

## Impact of Demographic Factors on Agricultural Cooperatives in Kogi State, Nigeria

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### Abstract

*Agriculture is the main source of employment and income in developing nations; however, its potentials seem not to have been fully explored. This study examines demographic factors of agricultural cooperatives in Kogi State, Nigeria. Survey research design was adopted for this study. The population of this study is six thousand and forty-four (6044) registered women in agricultural cooperatives in Kogi State. The sample size is three hundred and seventy-five (375) women cooperators and multi-stage sampling technique, which involves successive stratified random sampling was used in selecting respondents. Structured questionnaire was the major source of data. The instrument was subjected to reliability test using Cronbach's alpha consistency method. The researcher administered and collected data through the help of two research assistants. Data were analyzed using descriptive tools such as frequencies, percentages, mean ratings, standard deviation, and hypotheses were tested using multiple regression analysis. The findings revealed that demographic factors particularly gender significantly affects agricultural cooperatives in Kogi state. This study therefore, recommends that international Centre for Cooperative should strive and enforce equal membership right in terms of positions and benefits. Possibly there should be mandatory tenure rotation or shift based on gender line and cooperative official especially at the rural areas.*

**Keywords:** Demographic, Women, Agriculture, Cooperative.

### Introduction

Agriculture is the main source of employment and income in developing countries, where majority of the world's poor and hungry people live (FAO, 2013). It is an industry of major proportions and has always played important role in the economic history of any country. Its activities are often constituted and carried out in groups, like cooperatives.

Agricultural cooperative is conceived to be a group of farmers who pool their resources together for efficient facilitation of optimal production. This includes joint purchase of farm inputs like seedlings, farm machinery, aiding members morally and financially during cultivation and seeking marketing channels for farm products to ensure better and fair prices (Msimango & Oladele, 2013). It could also mean a unit of business organization charged with the responsibilities of meeting welfare needs of members in particular and the society in general. Agricultural cooperatives hold much potential to enable economically weak farmers to increase their collective bargaining power, enhance income, provide inputs and create market opportunities.

Women are the backbone of the development of rural and national economies as they represent 43% of the global agricultural labor force and, 80% of the agricultural production in Africa (Mucavele, 2015). Women are at the centre stage of agricultural production in Sub-Saharan Africa, where they play key role in household food security and rural poverty alleviation. The role of women in agriculture and rural life has been especially important and cannot be overemphasized. A report by the Africa Human Development (2016) indicates that gender inequality is costing sub-Saharan Africa on average \$US95 billion a year, equivalent to 6% of the region's Gross Domestic Product (GDP).

Agriculture in the post independent years was the main stay of Nigeria's economy, but suffered serious neglect due to the oil boom of 1970's. Agricultural production which then contributed about 80% to the nation's GDP declined to less than 3% in the 1990's and 2000's. In order to redirect the situation, many programmes were initiated which were not able to meet the objectives for which they were designed. Aside this, female farmers are marginalized from participating and benefiting from agricultural groups.

They seem to face greater constraints than men in accessing resources and opportunities they need to be fully productive.

Equal participation in agricultural cooperatives is women's right and important for sustainable people-centered development. If cooperatives are gender-responsive and inclusive, they can help women overcome gender constraints to improve their self-confidence, knowledge, leadership skills, income, access to agricultural inputs, social networks and position in value-chains (FAO, 2013). When women are economically empowered, it revealed that there are direct and positive effects on their household, community decision-making, access to and control over productive assets. This amounts to an enhanced household nutrition, food and economic security, broader development outcomes, as well as more coordinated production of both food and cash crops.

