

## Agricultural Cooperatives and Economic Empowerment of Rural Dwellers in Awka North, Anambra State, Nigeria.

\*<sup>1</sup>Okafor Ogochukwu Esther (Phd),<sup>2</sup>Okafor PethronillaIfeomaAnd<sup>3</sup>Uzondu ChikodiriScholastica (Phd)

<sup>1</sup>Department of Cooperative Economics and Management NnamdiAzikiwe University, Awka, Anambra State, Nigeria.

<sup>2</sup> Department of Cooperative Economics and Management, NnamdiAzikiweUniversity,Awka,Anambra State.

<sup>3</sup> Anambra State PolytechnicMgbakwu, Anambra State, Nigeria

Corresponding Author:Okafor Ogochukwu Esther(Phd),

---

**Abstract:** This study examines agricultural cooperative and empowerment of rural dweller in Awka North L.G.A of Anambra state, Nigeria. To achieve this 254 structured questionnaire were used to collect data from women agricultural cooperatives in the area. The study provides empirical evidence on the women's socio-economic characteristics as well as determines the relationship between membership duration and member's income, and also the effect of farm input; credit and extension visit on income which is proxy for empowerment. Findings revealed that the joint effect of the explanatory variable in the model account for 38% of the variations in the income profile of members of agricultural cooperatives. Two coefficients (farm input and credit) are not significant while extension visit was significant at 1%. Membership duration also shows a positive correlation with income of the members. There is a significant difference between the incomes of members after joining cooperatives. The study recommends that women in the area should be encouraged to form or join cooperatives for enhanced income and poverty reduction. Cooperatives should improve in the provision of farm input and credit to their members in other to enhance their agricultural production capacity thereby empowering the rural women economically.

**Keywords:**Agricultural Cooperatives, Empowerment, Socio-economic characteristics, Anambra State.

---

Date of Submission: 26-06-2018

Date of acceptance: 12-07-2018

---

### I. Introduction

Lack of women's empowerment has been considered as the bane of the economy of many African countries, particularly Nigeria. The indispensable role of women in any development calls for eradication to all related barriers to women empowerment at all levels. Women empowerment is the development of mental and physical capacity, power or skills in women for them to operate meaningful in the social milieu, thereby experiencing a more favorable level of social recognition and subsequently enhance their socio-economic status (Akomolafe, 2006). The aim of women's empowerment through participation in agricultural cooperatives activities is to enhance the socio-economic status of women through acquainting them with skills and literacy training for various economic/agricultural ventures and activities as well as creation of economic culture that will address the question of technical know-how in pursuing of women's multifaceted roles (Safiya,2011). Women empowerment in Nigeria is very low compared to their male counterparts. Most jobs performed by Nigerian women do not have economic values and all works and activities that do not require financial reward are the responsibilities of Nigeria women.

Most women in developing countries do not have access to education, productive resources and other services. Such discrimination hampers them not to earn incomes and not to actively participate in socioeconomic and political conditions (Kebeer, 1999). In order to solve the problem, women empowerment becomes a global agenda. The term women empowerment has become popular in the development field since 1980s. It is vividly recognized that women empowerment is essential for sustainable economic growth and poverty reduction in developing countries. Women empowerment is a necessary condition for development process. Thus, women empowerment has three dimensions. Social dimension signifies respectable and non-discriminatory positioning in the society. Political dimension signifies involvement in the governance of organization and administrative positions, and economic empowerment is enabling women members to have equal in employment, spending, ownership of production means and sharing benefits (Prakash, 2002). The focus of this study is on economic empowerment of rural women.

Cooperatives have a role to play in alleviating different shocks, and paving the way towards recovery that is socially and economically sound and sustainable. Ultimately, cooperatives can create a safe environment

where women increase their self-confidence, identify their own challenges, make decisions and manage risks. As a result, women are empowered and become active agents of change, entrepreneurs and promoters of social transformation who can improve their own lives and those of the community (Karunakran, 2004). Majurin (2012) revealed that cooperatives are also effective points of entry for addressing a broad range of gender equality issues such as unpaid work, shared responsibilities and gender-based violence. Agricultural cooperatives, therefore, have the capacity to empower and improve the living standard of the rural people especially women through the provision of agricultural inputs and technology, processing and storage, extension, financial services, land and tenure security, and market access ( Cheryl, Zoe &Shereen, 2012). Cooperative institutions and especially the agricultural cooperatives are the agencies which hold enormous potential for the development of women, and more particularly the rural women. (Biru, 2014)

