



## Benefits of Agricultural Cooperatives to Farmers in Owo Local Government, Ondo State

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### Abstract

This study examined the benefits of agricultural cooperatives to farmers in Owo Local Government Area (LGA), Ondo State, Nigeria. Data were obtained from 150 farmers using the multistage sampling procedure and analyzed using descriptive statistics and correlation. The result showed that the respondents were mostly males (55.7%), middle aged (61.1%) and married (66.5%). The dominant types of cooperative societies were producer, marketing, supply and credit (75.9%). The most prominent benefits of agricultural cooperatives included increased crop yield ( $\bar{x} = 2.00$ ;  $\sigma = 0.37$ ) and enhanced market access ( $\bar{x} = 2.00$ ;  $\sigma = 0.33$ ). The severe constraints hindering cooperatives included conflicts and poor governance ( $\bar{x} = 2.03$ ;  $\sigma = 0.22$ ), limited expansion of its members ( $\bar{x} = 2.03$ ;  $\sigma = 0.29$ ), and limited access to technology ( $\bar{x} = 2.03$ ;  $\sigma = 0.22$ ). There was a significant relationship between age ( $r = 0.555$ ;  $p = 0.000$ ), farm experience ( $r = 0.514$ ;  $p = 0.000$ ), family size ( $r = 0.564$ ;  $p = 0.000$ ), farm size ( $r = 0.514$ ;  $p = 0.000$ ), and the benefits of agricultural cooperatives to farmers. The study recommended that community-level micro-processing training centers should be established by cooperative societies to provide skills to rural dweller farmers.

### 1. Introduction

Agricultural cooperatives represent a form of coalition or vertical integration among farmers to achieve shared goals and objectives (Hueth and Marcoul, 2015; Rosu and Tudor, 2021). The principal purpose of agricultural cooperatives is to mobilise savings among members and advance credit facilities to them for their agricultural activities (Akanni et al., 2020). Agricultural cooperatives are especially crucial in sub-Saharan Africa where smallholder farms are fragmented over vast and remote rural areas (Wanyama et al., 2009). By providing credit services to member farmers, cooperatives alleviate production constraints and facilitating access to agricultural inputs such as fertilizers, seed, technologies, etc., they improve agricultural productivity, enhance livelihood of farmers, reduce poverty, and increase food security (Shiferaw et al., 2014; Tefera et al., 2016). Cooperatives have been instrumental in driving sustainable agricultural development and transforming rural communities (Nlebem and Raji, 2019). They develop the skills of farmers and enhance their bargaining and advocacy powers, thereby reduces the risks that they face in the market (Woldu et al., 2013). Moreover, agricultural cooperatives assist farmers in exchanging knowledge, reducing transaction costs, processing and marketing their produce, hence promoting investment, improving market access and fostering market participation (Oluwakemi et al., 2012).

Despite these acclaimed benefits, the co-operatives fraternity is generally perceived as performing sub-optimally in delivering the expected dividends due to poor investments, low efficiency, defective governance and flawed management systems (Nyawo and Olorunfemi, 2023). Moreover, cooperatives also face challenges such as inadequate capital, mismanagement and loan defaults (Brai et al., 2016). However, there is a dearth of studies on the perceived benefits of cooperatives on the farming activities of the anticipated beneficiaries.

The broad objective of the study is to assess the benefits of agricultural cooperatives to farmers in Owo LGA, Ondo State, Nigeria. Specifically, the study describes the socioeconomic characteristics of the farmers, examines various types of agricultural cooperatives in the study area, determines the benefits of agricultural cooperative to members and identifies the constraints faced by agricultural cooperatives in the study area. The study hypothesis is:

H01: There is no significant relationship between the socioeconomic characteristics of the respondents and the benefits of agricultural cooperatives to farmers

## 2. Materials and Methods

The study was carried out in Owo LGA of Ondo State, Nigeria. The total population of the LGA is 222,262 and agriculture is the mainstay of the economy, employing over 75% of the working population. Multi-stage sampling procedure was used in selecting the respondents for the study. The first stage involves the random selection of four communities in Owo LGA (Emure, Ehin-Ogbe, Isijogun and Iyere). The second stage involved a random selection of 40 farmers each from the four communities making a total sample size of 160 farmers. The methods of data collection were a well-structured questionnaire, interviews and direct observation. Data was analysed using both descriptive and inferential statistics such as frequency counts and percentages while the hypotheses was tested using Pearson Product Moment Correlation.