However, there have been some demographic, economic and socio-cultural factors influencing women participation in agricultural cooperatives. Demographically, gender unbiased and inclusive cooperatives play a stronger avenue in creating secured spaces for women and capacitating social solidarity and the capacity to address challenges, especially in all-female cooperatives. In combined cooperatives, both male and female cooperators tend to learn to adopt more gender equitable values that promote respect for each other as full-fledged, processors, farmers and entrepreneurs. When women assume leadership positions, it aids them to engrave their self-confidence, exercise political leadership and gain respect from their male counterparts. In addition, Mbagwu (2018) observed that farming experience, income and household size influences women farmers' cooperative membership and enhance the participation and adoption of improved farming techniques.

In Kogi state, most women farmers appear to be faced with various economic problems such as low income, financial burden and limited access to credit. Others are confronted by social issues such as discrimination in certain agricultural areas, cultural barriers, low access to formal education and demographic challenges such as age barrier, marital and religious background. Okojie (2012) argued that only 16% of adult females have participated in agricultural cooperatives due to divers' constraints. While Musa (2011) and Mbagwu (2018) traced low women participation in agricultural cooperatives to cultural values in Nigeria; Idris, Sulumbe and Mohammed (2017) attributed it to economic factors. This suggests a conflicting view that only empirical study of this nature can bring to bay the superior stand-point as it relates to Kogi state.

However, in most parts of Nigeria and Kogi state in particular, women are prohibited from practicing agricultural activities they desire and their rights are denied by social norms and customs of their societies. In most places, yam is revered with annual new yam celebration and its cultivation is culturally seen as exclusive right of the men. In such places, bans of yam are owned mostly by the men and could even earn a traditional title for any male farmer who achieved that great fit. Hardly would a woman own such large bans and where applicable could be termed a taboo with certain sanctions. Consequently, womenfolk avoid going into such revered but lucrative income agricultural enterprise due to its cultural symbolism or interpretation. Similarly, cassava is perceived in most cultures as the crop for women. As a result, their male spouses and wards tends to leave the cultivation for women alone, thereby leading to poor or subsistence yield that would barely feed the family.

The International Co-operative Alliance-Africa in Sifa (2016) Mulena and Damtew (2019) reported that a 1% increase in gender inequality reduces a country's human development index by 0.75%. It posits that there will be slightly more than 1.2 billion women in Africa by 2050 with potential economic loss if gender disparity is not actively pursued and attained earlier than later. In Kogi state, women face greater workloads and time constraints in both productive and domestic activities. Collectively, it was estimated that women from sub-Saharan Africa spend about 40 billion hours a year performing traditionally ascribed domestic gender roles of children bearing, cooking, washing and cleaning. This alarming estimate is considerably capable of determining whether or not a woman is participating in agricultural cooperatives.

Recently, the Kogi State Coordinator of Small-Scale Women Farmers Organisation of Nigeria (SWOFON), Hajia Sefiya Yahaya, decried that tradition and other hindrances militating against women ownership and control of land had impacted negatively on women farmers' capacity to produce. However, there are good numbers of cooperatives in Kogi state that most of these women farmers participate in their activities, but there seem not to be any empirical study that has examined factors influencing participation. In Tanzania, the underlying factors that determine women participation are traced to socio-cultural, such as subordination of women, work overburden, absence of access and control over resources, meager access to education and training facilities, glaring disparities in gender stratification, religious and social taboos.

Despite of the important roles played by women in agricultural activities in the country, they are hardly given adequate attention in the area of training for improved technologies. Commercial banks hardly grant women loans and are hardly reached with improved seedlings, fertilizer and other farm inputs. In identifying with some cooperative societies as a resort to actualizing agricultural aspirations, many of the women still experience gender discrimination, deprivation and even unmet needs. More so, the motivation to participate in those cooperatives seems not to be fully attained due to some socio-economic and cultural restrictions. As a result, this affects agricultural operation and mobilization of the women farmers in the state. In spite of interventions from both government and non-governmental organizations, some of those issues persist.

It is against this litany of issues that this study examines the socio-economic and cultural determinants of women participation in agricultural cooperatives in Kogi State, Nigeria.