Many households in Nigeria's rural areas live below the poverty line. Empowering women are empowering the society at large. The global statistics shows that women are in charge of 60 –80 percent of world's work force and produce 50 percent of food (World Bank, 2003). Despite the fact that their contributions are significant, they still have limited economic advantage and access to productive resources such as credit, input, extension services (Mayroux, 2009).Lack of productive resources has been found to have gender underpinning in Nigeria. The inference from the above statement shows that women most times lack productive resources such as capital, land, input and supplies. According to IFAD in Onugu&Ojiagu (2009), women own less than 2% of all land and receive only 5% of extension services worldwide. It is estimated that women in Africa receive less than 10% of all credit going to small farmers and a mere 1% of total credit going to the agricultural sector. However, according to Aregawi and Haileslaise (2013) agreed that record has shown a number of approaches to development that have been employed by government, developmental agencies, non-governmental organization to solve the socio-economic ills of the third world. Agricultural cooperatives, therefore, have the capacity to improve the living standard of the rural people especially women and promote food security of the country. Cooperative institutions and especially the agricultural cooperatives are the agencies which hold enormous potential for the empowerment of women, and more particularly the rural women. Regardless of the level of development achieved by the respective economies, women play a pivotal role in agriculture and in rural development in most developing countries Nigeria inclusive. They were, in fact, discriminated against by stereotypes which restrict them to a reproductive role, and denied access to resources which could eventually enhance their social and economic Contribution to the society. Similarly, many studies (Ekesionye&Okolo2012; Oyenyi, 2013, Awotide, 2012) have been conducted in Nigeria in a bid to empower women, but the efforts and roles of agricultural cooperative societies for instance in empowering rural women have not been well researched and documented in Anambra state and Awka North in particular, thus, leaves a gap and indeed necessitated the interest to conduct this study in order to ascertain the effort of agricultural cooperative on women empowerment in Awka North. As such, joining agricultural cooperative society (membership) will eventually empower women in Awka North by improving their income through various income enhancing activities of women agricultural cooperative societies. The major issue here is that are these agricultural cooperatives through their functions and activities enhanced the income of the women or not?

### **Research Question**

1. How has membership duration of the women agricultural cooperatives members affected their income profile?
2. What is the effect of farm input; credit and extension visit on the income of the women in the area?

### **Hypotheses**

1. Ho: membership duration of agricultural cooperatives members have no significant effect on their income profile.  
H1: membership duration of agricultural cooperatives members have significant effect on their income profile.
2. Ho: farm input; credit and extension visit have no significant effect on the income of the women members of agricultural cooperative in the area.
3. H1: farm input; credit and extension visit have significant effect on the income of the women members of agricultural cooperatives in the area.

### **The concept of empowerment**

Empowerment is a construct shared by many disciplines and arenas; community development, psychology, education, economics, and studies of social movement, and organizations among others. How empowerment is understood varies among these perspectives. In recent empowerment literature, the meaning of the term empowerment is often assumed rather than explained or defined. Rapp port (1984) has noted that it is easy to define empowerment by its absence but difficult to define in action as it takes on different form in

different people and contexts. Women empowerment is defined differently by different scholars. Mayoux (2005) and Mosedale (2005) define women empowerment as a mechanism where women become strong through increasing their confidence to make appropriate choice and control over resources. Naryaan (2002) on the other hand define women empowerment as increasing control and ownership of assets to influence and bargain over any decision that affects their lives

Empowerment is better known and understood when we see it in people with whom we are working and for programme of evaluation. Cheryl (1999) has noted that the term empowerment has no clear definition especially one that could cross- disciplinary lines. He sees empowerment as a multi-dimensional social process that helps people gain control over their own lives. Empowerment is a process that challenges our assumptions about the way thing is and can be. It challenges our basic assumptions about power, helping, achieving, and succeeding. To begin to clarify the concept of empowerment, we need to understand the concept broadly in order to be clear about how and why we narrow our focus to women empowerment through cooperative.

He further said that the core of the concept of empowerment is the idea of power. The possibility of empowerment depends on two things. First, empowerment requires that power can change, if power cannot change, if it is inherent in position or people, then empowerment is not possible, nor is empowerment conceivable in any meaningful way. In other words, if power can change, then empowerment is possible. Second, the concept of empowerment depends upon the idea that power can expand. This second point reflects our common experiences of power rather than how we think about power.

Sociological empowerment often addresses members of groups that social discrimination processes have excluded from decision-making processes through, for example, discrimination based on disability, race, ethnicity, religion or gender. Empowerment as a methodology is often associated with feminism.

