



EFFECT OF AGRICULTURAL COOPERATIVE BUSINESSES ON THE WELLBEING OF MEMBERS IN OGUN STATE, NIGERIA

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Cite this article:

Ayantoyinbo A. A., Alufohia G. O., Babalola D. O., Okelola O. E. (2024), Effect of Agricultural Cooperative Businesses on the Wellbeing of Members in Ogun State, Nigeria. African Journal of Agriculture and Food Science 7(3), 22-38. DOI: 10.52589/AJAFS-2BL7VVUE

Manuscript History

Received: 12 Apr 2024

Accepted: 13 Jun 2024

Published: 12 Jul 2024

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ABSTRACT: *Agricultural Cooperatives have a vital role in improving the wellbeing of their members. This study intends to assess the extent of agricultural cooperative businesses on the wellbeing of members in Ogun State, Nigeria. The specific objectives were to describe the socio-economic characteristics of agricultural cooperative members, identify the types of businesses operated by agricultural cooperative societies, identify the benefits that cooperative members derived from agricultural cooperative societies and businesses, and examine the effects of agricultural cooperative businesses on the wellbeing of cooperative members. The data for the study were gathered through structured questionnaires distributed to 312 active and registered members of the selected agricultural cooperatives. The sample was chosen through a multi-stage approach that included purposive and random sampling techniques, and the data were analysed using mean before and after ratings, simple percentages, standard deviation, and the t-test. According to the findings, the majority of respondents were able to purchase assets such as farms, buildings, motorbikes, bicycles, telephones, radios, and televisions as a result of agricultural cooperative societies engaged in profitable industries. Furthermore, members had increased access to healthcare and food. Furthermore, the effects of agricultural cooperative firms were visible in the increased income claimed by respondents following the founding of these businesses, as confirmed by a significant t-value of 5%. This implies that there was a considerable difference in members' subjective wellbeing in the establishment of agricultural cooperative businesses. Finally, this study provides persuasive evidence that agricultural cooperative businesses (economic activities) significantly improve the subjective wellbeing of members in the studied area. It is advised that agricultural cooperatives diversify their investments to increase their viability, improving the wellbeing of their members and host communities. This strategy will also inspire members to actively participate and support the acquisition of powerful abilities, ultimately leading to the attainment of sustainable development goals.*

KEYWORDS: Agricultural, Cooperatives, Effects, Members, Business, Investment.



INTRODUCTION

Cooperatives are widely recognised for their significant roles in enhancing the living standards of their members, especially those hailing from underprivileged rural and low-income backgrounds. These societies establish an institutional framework that amalgamates capital, assets, and individuals into an economic entity, thereby supporting their way of life (Fernandez-Guadaño, Lopez-Millan, & Sarria-Pedroza, 2020). Moreover, cooperatives frequently offer opportunities for rural farmers and disadvantaged urban dwellers to boost their income, being democratic businesses that empower members to contribute their own ideas while enhancing financial security and promoting gender equality (Quilloy, 2018).

In total, cooperative societies engage 10% of the global workforce and generate nearly \$2.2 trillion in revenue (International Cooperatives Alliance [ICA], 2022). Presently, cooperatives are perceived as the most effective avenue for transformative development as they empower individuals to steer their own **DESTINIES** and provide resources to their communities. In line with food policy initiatives, the Nigerian government has intensified its endeavours to promote cooperative formation (Nwobu, 2021).

Nlebem and Gibson (2019) define agricultural cooperative societies, also known as farmers' cooperatives, as joint business ventures owned, funded, supported, and democratically managed by farmers and other stakeholders in the agricultural sector to address members' needs and community wellbeing. Apostolakis and Dijk (2019) highlight that the primary objectives of cooperatives include maximizing member benefits while reducing income and expenditure disparities, fostering economic growth, enhancing consumer products, and improving member wellbeing. Aboramadan et al. (2023) argue that enhancing wellbeing should prioritize human resources and grassroots individuals who voluntarily collaborate and pool their limited resources. Notably, agricultural cooperative societies, in particular, play a crucial role in augmenting the income of rural residents, thereby enhancing their wellbeing.