### **Objective of the Study**

The broad objective of this study is to examine the impact of Demographic Factors on Agricultural Cooperatives in Kogi State, Nigeria. However, the specific objective of this study is to examine the impact of women participation on Agricultural Cooperatives in Kogi State, Nigeria.

### **Research Question**

1. What is impact of women participation on Agricultural Cooperatives in Kogi State, Nigeria?

### **Research Hypothesis**

1.  $H_0$ : Women participation does not have significant impact on agricultural cooperatives in Kogi State, Nigeria.  
 $H_1$ : Women participation has significant impact on agricultural cooperatives in Kogi State, Nigeria.

### **Conceptual Review**

#### **Agricultural Cooperatives**

Women participation in agricultural cooperatives has been described as the bane for effective agricultural production. He posits that the place of women in agricultural enterprise through cooperative societies cannot be relegated. In other words, women farmers that have not identified with cooperative society needs to be made to understand the essence of that. Findings from a study financed by United Nations Development Programme in Nigeria found out that women make up some 60 - 80% of the agricultural labour force, depending on the region and they produce two-thirds of the food crops. Similarly, women are perceived as the majority in the rural areas and are involved at all agricultural enterprises. They are responsible for about 80% of all food items produced and 50 percent of the domestic food storage in the country. In addition, they form an active and reserve labor force,

suggesting that the position of women in agricultural development cannot be over emphasized. In the face of high transaction costs and market failures, the participation of small holder women farmers in the agricultural cooperative activities and the extent to which they benefit from their participation are very low.

Agricultural cooperatives play a crucial role in curbing these problems by providing services ranging from making credit and modern inputs available to creating market opportunities and selling members' output. Although agricultural cooperatives are intended to serve as a basis and a platform for bringing together members who are economically weak in the society and thereby improving their individual capacity, like in developing countries such as Nigeria.

The participation of women, who contribute much to the agricultural sub-sector, is very minimal. Since cooperatives, like other forms of enterprise, reflect the wider community in which they operate, it is therefore not a surprise that gender imbalances do occur, despite the principles and values that cooperative proclaim equality. Among the most important gender issues in cooperatives today are women's low level of active participation and their under-representation in decision-making and leadership. As observed by Awotide (2012) women especially in developing countries, are confronted by formidable constraints that block their active participation in cooperatives.

In many parts of Nigeria, women do not easily access land, production inputs or credit facilities. More so, their educational level is lower than men's and their business experience as well as knowledge of cooperatives is often very limited. Because of their low level of participation in cooperatives, they seldom enjoy the benefits that cooperatives and their support structures hardly provide to their members such as education, credit and training, production inputs, technology and marketing outlets.

### **Characteristics of Women Agricultural Cooperatives**

Since small - scale farmers cannot cope effectively with technical and capital-intensive demands of modernized production, the need to explore women' cooperative organizations become necessary. These organizations are capable of cooperation to collectively carry out activities that will enhance their production capacity. Cooperative is defined as a system of social organization based on the principle of unity, economy, democracy, equity and liberty. Again, Emta and Agus (2014) sees groups as "a consciously coordinated and deliberately structured entity composed of sets of persons with established patterns of interaction, possessing relatively identifiable boundaries and existing on a relatively conscious basis having been developed to achieve a specific goal or goals. Traditionally, women in the rural areas group themselves together on neighborhood bases to organize and conduct joint festivities, provide mutual assistance in emergency situations like sickness, pregnancy and during the birth and post - natal period. In comparison with traditional groups, women groups of today have more ambitious objectives and perform numerous activities of the widest variety. This include, working together on members farms on a rotational basis, establishment of saving and loan schemes; purchase of collectively own assets; purchase of farm inputs which are all meant to raise their income and improve their immediate situation.