Nevertheless, Abdalla (1999) is of the opinion that empowerment is a complex and often misunderstood concept. It is located within the discourse of community development and is connected to concept of self-help participation, networking and equity. While it has acquired a considerable aura of “respectability”, even “social status” within the vocabulary of development, it has not yet acquired a socially agreed content. It is also one of those concepts whole full implications people do not realized when they use it.

He further said that empowerment has evolved within the development discourse. It has dethroned the term “participation”, which lost some of its currency since the 1980s. Empowerment came into vogue in response to the situation, where people could “participate” in a project without having the power to decide on the critical issues to the project. However, empowerment appears to mean different things to different people. He noted that empowerment is supposed to bring closer those who hold power and those who are powerless. Empowerment moves the powerless into positions of power and makes those at the higher levels of power accept sharing power with them.

More so, he said that empowerment generally means engaging the relevant stakeholders in a given process by applying the principles of inclusiveness, transparency and accountability. As such, the empowerment concept goes beyond the notions of democracy, human right and participation to include enabling people to understand the reality of their environment (social, economic, political, ecological and cultural) and to take the necessary actions to improve their well-being.

### **Agricultural Cooperative**

Agricultural Cooperative has been known for organizing small farmers into producer organizations to increase their bargaining power visa- avis other actors in the value chain (Roldan and Ellen, 2009). They emphasized that agricultural cooperative offers such a possibility by means of organizing and empowering individual small producers through provision of farm input and credit. Nevertheless, new challenges associated with emerging consumer demands, global standardization processes, market requirements and price instability require different roles and capacities from agricultural cooperative operating in agro-food value chains worldwide. Agricultural Cooperatives are now challenged to take on a more pro-active role in marketing, updating their organizational structure and engaging in value chain integration.

Adefila (2011) noted that the history and importance of agricultural cooperative organization in Nigeria is a long- standing one. Before the enactment of the cooperative society law in 1935, there had been indigenous attempt to form associations such as Cocoa farmer’s society and Kola nut planters Union. These associations were formed in major cocoa producing areas and they were independent of government support (Adefila, 2011). Cooperative organizations have undergone changes over the years from traditional, informal and modern and formal institution. (Harrisand Stefansson, 2005). Cooperatives were competing favourably with private individuals including multinational companies amidst of various challenges such as price fluctuations, legislation controls and low capital accumulation. The embarked on many agricultural development strategies such as input subsidization, market boards and institutional reforms geared towards improvement of agricultural production. (Adefila, 2011).

Nevertheless, agricultural cooperatives societies do engage in the production, processing, marketing and distribution of agricultural products. (Adefila, 2011). An important form of agricultural cooperative in Nigeria is the Group Farming Societies (GFS). Members of this society engage in the production of a variety of crops while they also arrange for the marketing of the products. Some other agricultural cooperatives are devoted to the cultivation of single crops and such societies are named after the crops such as Tobacco Growers Cooperatives (TGC), Cooperative Credit and Marketing Societies (CCMS) etc. Moreover, modern agricultural processing cooperatives for crops such as oil seed and groundnut farmer's cooperatives have played far reaching roles in agricultural development. (Adefila, 2011).

However, farmer's cooperatives are viewed as mechanisms to help improve the marketing environment for poor rural farmers faced with limited and uncertain consumer demand for the goods they produce. Agricultural Cooperatives can help reduce production cost by organizing bulk input purchase for their members. (Olabisi, 2010). Cooperatives are useful in overcoming barrier to assets information, services, and markets for high- value product; they also assist some Nigerian small-scale farmers in solving land, labour, and capital problems. (Holloway etal, 2000). Reardon and Barnett (2000) believe that the increasing importance and changing nature of food grades and standards are reason for the rise of Agricultural cooperatives. Other roles of agricultural cooperatives identified in the literature include

- i) Promoting self-help by imparting better business management skills to members.
- ii) Solving market failure by providing and coordinating missing services (e.g. Input and / or product marketing).
- iii) Enhancing bargaining strength and reducing transaction costs with input suppliers and farm product buyers.
- iv) Monitoring costs ( thereby ensuring normal return for capital invested)
- v) Reducing opportunistic behaviour by potential competitors.
- vi) Providing economies of large scale.
- vii) Promoting community development and public support to farmers.
- viii) Influencing the terms of trade for their members.
- ix) Influencing public policy making. (Reardon and Barrett, 2000).

Membership of agricultural cooperative societies is very significant to empowerment of women farmerstowardsagricultural production hence should be encouraged as a strategy for improving the agricultural productivity and livelihoods of the women farmers which is crucial to their empowerment and achievement of sustainable rural development in Nigeria (Deji, 2005).