Subjective wellbeing, also known as self-reported wellbeing, refers to how people experience and evaluate different aspects of their lives. It is often used to measure mental health and happiness. A high level of subjective wellbeing not only improves life quality but also enhances productivity and then increases economic performance (e.g., income) and welfare (e.g., food consumption and health conditions) (Stevenson & Wolfers, 2021; Dominko & Verbič, 2022; Martín-María et al., 2020). The consumption of goods and services constitutes an essential part of human life and is, moreover, considered to be a hallmark of the prevailing lifestyle. The wellbeing is ultimately defined by the level, kind, and quality of consumption of goods and services. The work of Tauseef (2022) for Bangladesh suggests that income increases are a significant driver of subjective wellbeing. The logic behind this is that income growth can directly satisfy people's basic needs (e.g., food, medical care, and security) and their higher-level needs (e.g., self-development, social status elevation, and dream realization), making them happier and more satisfied with their lives. As aforementioned, cooperative businesses could serve as an effective channel to enhance members' income earnings, which could further improve members' subjective wellbeing. Ownership of assets is the components of physical capital and can be used to measure individual wellbeing. According to Komba (2008), assets provide people with opportunities and options in the face of impoverishing forces. Moreover, being asset poor limits people's capacity to improve and safeguard their wellbeing.



Nevertheless, agricultural cooperatives often encounter internal and external pressures to diversify their business beyond their traditional operations to enhance the wellbeing of members and host communities. Diversification of agricultural cooperative simply means adding new economic activities. These could include agricultural related, non-agricultural related and interrelated businesses. Delving into other businesses alongside their core activities is deemed an effective strategy to reduce risks significantly and enhance subjective wellbeing. According to Yussuf and Mohamed (2022) these could include agricultural or non-agricultural Diversification into other businesses not only mitigates risks but also boosts income and enhances the overall quality of life and wellbeing of cooperative members. The gap established in this work is to find out if businesses established by agricultural cooperatives can enhance the wellbeing of members, which is their obligation.

Numerous studies have explored the impact of agricultural cooperatives on members' income and food security (Damilola & Emmanella, 2022; Kehinde & Kehinde, 2022; Li et al., 2021; Ma & Abdulai, 2016; Lecoutere, 2017), the enhancement of technical efficiency (Akaeti & Frank, 2021; Olagunju, Ogunyi & Oyetunde, 2021), and the amelioration of the livelihoods of smallholder farmers (Ominikari, 2022). These inquiries have also ascertained that enrolment in agricultural cooperatives positively impacts wellbeing (Ahmed & Mesfin, 2017), which explains the need for this work as there seems to be a vacuum in the area of cooperative businesses and the wellbeing of members of the cooperative.

Limited scholarly work, particularly within the Nigerian context, has scrutinized the effects of agricultural cooperative businesses on the wellbeing of members. Thus, the aim of this research is to examine the effects of cooperative businesses (profit-generating economic activities) on the wellbeing of members. Understanding the functionality of cooperative businesses is imperative, as it constitutes a pivotal element in the strategy to enhance the subjective wellbeing of members and communities (i.e., how members experience and evaluate different aspects of their lives). This study will contribute to the continuing discussions on how and to what extent cooperative businesses enhance the subjective wellbeing of their members.

Statement of Problem

In the global context, competition, economic downturns, and low profitability create a necessity for agricultural cooperatives to formulate strategies to survive. A cooperative, being a business owned by its members, can operate businesses with the purpose of serving its members. Consequently, the promotion of the formation of agricultural cooperatives lies in the improvement of the subjective wellbeing of their members. Thus, effective strategies that enhance the wellbeing of agricultural cooperative members are necessary, and these strategies involve delving into profit-making businesses, which is not the original orientation of cooperatives. Senevirthna and Dharmadasa (2021) argued that diversification is globally considered an effective way to significantly reduce risks and improve wellbeing. The study, conducted by Salam et al. (2019) indicated that an appropriate method of improving wellbeing is diversification. Diversification of agricultural cooperatives into agricultural-related, non-agricultural-related, and interrelated businesses aims at enhancing the wellbeing of members. But the question remains as to what extent this obligation is being fulfilled by societies through establishment of profit generating businesses. Therefore, the objective of this research is to examine the extent to which agricultural cooperative businesses influence the wellbeing of members through the establishment of profit-oriented businesses.