While some groups are formed through State initiatives, others are formed through their own or self-help initiatives. An example is the Kenya's women groups where those formed through government intervention were found not to be sustainable. However, groups formed through members' initiatives had more encouraging experiences and result. Reasons for such outcomes could be attributed to the fact that government-initiated projects are usually very ambitious with much promises of financial and material assistance, and when such assistance fail to materialized or when they are withdrawn, groups disintegrate, become inactive or dissolved completely. Groups that come- up though self-help initiative usually get involved in minor projects like agriculture, small - scale trading, craftwork or community development, bearing in mind their material and financial capabilities. Although such groups get involved in other activities, agricultural activities are carried out by the overwhelming majority of

groups as their main area of focus. They could however benefit from outside assistance which helps to boost their activities.

### **Women in Agricultural Development**

Women represent 50% of the world population, and play a vital role in food production and food security. The world's experiences show that food security encompassed a broad range of issues. All these issues are central to women. Agricultural development is a complex process and a challenging one as well. Women account for 70% of agricultural workers, 80% of food producers, and 100% of those who process basic foodstuffs and they undertake from 60% to 90% of the marketing. It is often argued that women contribute more than half the global food production. They are said to be "feeding the world". The pivotal role women play in developing agriculture and the rural community is pivotal to agricultural and rural transformation in sub-Saharan Africa.

### **Concept of Agricultural Cooperative**

Many types of cooperatives have been established worldwide to serve the interests of members, including consumer, producer, and worker and service cooperatives. According to FAO (2013), there are 48,000 cooperatives serving 120 million people in the US, whereas globally some 750,000 cooperatives serve 730 million members. The various cooperative types provide members with diverse products and services, including financial services, equipment and farm supplies, marketing of agricultural products, consumer goods, utilities (e.g., electricity, telephone), housing, and other services (e.g., insurance). Barton (2000) points out that, although cooperatives are common in many parts of the world, their most extensive and successful use during the last century has been in North America and Europe. Within Africa and the international community, there is growing interest in supporting agricultural cooperative and cooperative union development as a platform for enabling vulnerable male and female smallholder farmers to secure sustainable livelihoods (Mutangadura, 2014 & Mzuyanda *et al*). Agricultural cooperatives have much opportunity for the farmers who are economically weak to improve their livelihoods through transforming their collective and individual capabilities.

Agricultural cooperative is a group of farmers who pool their resources together in certain area of activity to facilitate optimal production through efficient use of these resources. This pooling of resources include joint purchase of farm inputs like seed, farm machinery, aiding members morally and financially during cultivation and seeking marketing channels for farm products to ensure better and fair prices The purpose of forming cooperatives is to create a secured environment in terms of food security and the improvement of the standard of living among other members of the community agricultural co-operatives play an important role in the development of agriculture in industrialized countries as suppliers of farming requisite, marketers of agricultural commodities and providing services such as storage and transport.

### **Empirical Studies**

Firafis (2016) did a study that investigated the factors affecting women farmers' participation in agricultural extension services for improved production capacity Dendi district, West Shoa Zone, Ethiopia. Required data were collected from three kebele's of Dendi district from 120 randomly selected households (60 participants and 60 non-participants female headed), 10 in-depth interviews with key informants and eight focus group discussions. The data were analyzed using descriptive statistics, bivariate correlation, and multiple linear regression analysis procedure, chi-square test, independent sample t-test and one-way analysis of variance (ANOVA). The result of the regression model revealed that marital status, age of farmers access to market, access to credit and contacts with agricultural extension agent's increases women's' participation to agricultural extension service. Age, educational level, family size, member less than 64 years of age, use of improved seed, knowledge and attitude on agricultural extension service for income were found significantly influencing the index of all

respondents' and male headed farmers' diet diversification function. On the other hand, farming experience was found significantly influencing the index of female headed farmers' participation on rural women to agricultural extension service.