Furthermore, Agricultural cooperatives enable small farmers to take collective action to reduce input cost and marketing risks. Through cooperative, farmers can do collective bargaining or purchasing to get the best deals on seeds, supplies and equipment on their own (Saikon and Hung, 2008). According to Saikon and Hung, (2008) through cooperative the members can purchase the equipment jointly and\ or lease them from the cooperatives feel. Agricultural cooperatives may also integrate an information centre or include an extension agency involved in the work helping to stimulate new crops and farming techniques. Some of them are also active in community development and education in areas of farming as well as primary level business management and government lobbying.

Nevertheless, Agro and food processing cooperatives are cooperative which engage in value-added activities from primary agricultural products. Cooperative makes it possible the joint purchase of expensive agro-food processing equipment and machineries which normally would not be possible for small scale agricultural producers. They offer the benefit of enabling the small procedure to enter substantially more lucrative and profit making areas. Business in processed products is substantially more lucrative than business in primary goods.They further argued that study revealed that prices of primary products such as coffee, cocoa and sugar dropped from 200 to 400% while the value of processed goods such as instant coffee, chocolate bars and cornflakes increased more than 200 percent from 1980 to 2000. Another study in Mexico noted that value-adding activities accounted for a 350 percent increase farmer's income.

However, agricultural cooperatives supply agricultural inputs to their members, jointly produce and market their produce. Input supply includes the distribution of seeds and fertilizers to farmers. Cooperatives in joint agricultural production assume that members operate the co-operative on jointly owned agricultural plots, also joint agricultural marketing of producer crops (Chambo, 2009). It must also be recognised that the incidence of agricultural cooperatives in Africa is not accidental. Most developing countries including those in Africa depend on agricultural production for their livelihoods. The statistics indicate that 84 percent of the population in African countries depends on agriculture as source of food, income and employment. (Chambo, 2009)

### **Empowering women through Agricultural cooperative**

Empowering women through cooperative according to Kokanova (2009) is to improve the socio-economic conditions of rural women and their families. Government has made effort to empower women's

cooperative member by training cooperative member on micro credit financing as well as on how to boost agricultural production and their access to local market. The aim of empowering women through cooperative is to increase the capacity of the cooperatives to achieve a higher and more sustainable income. The government will work closely with women's cooperative, specifically identified as dynamic but with vulnerable members (Kokanova 2009).

Sourbani (2009) suggests that in order to integrate the vast majority of poor women with the main stream of the society, our government has introduced measures to create social and economic awareness among the woman. Certainly, such measures have improved their standard of living. Cooperative, which is social and economic in character has been recognized as the most suitable institutions to undertake such tasks for the women. She also said that after rapid industrialization of their country India, women are actively participating in economic activities and they are not mere "house wises" looking after house hold responsibilities. Involvements of women cooperative are practical program for raising the status of women in the society on a very large -scale especially in those echelons of our society where our help and assistance are needed most.

Atta (1990) opines that women have proven to the world today that they are assets for attaining sustainable and equitable global empowerment. He further argued that there is need to emphasize that women are agent of social change. In the past, it was even believed in Nigeria that women were less endowed than men, and that women was merely seen as chattels to be owned whose abiding responsibility laid home as kitchen manager and child bearing agent for the society. Attah however noted that the major constraints confronting low income people is that a large percentage of women lack group based support, credit and technical assistance.

Yaye (2010) argues that, if the women cooperative members are empowered and encouraged to embark on agricultural production, processing and marketing, the cooperative enables the women to be active in community development, participate in decision-making and improve their living standard. Vulnerable women are encouraged to create and join cooperative to increase their income. As they become economically empowered within the house hold, they are also less likely to surfer domestic violence.

Women could be used as proxy for economic empowerment in the sense that empowering women economically means empowering the whole nation. UNDP (1987) noted that women make up 60%-80% of the agricultural labour force and depending on the region produce two-third of the food crops. Empowering women economically has a multiplier effect, if women are empowered, their income level and standard of living would be transformed. The life of their house hold will change, and if the life all the households in the area changes, the life the entire community will also will be transformed. If the effect of empowerment of women transforms the life the people in their community, it will also affect the entire local government area, state and the nation at large. The gross domestic product (GDP) of the country will also increase.