Socioeconomic characteristics were measured as age, marital status, household size, income, farm size etc. at nominal and interval level. The various types of agricultural cooperatives were measured by asking the farmers if they were available in the community through a dichotomous response of Yes = 1 and no = 0. The benefits of agricultural cooperatives to farmers were determined by asking the farmers to indicate the benefits on a five (5) point Likert type scale of Very high = 5, High = 4, Fairly high = 3, Low = 2 and very low = 1. The constraints of agricultural cooperatives in the area were determined by asking the farmer members to indicate the constraints on a three (3) point Likert type scale of severe constraint, mild constraint and not a constraint.

## 3. Results and Discussion

### 3.1 Socioeconomic characteristics respondents

Table 1 that 55.7% of the respondents were male, while 44.3% were female, indicating a relatively even gender distribution of membership of the cooperatives, and suggesting that both genders appreciate the advantages of belonging to cooperatives. Akinola et al., (2023) found that males constitute 69% of tomato farmer-members of cooperative societies sampled in Nigeria.

The age distribution shows that 46.8% of respondents were aged 40-49 years, 20.30% were aged 30-39 years, and 19% were aged 50 years or more. This shows a dominance of working-age respondents in the sample, indicating their vibrancy and resourcefulness to exploit the benefits accruing from membership of cooperatives. Gillani et al., (2022) discovered that one-fourth of their study respondents in Punjab, Pakistan were aged 41-50 years, while more than two-fifth were aged more than 50 years.

Most (66.5%) of the respondents were married while 24.7% were single. Early marriages are typical of rural farm households in Nigeria which provides an extra hand for households farm work. The family commitments associated with marriage could also be an impetus to join cooperatives as financial buffer for coping with household needs. Joshua and Bashir (2020) found that 71.58% of the women agricultural cooperators in Zaria, Kaduna State, Nigeria were married.

Adherents to Christian mode of worship were more prominent (63.9%), with Islamists accounting for 32.9% of the respondents. Ecumenical affiliations often do not influence decisions to join associations like cooperatives, whose appeal draws on the pecuniary and social support they offer. Lang (2018) surmised that Christian missionaries contributed to modernizing agriculture by designing and implementing several agricultural projects in Cameroon since the pre-colonial era.

More than 95% of the respondents had some form of education, with a striking 36.7% having tertiary education. This suggests significant degree of learning among the respondents, signaling their enlightened knowledge of the roles that cooperatives play in agriculture and fueling greater inventiveness in utilizing the resources cooperatives provide for the benefit of their farm enterprise. Okafor *et al.* (2024) affirmed that 55.7% of respondents in their sample of farm households in Anambra State, Nigeria had tertiary education while 32.3% had secondary education.

Most (69.6%) of the respondents had family sizes of 4-6 persons, 20.3% had family sizes of 1-3 persons, while 10.1% had family sizes of more than 5 persons. This indicates largely medium size families, which offers them a ready pool of farm labour. Akioya and Onemolease (2021) reported average household size of four for farm households in Edo State, Nigeria.

The respondents had a substantial number of experienced farmers as 37.30% had farming experience of 7-12 years. 32.3% had been farming for 13 to 18 years, and 13.3% had farming experience of 19 years or more. The high level of

experience suggests that the farmers were likely seasoned at utilizing the opportunities and services offered by cooperatives such as input supply, credit access and extension services, to enhance their farm outputs. Akinola et al., (2023) reported an average farming experience level of 13 years for smallholder tomato farmers in Nigeria.

Most of the respondents had moderate farm sizes of less than 3 acres (33.5%) and 3-5 acres (39.7%). Many rural farm households operate small farm sizes restricted by land and financial resources. Nyawo and Olorunfemi (2023) confirmed that less than two-thirds of the smallholder farmers in their sample had farm sizes of five hectares or less.

Approximately three-fifth of respondents (64.6%) earned more than ₦90,000 monthly from their farm business while 23.4% earned 60,000 to ₦89,999, which suggests that farming provides modest income. Fasakin and Popoola (2019) corroborated a monthly income level of ₦60,000 to ₦80,000 for 42% of agricultural cooperative association members in Osun State, Nigeria.