Idris, Sulumbe and Mohammed (2017) examined the socio-economic factors affecting women's participation in agricultural cooperatives in Gwoza LGA of Borno state, Nigeria. Data for the study were derived from three purposively selected communities (Gwoza, Ngoshe and Pulka). Forty respondents were randomly selected from each of the three communities, giving a total of 120 participants. The major instrument of data collection was questionnaire. Analytical tools used were percentages and chi-square ( $\chi^2$ ) to test existence of relationship between level of participation and socio-economic characteristics of respondents, and correlation analysis was used to test cause-effect relationship between socio-economic variables and some indicators of cooperative activities. The results showed that majority of respondents (82%) were between 30 and 40 years, and married (76%). Just 4% attended tertiary institution and about 41% attended up to secondary education. The study further revealed that cultural beliefs (82%) and low level of education (57%) were major problems militating against women participation in cooperatives. Relationship between socio-economic variables and women participation in cooperatives were significant for age, education and primary occupation as revealed by the chi-square analysis tested at 5% level.

### **Research Methodology**

The research adopted a descriptive research design. This method is a research survey design involving studying the respondents with the view to collating responses with the aim of making empirical statistical inference. Therefore, this research which examines demographic factors on Agricultural Cooperatives in Kogi State, Nigeria involved collecting data through primary sources. The primary data obtained were through a structured questionnaire while the data were subjected to descriptive and inferential analysis. The population of this study comprised the women cooperatives in Kogi state. However, considering the fact that the population for this study may not be manageable effectively, it becomes impossible to study the entire population. Therefore, the research adopted Yamane statistical formula.

The sample size for this study is three hundred and seventy-five (375) registered members of women agricultural cooperatives in Kogi State. It became imperative to sample as to have a manageable figure based on time frame and available resources and as well have a clear representation of the population. The sample size was determined from the population using Taro Yamane (1967) formula. It is calculated thus;

$$n = \frac{N}{1 + N(e)^2}$$

Where; n = Desired sample size

N = population size under study

1 = Unity (always constant) in value

e = error margin (5% or 0.05)<sup>2</sup>

Thus;

$$n = \frac{6044}{1 + 6044(.05)^2}$$

$$= \frac{6044}{1 + 6044(0.0025)}$$

$$= \frac{6044}{16.11}$$

$$n = 375.$$

### Reliability of the Instrument

Reliability statistics was conducted to determine the internal consistency of the instrument. To test the reliability of the instrument, the study carried out a pilot study by distributing questionnaires numbering twenty (15) to the target respondents through the help of two research assistants; the Cronbach Alpha coefficient measure of internal consistency was adopted. The reliability of the instrument using Cronbach alpha reliability test with the Statistical Package for Social Sciences (SPSS) which yielded the result of 0.79

### Method of Data Analysis

The presentation and analysis of collected data were presented in tables. The demographic characteristics of the respondents were analyzed using descriptive tools such as frequencies, percentages, mean ratings, standard deviation, etc. More so, the study hypotheses were tested using multiple regression analysis. This was carried out through the aid of SPSS computer software version 22.

The implicit model of the regression analysis is specified thus;

$$WP = f(\text{age, edu.level, marital stat., relg., fam size, coop.yrs., incom}) \quad 1$$

$$WP = f(\text{cultural practices, gender discrim., beliefs}) \quad 2$$

Where;

WP = Women Participation

The explicit version of the implicit model above is specified as follows;

$$DF = \alpha + \beta_1 \text{ age} + \beta_2 \text{ edu.level} + \beta_3 \text{ marital stat.} + \epsilon_i \beta_4 \text{ fam size} + \beta_5 \text{ coop.yrs.} + \beta_6 \text{ income} + \epsilon_i \quad 3$$

$$WP = \alpha + \beta_1 EF + \beta_2 SF + \beta_3 DF + \beta_4 CF + \epsilon_i \quad 4$$

Where:

The ‘ $\alpha$ ’ represent the intercept term that shows the extent of the effects of independent variables (demographic, economic, social and cultural factors) on dependent variables when each value in the models is zero. The  $\beta_1$  to  $\beta_6$  represents the coefficients that describe the size of the effect of the independent on the dependent variables.