Moreover, Bidisha (2008) opined that women empowerment is a change in the context of a women's life, which enables her increase capacity for leading a fulfilled human life. Women empowerment is one of the essential factors that promote human development. In fact, empowered women can contribute to human development through house hold and community activities and at the same time progress in human development is expected to promote women empowerment through improved health, nutrition, education, social security, political freedom, availability of employment and decent standard of living. He also noted that women education has important bearings on children's health and their survival. A study Cote de Voire reveals that in increased women share over house hold income leads to increased spending on human development items like food, health care etc. Blumberg (2005) opined that economic empowerment of women are the key to achieve gender equality as well as wealth and well-being of a nation. Almaz (2006) argued that increased income controlled by women gives them confidence which helps them obtains a voice and vote in:

- i) House hold decisions such as domestic well – being decision, for instance, women tend to use income clout for more equitable decisions about sons daughters diet, education and health.
- ii) Economic decision: acquiring, allocating and selling assets.
- iii) Fertility decision: economically empowered women tend to have fewer children.
- iv) Land use and conservation decision: rural women tend to favour sustainable environment practices since they are usually the ones that collect the families' natural resources, such as water and fire wood.

She noted that women economic power also enhances the "wealth and well-being of nations. More so women who control their own income tend to have fewer children, and fertility rates have shown to be inversely related to national income growth. However, women are also generally more willing than male counterparts to send daughters as well as sons to school, even when they earn less than men. Furthermore, women represent half of the world's population, and gender inequality exists in every nation on the planet. To discriminate and prevent half of humanity from reaching its full potentials is economic folly. Denying women and girls equality and fairness not only hurts them, but also hinder the rest of the society. Almaz (2006).

## II. Methodology

The study area is Awka-North Local Government Area of Anambra state. Awka north is a local government area in Anambra state, south east of Nigeria. Towns that make up the local government are Awbaofemili, Ugbene, Ebenebe, Achalla (the capital), Urum, Amansea, Amanuke, IsuAniocha, Mgbakwu and Ugbenu.

The population of this study is all registered women agricultural cooperative in Awka- north local government area, which is thirteen (13) in number. All thirteen (13) women cooperatives were selected. The total membership strength of the thirteen women agricultural cooperative in those rural communities is seven hundred (700). To get the sample size, the researcher used a Taro Yamane formula ( $n = 254$ ).

The analytical methods used to investigate the outline objectives include descriptive statistics such as frequency distribution (number and percentage) to facilitate effective comparison. In analyzing the socio – economic characteristics of members, agricultural activities and the effect on their output and income level, frequency model was used. Frequency distribution by number and percentage of respondents was also used to turn the qualitative characteristic into numerical forms. To accomplish this, a multiple regression analysis was employed. The chosen model is linear and of the ordinary least square (OLS) type. The specification of this model is as follows:

$Y = B_0 + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + b_6X_6 + b_7X_7 + b_8X_8 + b_9X_9 + b_{10}X_{10} + b_{11}X_{11} + e_i$  where Y = total income of the members after joining cooperatives in naira.

X1=marital status of the member.

X2=occupation of the member.

X3=age of the member.(in years)

X4=educational level of the member (in years).

X5=family size of the member (in no)

X6= membership duration (in years)

X7= amount of input purchased through women agricultural cooperative in 2014 in naira.

X8= total amount of money obtained as loan through women agricultural cooperative in 2014.

X9= Extension visit (no of times)

B<sub>0</sub>= intercept

E<sub>i</sub>= error term.

## III. Result and Discussion

### 1 Socio-economic Profile of the farmer Members Cooperatives

**Table 1:** The socio-economic profiles of the members are ascertained and analysed to enable us understand the characteristic of the members in the area.

In table one below, it revealed that majority of the respondents are in the age range of between 40-49 years, 30-39 and 60 and above representing 60.6%, 31.5.1% and 7.8% respectively. This shows that majority of them were in their productive age and any cooperative that their members are in such age range will have high rate of productivity because their members are still vibrant. Majority of the members attended secondary education. This was represented 72.4% .A small number of has passed through primary and tertiary institution which is 19.6% 7.8% respectively. This indicates that greater number of the women attended only secondary education. Most of the members of cooperatives in the area are farmers, traders and civil servants, representing 53.1%, 25.5% and 21.3% respectively. This indicates that since members have additional occupation to their farming activities, it will enhance their income level. As can be seen in the above table, most members of the cooperative are married, representing 86.6% while 13.4% of them are widows. 39.4% of the respondents had family sizes of six and above and 35% had family size of five while some of them had family size of three and four representing 19.6% and 5.9% respectively as presented in table 1 above. This indicates that members with large family size would have enough labour force which would be useful in their farms. On the other hand, members with small family size would need to hire labour in the course of their farming activities thereby incurring more expenses. Almost all the respondents have had above 4 years cooperative experience representing 80.3% while 19.6% of the respondents have had 3 years cooperative experience. This would enhance their level of income. Members with long years of cooperative experience will have high level of cooperative spirit and will also participate actively in cooperative business.56.7% of the members sourced their fund from Nigerian agricultural & Rural Cooperative while 15.7% of the respondents sourced their fund from cooperative society. This indicates that cooperatives have not done so much in terms of credit disbursement in the area. More so 82.7% of the respondents had enhanced income as result of joining agricultural cooperative, this shows that cooperatives have indeed empowered the rural women in the area economically.

