among Crop Farmers in Niger State, Nigeria: Double Difference Estimator from a Regression Analysis Approach. *Journal of Economics and Sustainable Development*, 6(15). 93-99.

Hussain, J. G. and Mahmood, S. (2012). Impact of Microfinance Loan on Poverty Reduction Amongst Female Entrepreneurship in Pakistan. *Cambridge Business and Economics Conference*; ISBN: 9780974211428. 2(2): 126-135.

Ifeanyi-Obi, C.C. and Matthews-Njoku, E.C. (2014). Socio-Economic Factors Affecting Choice of Livelihood Activities among Rural Dwellers in Southeast Nigeria. *Journal of Agriculture and Veterinary Science, 7* (4),52-56.

International Fund for Agricultural Development (2016). Rural Development Report 2016: Fostering Inclusive Rural Transformation, Rome. Italy.

Katega, B. I. B. and Lifuliro, C. S. (2014). Rural Non-Farm Activities and Poverty Alleviation in Tanzania. *International Journal of Agricultural Policy and Research. 2 (5), 198-202.*

Kihwele E.A. and Gwahula R. (2015). Impact of Saving and Credit Cooperative Societies in Poverty Reduction, Empirical Evidence from Tanzania. *European Journal of Business and Management, 7*(23), 104-110.

Kwai M.D.and Urassa J.K. (2015). The Contribution of Savings and Credit Cooperative Societies to Income Poverty Reduction: A Case Study of Mbozi District, Tanzania. *Journal of African Studies and Development*. 7(4), 99-111.

Mavimbela,P., Masuku, M.B. and Belete, A. (2010). Contribution of Savings and Credit Cooperatives to Food Crop Production in Swaziland: A Case Study of Smallholder Farmers. *African Journal of Agricultural Research*, 5 (21):2868-2874.

National Population Commission (2007). A Blue Print on 2006 National Census of Nigeria.

Odetola,S. K., Awoyemi,T.T. and Ajijola.S.(2015). Impact of Cooperative Society on Fish Farming Comercialization in Lagos State, Nigeria. *African Journal of Agricultural Research,* 10(18), 1982-1988.

Ogunleye, A.A., Oluwafemi, Z. O., Arowolo, K.O. and Odegbile, O. S. (2015). Analysis of Socio - Economic Factors Affecting Farmers' Participation in Cooperative Societies in Surulere Local Government Area of Oyo State. *IOSR Journal of Agriculture and Veterinary Science, 8*(5), 404-413.

Oni,O.A., Yusuf,S.A. and Ogbowa, O. (2004). Determinants of Credit Demand among Rural Farming Households in Ose Local Government Area, Ondo State. Journal of Economic and Financial Studies, *1*(1), 14-21.

Ovwigho, B.O. (2014). Factors Influencing Involvement in non-farm Income Generating Activities among Local Farmers: The Case of Ughelli South Local Government Area of Delta State, Nigeria. *Sustainable Agriculture Research*, 3(1), 78-85.

Oyesola, O.B. (2007). Rural Dwellers Perception on Effect of Infrastructural Facilities on Livelihood Activities in Akinyele Local Government Area of Oyo State, Nigeria. *Journal of Economics and Rural Development*,*16*(1), 83-92.

Senadza, B. (2012). Non-Farm Income Diversification in Rural Ghana: Patterns and Determinants. *African Development Review*, *24*(3), 233–244.

Simkhada, N. R. (2004), Innovations in Nepal's Microfinance Sector and Benefits for Asia: A Case Study of Four Savings and Credit Cooperative Societies Operating in the Hills of Nepal. *Paper Presented to the Workshop on Sharing Microfinance Resources and Knowledge in South Asia.*

Woldenhanna, T., & Oskam, A. (2001). Income diversification and Entry Barriers: Evidence From the Tigray Region of Northern Ethiopia. *Food Policy*, *26*(4), 351–365.

Wooldridge, J. M. (2009). Introductory Econometrics (4th Ed.). South-Western Cengage Learning.

World Bank (2000). World Development Report, Washington D.C.