### Data Analysis and Results

Table 1: Distribution of Respondents by their Demographic Characteristics

S/n	Bio-Data of Respondents	Frequency	Percentage	Mean
1.	<b>Age</b>			
	Below 20	1	.3	
	21-29	8	2.4	
	30-38	53	16.4	
	39-47	79	24.5	
	48 & Above	181	56.2	50
	<b>Total</b>	<b>322</b>	<b>100%</b>	
2.	<b>Educational Level</b>			
	No formal Education	94	29.1	
	FSLC	160	49.6	
	WASSC/GCE	48	14.9	
	OND/HND/B.Sc.	3	.9	
	Other(vocational)	17	5.2	
	<b>Total</b>	<b>322</b>	<b>100%</b>	
3.	<b>Marital Status</b>			
	Single	19	5.9	

	Married	213	66.1	
	Widow	88	27.3	
	Divorced/Separated	2	.6	
	<b>Total</b>	<b>322</b>	<b>100%</b>	
4.	<b>Religion</b>			
	Islam	202	62.7	
	Christianity	98	30.4	
	Traditional African Religion	22	6.8	
	<b>Total</b>	<b>322</b>	<b>100%</b>	
5.	<b>Household size</b>			
	Less than 5 persons	57	17.7	
	5-10	81	25.1	10
	11-15	175	54.3	
	16 and above	9	2.7	
	<b>Total</b>	<b>322</b>	<b>100%</b>	
6.	<b>Extent of Cooperatives Participation</b>			
	Below 5yrs	61	18.9	
	6-10yrs	236	73.2	8
	11-15 yrs	20	6.2	
	16yrs & Above	5	1.5	
	<b>Total</b>	<b>322</b>	<b>100%</b>	
7.	<b>Annual Income</b>			
	Less than N100, 000	46	14.2	
	N100, 001 – N150, 000	199	61.8	
	N151, 000 and Above	77	23.9	N165,803
	<b>Total</b>	<b>322</b>	<b>100%</b>	

Source: Survey, 2022

In the analysis of demographic characteristics of respondents, the result as shown on table 1 revealed that majority of the respondents 181(56.2%) fell within the age bracket of 48 years and above. This is followed by 79(24.5%) that fell between 39 to 47 years of age. In all there is an average age mean of 50years. What this means is that the respondents are adult and aging. Away from age, about 160(50%) of the respondents had just primary education (FSLC) and this is followed by 94(29.1%) that never had any formal education. It is instructive to note that only 3(.9%) and 17(5.2%) were able to acquire tertiary and vocational education respectively. This suggests that the respondents are less educated and could lead to poor awareness on the importance or benefits of participating in agricultural cooperatives. Again, over 65% of the respondents were married and 88(27.3%) were widows. The least of the respondents 2(.6) were either divorced or separated with their spouses and just 19(5.9%) make for those that were single. Based on this result, it appears that single persons are not showing interest in agriculture or agricultural cooperatives. However, majority of the respondents 202(62.7%) are Muslims. This is followed by 98(30.4%) that are Christians and 22(6.8%) that practice traditional African religion. It is not surprising having close to 65% of the respondents are Muslims, since the study was conducted in Kogi state, which is predominantly Islamic society. The average household size of the respondents is 10 persons. Again, the table also revealed that about 175(54.3%) of the respondents have between 11 to 15 household size. This indicated a large family size that perhaps depends on the women for care and food.