Objectives of the Study

The broad objective of this study is to examine the effect of agricultural cooperative businesses on the wellbeing of members in Ogun State, Nigeria.

The specific objectives are to:

- (i) describe the socio-economic characteristics of their members.
- (ii) identify the types of businesses operated by the agricultural cooperative societies
- (ii) identify the benefits the cooperative members derived from agricultural cooperative businesses
- (iv) assess the wellbeing status of members before and after the establishment of the businesses in the study area.

Hypothesis

H₀₁: There is no significant difference in the wellbeing of members before and after establishment of the businesses.

LITERATURE REVIEW

The Concept of Agricultural Cooperatives

An agricultural cooperative society is a business enterprise that is jointly formed, owned, capitalized, patronized, and democratically controlled by farmers or other operators in the agricultural sector to meet the pressing needs of members and the community (Nlebem & Gibson 2019). Oyediran, Njoku, and Okoli (2015) also define an agricultural cooperative, otherwise known as a farmer cooperative, as a cooperative whose members are agricultural producers or are involved in related activities. Agricultural cooperatives have been recognized as important actors for economic development given their ability to increase the gains of local economies, promote regional development, and improve the wellbeing of populations (Castilla-Polo, Sánchez-Hernández, & Gallardo-Vázquez, 2017).

Concept of wellbeing

The concept of wellbeing is used to describe the quality of life of a community or individual in a specific area and time.(Maddux,2018;Ruggeri et.al.,2020). Wellbeing is defined as a combination of feeling good and functioning well, including experiencing positive emotions, developing one's potential, having control over one's life, having a sense of purpose, and having positive relationships. The two major approaches to conceptualizing wellbeing includes subjective and objective indicator. (Tov,2018). Subjective wellbeing is synonymous with positive mental health.



Components of Subjective well being

1. Frequent positive effect: this involves experiencing positive emotions and moods
2. Infrequent negative effect: This relates to not experiencing negative feelings or moods often
3. Cognitive evaluations: This aspect considers how people think about lives and overall life satisfaction.

These three factors collectively influence how individual perceive the quality of their lives, encompassing emotional reactions and cognitive judgements

Theoretical Framework

Collective Action Theory

Collective active theory was propounded by Marshall in 1998. The theory states that individuals, under certain institutional arrangements and shared norms, are capable of organizing and sustaining cooperation that advances the common interest of the group to which they belong. This line of thought recognizes that human beings can organize and govern themselves based on appropriate institutional arrangements and mutual agreements in a community of understanding. The theory of collective action is not restricted to a particular phenomenon and can be related to groups, organizations, agencies, and even community action. For Marshall, collective action is an action taken by a group (either directly or indirectly through an organization) in pursuit of members perceived share of interest, especially in reducing any economic problem affecting them as a community. He saw it also as a voluntary action taken by a group to achieve common interests, which helps reduce negative externalities in providing rural or local public goods or services since they address the needs of the people. It has a lot of positive impact on society; for instance, poverty inequities could be bridged, and livelihoods for marginalized and vulnerable groups like the elderly, widows, etc. could be improved. Hence, this theory finds its rightful place in this paper.

Empirical Review

Agbasi and Ufoaro (2023) examined the role of cooperative societies on the wellbeing of staff of public polytechnics in Anambra State, Nigeria. The study concluded that access to educational loans and commodity purchases (household assets) have a significant positive relationship with the wellbeing of staff of public polytechnics in Anambra State, Nigeria, at a 5% level of significance.

Omimakin et al., (2022) investigated the impact of cooperative societies on the wellbeing of the people based on the criteria set, which include ease of access to credit facilities, low interest rates on loans, saving opportunities, educational support, business advice and entrepreneurial training, social activity support and motivation for fixed asset acquisitions, and poverty reduction. The majority of the respondents affirm that cooperative societies have strongly improved their wellbeing.

Rasaki et al. (2021) analyzed the contributions of cooperative societies to the wellbeing of women in Ogun State using descriptive statistics and inferential statistics. It was generally



affirmed by the respondents that benefits derived from cooperative societies were access to credits, training, information, farm input, a market for farm produce, and social recognition. The majority of the respondents were able to possess farmland, buildings, motorcycles, bicycles, telephones, radios, and televisions after they joined cooperative societies. They also had better access to good health care and food. The result of the t-test showed that there was a significant difference in the average monthly income, indicating that cooperative societies contributed a lot to the wellbeing of members in the study area.