**Table 1: Socio-economic profile of cooperative women farmer members.**

Age range	Frequency	Percentage
20-29	-	-
30-39	80	31.5
40-49	154	60.6
50-59	20	7.8
60 and above	-	-
Total	254	100
Educational level		
Primary school level	50	19.6
Secondary school level	184	72.4
Tertiary level	20	7.8
Total	254	100
Occupation		
Farming	135	53.1
Trading	65	25.5
Civil servant	54	21.5
Total	254	100
Marital Status		
Single	-	-
Married	220	86.6
Widow	34	13.4
Total	254	100
Family Size		
Two	-	-
Three	15	5.9
Four	50	19.6
Five	89	35.0
Six and above	100	39.4
Total	254	100
Cooperative Membership		
Two years	-	-
Three years	50	19.6
Four years & above	204	80.3
Total	254	100
Sources of fund		
Personal savings	-	-
Loan from cooperatives	40	15.7
Loan from Micro finance bank	70	27.6
Grants from friends & relatives	-	-
Loan from Nigerian Agricultural cooperative & Rural Development	144	56.7
Total	254	100
Annual income before joining cooperative		
20,000 – 50,000	225	88.6
50,000 – 100,000	29	11.4
100,000 – 200,000	-	-
200,000 – 400,000	-	-
400,000 – 800,000	-	-
800,000 & above	-	-
Annual income after joining cooperative		
20,000 – 50,000	210	82.7
50,000 – 100,000	44	17.3
100,000 – 200,000	-	-
200,000 – 400,000	-	-
400,000 – 800,000	254	100
800,000 & above	-	-
Total	-	-

Source: Field Survey September, 2015

**Regression estimates of the effect of input, credit and Extension visit on income of the members of agricultural cooperatives**

The regression analysis specified in the equation in sub section 3.8 above page – was estimated using multiple regressions. The results of the regression for the effect of farm input, credit and extension visit on income profile of members of agricultural cooperatives are presented in table 2. The relative importance of these variables in contributing to income of agricultural cooperative members were also identified by ranking the variables based on the magnitude of their absolute t-values. Based on this, it was observed that among the variables, extension visit of cooperative has the highest contribution to income. However, the test of

significance shows that extension visit was statistically significant. The R2 estimated as 0.038 shows that 38% of variations in income of agricultural members were explained by the explanatory variables included in the model.

Table 2 Regression estimates of the effect of input, credit and Extension visit on income of the members of agricultural cooperatives.

Model	B	Std. Error	Beta	T-value	Sig
Constant	298545.544	20279.888	-	14.721	0.000
Input	0.131	0.410	0.022	0.318	0.751
Credit	0.234	0.446	0.037	0.525	0.600
Extension visit	13063.156	4448.981	0.183	2.936	0.004

R = 0.195

R square = 0.038

N = 254

DW = 0.194

Source: Field Survey September, 2015

Test of Hypothesis

Hypothesis 1

Ho: Membership duration of agricultural cooperative members have no significant effect on their income profile.

H1: Membership duration of agricultural cooperative members have significant effect on their income profile.

To test the above hypothesis, Correlation estimates of the effect of membership duration on income of the members of agricultural cooperatives are presented below.

Table 3 Correlation estimates of the effect of membership duration on income of the members of agricultural cooperatives.

	Income after	Membership duration
Income after pearson correlation	1	0.250**
Sig. (2- tailed)		0.000
N	254	254
Membership pearson correlation	0.250**	1
Sig. (2. Tailed)	0.000	
N	254	254

\*\* . Correlation is significant at the 0.01 level (2-tailed).

Source: Field survey Sept, 2015.

In table 3, the correlation is significant at 1% level, which implies that the more members stay in cooperative the more their income increases. Therefore we reject the null hypothesis and conclude that membership duration of agricultural cooperative members have significant effect on their income profile

Hypothesis Two

Ho: Farm input, credit and extension visit have no significant effect on the income of the members of agricultural cooperative in the area.