Importantly, the table revealed that majority of the respondents 236(73.2%) has been participating in cooperative societies for an average of 8-years. Those who have participated between 11 to 15 years and 16years above were just 20(6.2%) and 5(1.5%) respectively. Although low, this suggests that the respondents have participated in cooperative societies to a reasonable extent. The implication is that the women may still need more years to fully anticipate the huge benefits inherent in agricultural cooperatives. Furthermore, the average annual income of the respondents was one hundred and sixty-



five thousand, eight hundred and three (N165,803) naira. This poor annual income might explain why majority of women farmers in Kogi state are poor and could be attributed to the poor interest in cooperative societies.

### Demographic Factors affecting Agricultural Cooperatives

Table 2: Analysis of Demographic Factors that affect Women Participation

	<i>Coeff.</i>	<i>t-val.</i>	<i>Sig.</i>
Constant (Demographic factors)	832.764	6.437	0.000
X <sub>1</sub> Age	-3.531	-2.156	0.321
X <sub>2</sub> Edu. Level	12.601	8.104**	0.002
X <sub>3</sub> Marital Status	-1.431	-0.592	0.410
X <sub>4</sub> Religion	-0.326	-1.784	0.110
X <sub>5</sub> Household size	60.951	4.456*	0.033
X <sub>6</sub> Years in Coop.	-13.239	-2.832	0.720
X <sub>7</sub> Annual Income	52.841	31.112**	0.000
R <sup>2</sup>		0.816	
Adj. R <sup>2</sup>		0.794	
F		19.521	
N		322	
Dependent Variable: participation			

\*\*Significant at 1% level, \*Significant at 5% level.

A careful look at table 2 shows that the demographic factors under study explain close to 80% variations in participation of the women in agricultural cooperatives. Specifically, X<sub>2</sub>, X<sub>5</sub> and X<sub>7</sub> were observed to be coefficiently significance. This is because their p-values are below the 0.05 level. However, X<sub>1</sub>, X<sub>3</sub>, X<sub>4</sub> and X<sub>6</sub> variables bore negative signs, implying they are not significant. Therefore, the demographic factors affecting women participation in cooperatives are shown to comprise educational level, household size and annual income.

#### Test of Hypothesis

- H<sub>0</sub>: Women participation does not have significant impact on agricultural cooperatives in Kogi State, Nigeria.  
 H<sub>1</sub>: Women participation has significant impact on agricultural cooperatives in Kogi State, Nigeria.

Table 3: Hypothesis one model summary of the regression

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig.	
					1	.653 <sup>a</sup>	.816	.794	15.60352	

a. Predictors: (Constant), demographic factors

b. Dependent Variable: agricultural cooperatives

Table 3 shows that 81.6% of variations in participation of the women in agricultural cooperatives are as the result of demographic factors. Again, about 79.4% of changes in participation of the women farmers are caused by the demographic factors. Based on the coefficient result of the regression as shown on table 1, the demographic factors affecting participation of the women farmers at 5% level are observed to be X<sub>2</sub>, X<sub>5</sub> and X<sub>7</sub>. This gave clear evidence to reject the null hypothesis and accept alternate. Therefore, it implies that demographic factors (educational level, household size and annual income) have significant effect on women participation in agricultural cooperatives in Kogi State.

## Conclusion

This study has just added to the extensive examination of the determinants of women participation in agricultural cooperatives by scholars and this is done in view of the effects of economic, social, demographic and cultural factors influencing participation in Kogi State, Nigeria. Lastly, this study concludes that women participation in agricultural cooperatives in Kogi state is significant but low and this is as a result of some socio-economic, demographic and cultural factors.

## Recommendations

The following recommendations are made for possible policy implementation;

1. Proper enlightenment on the benefits of cooperative membership should be carried out on women farmers in the state. This will help to eliminate barriers and encourage more participation.
2. Women should be given the opportunity and level playing ground to attain their full potentials in the society. This can be done through effective law enactment against any form of cultural restriction of women on land ownership or usage. This will help eradicate the traditional misconception that women are not to exceed reproductive or domestic boundaries, and enable them to fully harness their agricultural potentials.

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