Table 1. Socioeconomic characteristics

Socioeconomic characteristics	freq.	%
Age		13.9
<30.00	22	
30.00 - 39.00	32	20.3
40.00 - 49.00	74	46.8
50.00+	30	19.0
Gender		
Male	88	55.7
Female	70	44.3
Marital Status		
Single	39	24.7
Married	105	66.5
Divorced	1	0.6
Widowed	4	2.5
Separated	9	5.7
Religion		
Christianity	101	63.9
Islam	52	32.9
Traditional	5	3.2
Educational Status		
No Formal Education	6	3.8
Primary Education	14	8.9
Junior Secondary Education	58	36.7
Senior Secondary Education	22	13.9
Tertiary Education	58	36.7
Farming Experience		
1-6 Years	27	17.1
7-12 Years	59	37.3
13-18 Years	51	32.3
≥ 19 Years	21	13.3
Family Size		
1-3persons	32	20.3
4-6persons	110	69.6
7-9persons	16	10.1
≥ 10 Persons		
Monthly Income		
<₦30000	6	3.8
₦30000 – ₦59999	13	8.2
₦60000 – ₦89999	37	23.4
₦90000+	102	64.6
Farm Size		
<3 Acres	53	33.5
3-5 Acres	63	39.9
6-8 Acres	42	26.6
≥ 9 Acres		

### 3.2 Types of cooperative societies

Table 2, shows that 74.7% each of the respondents mostly belonged to producer, marketing, supply, credit and community-based cooperatives, while a marginally smaller proportions, were members of consumer and farmer-owned cooperatives. Other cooperative attachments of the respondents were digital cooperative (1.9%) and service and hybrid cooperatives (0.6%). Apparently, most of the agricultural cooperatives engaged in savings and thrift operations through which they harnessed funds from members/other sources and funneled them as loans to the farmers thereby catalyzing farm production and bolstering farm incomes. Community-based cooperatives handle the storage, processing, production, marketing, thrift and savings and information needs of member-farmers in the community. By pooling resources, investing or expending them, community-based cooperatives drive growth and progress of rural communities through the array of projects they execute. Ndagi et al., (2023) found that a colossal 81% of the agricultural cooperators in Niger State, Nigeria belonged to producer cooperative societies.

Table 2. Membership of agricultural cooperative societies

Types	Freq	%
Producer cooperative	120	75.9
Marketing cooperative	120	75.9
Supply cooperative	120	75.9
Service cooperative	1	0.6
Hybrid cooperative	1	0.6
Credit cooperative	120	75.9
Consumer cooperative	118	74.7
Farmer-owned cooperative	118	74.7
Community-based cooperative	120	75.9
Digital cooperative	3	1.9

Source: Field Survey, 2024.

### 3.3 Benefits of agricultural cooperatives

The prominent benefits of agricultural cooperatives indicated by the respondents included increased crop yield ( $\bar{x} = 2.00$ ;  $\sigma = 0.37$ ), improved crop quality ( $\bar{x} = 2.00$ ;  $\sigma = 0.14$ ), enhanced market access ( $\bar{x} = 2.00$ ;  $\sigma = 0.33$ ), reduced production costs ( $\bar{x} = 2.00$ ;  $\sigma = 0.42$ ), increased income ( $\bar{x} = 2.00$ ;  $\sigma = 0.15$ ), improved technology adoption ( $\bar{x} = 2.00$ ;  $\sigma = 0.25$ ), enhanced knowledge sharing ( $\bar{x} = 2.00$ ;  $\sigma = 0.21$ ), increased social capital ( $\bar{x} = 2.00$ ;  $\sigma = 0.27$ ), and institutional strengthening ( $\bar{x} = 2.00$ ;  $\sigma = 0.24$ ). The relatively lower benefits were social impact ( $\bar{x} = 1.89$ ;  $\sigma = 0.17$ ), and better input supply management ( $\bar{x} = 1.86$ ;  $\sigma = 0.31$ ) (Table 3).

Table 3. Benefits of agricultural cooperatives

Benefits	Freq	%	$\bar{x}$	$\sigma$ .
Increased crop yield	120	75.9	2.00	0.37
Improved crop quality	120	75.9	2.00	0.14
Enhanced market access	120	75.9	2.00	0.33
Reduced production costs	118	74.7	2.00	0.42
Increased income	120	75.9	2.00	0.15
Improved technology adoption	117	74.1	2.00	0.25
Enhanced knowledge sharing	120	75.9	2.00	0.21
Better risk management	119	75.3	1.99	0.16
Increased social capital	120	75.9	2.00	0.27
Improved food security	119	75.3	1.94	0.32
Increased agricultural productivity	120	75.9	1.86	0.27
Better input supply management	120	75.9	1.86	0.31
Social impact	120	75.9	1.89	0.17
Environmental sustainability	120	75.9	1.97	0.22
Institutional strengthening	120	75.9	2.00	0.24
Enhanced credit access	120	75.9	2.00	0.12
Access to information	120	75.9	2.00	0.52
Capacity building	120	75.9	2.00	0.31

Source: Field Survey, 2024.