H1: Farm input, credit and extension visit have significant effect on the income of the members of agricultural cooperative in the area

To test the above hypothesis, the mean summary statistics of the responses of women agricultural cooperative in Awka North local government area as well as F statistics are presented below.

Table 5: one way analysis of variance (ANOVA) of the effect of farm input, credit and extension visit on income of women agricultural cooperative members.

Model	Sum of squares	DF	Mean Square	F	Sig.
Regression	95823969457.812	3	31941323152.604	3.298	0.021
Residual	2421341384872.894	250	9685365539.492		
Total	2517165354330.706				

Source: Field Survey September, 2015

#### IV. Decision

In table 4 -, the F-ration is found to be significant at 1% level of significance. Therefore we reject the null hypothesis and conclude that farm input, credit and extension visit have significant effect on income profile of members.

#### V. Conclusion

The study examined agricultural cooperative and empowerment of rural dweller with special reference to Awka North Local Government Area of Anambra State. Data were collected with the aid of structured questionnaires from 254 respondents selected through random sampling technique. To accomplish this, a multiple regression analysis was employed. The chosen model is linear and of the ordinary least square (OLS) type. However, the test of significance shows that cooperative membership duration and extension visit are found to be statistically significant. The R<sup>2</sup> estimated as 0.038 shows that 38% of variations in income of agricultural cooperative members were explained by the explanatory variables included in the model.

## VI. Recommendation

Based on the findings, the following recommendations are made to enhance the empowerment of rural dwellers in Awka North.

1. Women in the area should be encouraged to form or join cooperative society so as to enhance their income level which is proxy for empowerment.
2. Agricultural cooperatives in the area should improve in their services of input supply and credit disbursement to their members to strengthening their income profile

## Reference

- [1]. Abadalla G. (1999): Citizen Economic Empowerment in Botswana: Concepts and Principles. Botswana Institute for Development Policy Analysis (BIDPA)
- [2]. Adefila, J.O. (2011): Spatial Assessment of Farmers Cooperative Organizations Agricultural Development in Gurara Area of Niger State, Nigeria.
- [3]. Akomolafe, B. (2006) "Open and Distance Learning as a Mechanism for Women Empowerment in Nigeria" Education Foundations and Management
- [4]. Almaz, N. (2006) Economic empowerment women; First women intellectual forum.
- [5]. Aregawi, T. and Haileslasie T. (2013). The Role of Cooperative in Promoting Socio-Economic Empowerment of Women: Evidence from Multipurpose Cooperative Societies in South-Eastern Zone of Tigray, Ethiopia. International Journal of Community Development Vo. 1, No. 1
- [6]. Attah J. (1990); The Role of cooperative in women in Development in Nigeria, Paper presented at 1<sup>st</sup> cooperative forum, Abuja.
- [7]. Awotide, D. O. (2012) Assessment of Women's participation in cooperative societies and its determinants in Yewa North Local Government Area of Ogun State, Nigeria, Asian Journal of Agriculture and Rural Development
- [8]. Bidisha, M. (2008) women empowerment in Assam "A human Development Approach. Dissertation work.
- [9]. Biru A.G. (2014): The Role of Agricultural Cooperatives in promoting Food Security and Rural Women's Empowerment in Eastern Tigray Region, Ethiopia. Developing country Studies. Vol.4. No 11
- [10]. Blumberg, R.L. (2005): "women economic empowerment as the magic portion of development. "Paper presented at the 100<sup>th</sup> annual meeting of the America sociological association, Philadelphia.
- [11]. Chambo S.A, (2009) Agricultural Cooperative: Role in Food Security and Rural Development. Paper presented to Expert Group meeting on Cooperative Held on 28-30<sup>th</sup> April, 2009 NewYork.
- [12]. Cheryl D. (1999) Empowerment: What is it? Journal of extension www.Joe.org.
- [13]. Cheryl D., Zoe B. & Shereen D. (2012). Women's Empowerment in Agriculture: Supporting women Farmers. Prepared for UN Foundation.
- [14]. Cooperativas Agro-alimentarias. 2011. Observatorio Socioeconomico del Cooperativismo Agrario Español. [http://www. agro-alimentarias.coop/ficheros/doc/03580.pdf](http://www.agro-alimentarias.coop/ficheros/doc/03580.pdf). [Accessed November 1, 2012].
- [15]. Deji O.F. (2005) Membership of Cooperative Societies and Adoption Behaviour of women farmers: Implication for Rural Development Ile-Ife Kamla – Ray
- [16]. Ekesionye E. n. and Okolo A. N. (2012) Women empowerment and participation in economic activities: Indispensable tools for self-reliance and development of Nigerian Society.
- [17]. Harris A. & Stefansson R. (2005): New Generation Cooperative and Cooperative Theory.
- [18]. Holloway G.C. Nicholson C., Delgado S. Staal and Ehui (2000): Agro-Industrialization through Institutional Innovation: Transaction cost, Cooperatives and Milk- market Development in the East Africa highlands. Agricultural Economics.
- [19]. Kabeer, N. (1999). Resources, agency, achievements: Reflections on the measurement of women's empowerment. Development and Change, Vol.30. Institute of Social Studies, Oxford, UK.
- [20]. Karunakaran, R. (2004). An assessment of social impact of cooperative movement in Dinchigul district. Unpublished PhD thesis. Gandhigram Rural University, India
- [21]. Kokanova, N. (2009); nora. kokanova@ Unifem. Org.
- [22]. LeVay, C. (1983): "Agricultural Co-operative Theory: A Review." Journal of agricultural Economics 341-44
- [23]. Majurin, E. (2012). How women fare in east African cooperatives: The case of Kenya, Tanzania and Uganda. The Cooperative Facility for Africa (CoopAfrica), International labor office-Daereselam, ILO.
- [24]. Mayoux, L. (2005). Women's empowerment through sustainable micro-finance: Rethinking best practice. Retrieved from: <http://www.genfinance.net>.
- [25]. Mayoux, L. (2009), "Taking gender seriously: towards a gender justice protocol for financial services", paper presented for publication in Microfinance Handbook, CERMI, Brussels, 2009.
- [26]. Mosedale, S. (2005). Policy arena; Assessing women's empowerment: Towards a conceptual framework. Journal of International Development. 17: 243-257.
- [27]. Naryaan, D. (2002). Empowerment and poverty reduction. World Bank, Washington, DC.
- [28]. Olabisi A. I. (2010): Improving Marketing and Traceability of Agricultural Commodities. The Role of Cooperatives International Food Policy Research Institute.
- [29]. Onugu, C.U and Ojiagu, N.C. (2009). Genderizing Development in Rural Nigeria: Needs Challenges and Approaches. Journal of legislative Studies.
- [30]. Oyeniyi, B. (2013). The Impact of Cooperative Society in Empowerment of Rural Women. Retrieved from <http://kayworld-bukkyblegspot>.

- [31]. **Prakash, R. (2002)**. Indian women: Rights, economic position and empowerment. A paper presented on Socio-cultural Issues related to Women and Development in India: A Case Study of War Widows in Rajasthan
- [32]. **Rapoppport, J. (1984)**; Studies in empowerment: Introduction to the issue. Prevention in human services.
- [33]. **Reardon .T. and Barrett C.B.(2000)**: Agro-Industrialization, Globalization, and International Development: An Overview of Issues, patterns and determinants, Agricultural Economics.
- [34]. Richardson, Jeremy (ed.) (1993) Pressure Groups, Oxford: Oxford University Press.
- [35]. **Roldan M and M. Ellen (2009)**.The challenge of Entrepreneurship in Agricultural Cooperatives.
- [36]. **Safiya, D.K (2011)** Skill Acquisition Capacity Building and Women Economic Empowerment: A Case Study of Women Education Center, Birnin-Kebbi
- [37]. **Saikon S.E. and W. Hung (2008)** Green Cooperative: A strategy Approach Developing women's Entrepreneurship in the Asian and Pacific Region.
- [38]. **Sourbani, P. (2009)**; the role cooperative in empowering.
- [39]. United Nations (2005). Progress towards the Millennium Development Goals, 1.990-2005. Secretary-Generals Millennium Development Goals Report. New York and Geneva: United Nations Publications
- [40]. **UNDP (1987)**, Reports of workshop on effectiveness of agricultural Extension service in reaching rural women in African food and Agricultural organization (FAO) Harare Zimbabwe, October.
- [41]. **World Bank, (2003)** Women in Agriculture, In: Sharing Experience-examples of participating Approaches. The World Bank Group. The World Bank participating Source Book, Washington D. C. <http://www.worldbank.org/wbi/publications.html>
- [42]. **Yaye, M. (2010)**; Empowering Women through Agriculture. The Gbalin WomenCooperative in Liberia

IOSR Journal of Business and Management (IOSR-JBM) is UGC approved Journal with SI. No. 4481, Journal no. 46879.

Okafor Ogochukwu Esther(Phd) "Agricultural Cooperatives and Economic Empowerment of Rural Dwellers in Awka North, Anambra State, Nigeria." IOSR Journal of Business and Management (IOSR-JBM) 20.7 (2018): 22-31.