Mean  $\geq 2.0$  = High benefit

The extensive benefits derived from cooperatives as expressed by the respondents were validation of their importance in rural farming settlements. Candemir et al., (2021) enumerated some of the benefits of agricultural cooperatives as prioritizing members' economic gains or profit maximization, enhancing members' welfare, providing incentives to catalyze innovations for improving product quality and assisting in input procurement.

### 3.4 Constraints of cooperatives

Table 4 shows that the severe constraints faced by agricultural cooperatives included conflicts and poor governance ( $\bar{x} = 2.03$ ;  $\sigma = 0.22$ ), limited expansion of its members ( $\bar{x} = 2.03$ ;  $\sigma = 0.29$ ), limited access to technology ( $\bar{x} = 2.03$ ;  $\sigma = 0.22$ ), high operational costs ( $\bar{x} = 2.03$ ;  $\sigma = 0.22$ ), limited technical expertise ( $\bar{x} = 2.03$ ;  $\sigma = 0.22$ ), and limited access to credit ( $\bar{x} = 2.00$ ;  $\sigma = 0.19$ ). The less severe constraints were poor infrastructure ( $\bar{x} = 1.99$ ;  $\sigma = 0.16$ ), dependence on external support ( $\bar{x} = 1.98$ ;  $\sigma = 0.20$ ) and low number of active members ( $\bar{x} = 1.98$ ;  $\sigma = 0.22$ ). Omar et al., (2022) submitted that agricultural cooperatives in Malaysia were constrained by conflicts amongst board members, uncertainty of incomes and intense competition from private players.

Table 4. Constraints of cooperatives

Constraints	$\bar{x}$	$\sigma$
Limited access to credit	2.00	0.19
Poor infrastructure	1.99	0.16
Inadequate market information	2.01	0.16
Limited technical expertise	2.03	0.20
High operational costs	2.03	0.22
Dependence on external support	1.98	0.20
Conflicts and poor governance	2.03	0.22
Limited expansion of its member	2.03	0.29
Regulatory constraints	2.02	0.26
Environmental factors	2.00	0.26
Limited access to technology	2.03	0.22
Low number of active members	1.98	0.22

Source: Field Survey, 2024.

Mean  $\geq 2.0$  = Severe constraints.

Table 5. Correlation between socioeconomic variables and the benefits of agricultural cooperatives to farmers

Correlation	Correlation Coeff (r)	P-value
Age	0.555**	0.0001
Farm experience	0.514**	0.0001
Family size	0.564**	0.0001
Farm size	0.514**	0.0001

Source: Field survey, 2024.

\*\*Significant at 0.01 level of significance

### 3.5 Hypothesis test result

Table 5 shows that there is a significant relationship between age ( $r = 0.555$ ;  $p = 0.000$ ), farm experience ( $r = 0.514$ ;  $p = 0.000$ ), family size ( $r = 0.564$ ;  $p = 0.000$ ), and farm size ( $r = 0.514$ ;  $p = 0.000$ ), and the benefits of agricultural cooperatives to farmers. This implies that a variety of socioeconomic factors impacted the benefits of agricultural cooperatives to farmers. Abdelrahman (2017) found that the combination of age and experience of the farmers explained 44% of the variance in their benefits from agricultural cooperatives. Akinola et al., (2023) confirmed a positive correlation between membership of agricultural cooperatives and tomato yield among smallholder farmers in rural Nigeria.

## 4. Conclusion and Recommendations

Smallholder agricultural cooperators in Owo Local Government Area, Ondo State, Nigeria derived significant benefits from membership of agricultural cooperatives such as increased yield, improved crop quality, enhanced market access, increased income, and better knowledge sharing. It is recommended that community-level micro-processing training centers should be established to enable cooperative societies impart skills to rural dweller farmers. Similarly, agricultural cooperatives should prioritize the training of their personnel to improve service delivery to their members.

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