METHODOLOGY

Research Design

A descriptive survey research design was used for this study, where both quantitative and qualitative methods were employed to collect and analyze the data. A descriptive survey was chosen because it focuses on people, the vital facts of people and their beliefs, opinions, attitudes, motivation and behavior (Osuala, 2001).

Study Area

The study was carried out in Ogun State, Nigeria. Ogun State, otherwise called the Gateway State, is one of the 36 states that make up the Federal Republic of Nigeria. It covers a land area of about 16,409.26 km², which is approximately 1.81% of Nigeria's land mass of about 923,768 square kilometers (Akanni, 2000), with 20 local government areas and a population of 5,185,400, comprising 49.71% males and 50.29% females (Ogun State Regional Plan, 2019). Ogun State is located in south-western Nigeria between latitudes 6°N and 8°N and longitudes 3°E and 5°E. The state is bounded in the west by the Republic of Benin, to the south by Lagos State and the Atlantic Ocean, to the east by Ondo State, and to the north by Oyo State. Abeokuta is the capital and largest city in the state. The state is within the tropical, humid climate zone of Nigeria, which is generally characterized by high rainfall and high relative humidity. Agriculture, the mainstay of the economy, provides a major single occupation for the people of the state, especially those in the rural areas. Arable crops like maize, yam, cassava, rice, cocoyam, groundnut, melon, banana plantains, oranges, pineapple, sugar cane, and kolanut are produced in the state. In the riverine areas, people engage in fish farming.

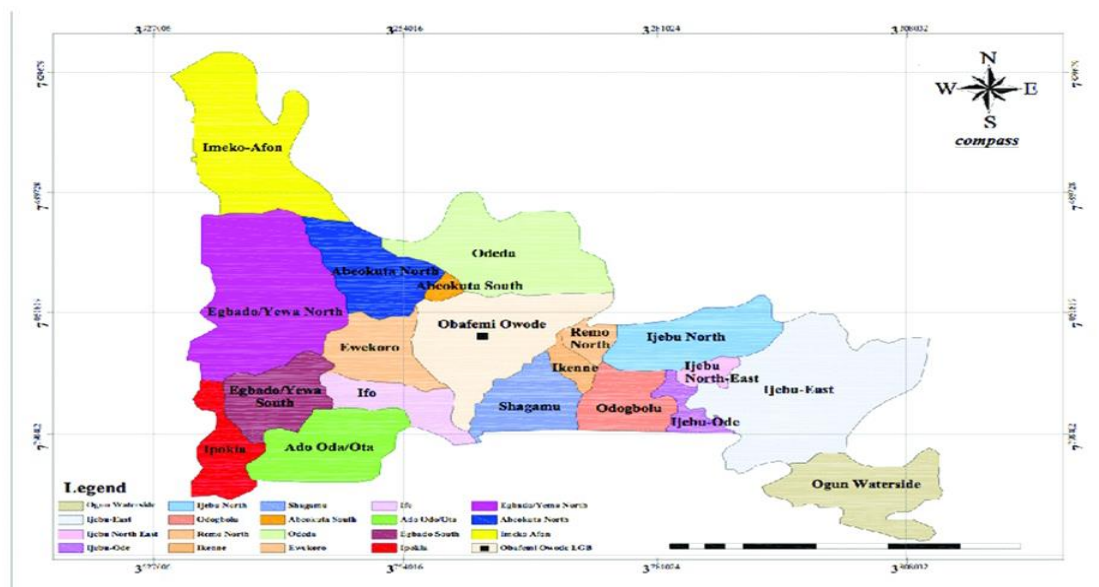


Fig 1 : Map of Ogun State Showing the Study Area

Source: *Google map*

Target Population

The target population for the study comprises all registered and active agricultural cooperative societies in the study area.

Sampling Technique

A multi-stage sampling procedure was adopted for this study. The first stage involves a purposive selection of Ogun States in southwestern Nigeria due to the relatively large number of active registered agricultural cooperative societies. In the second stage, 50% of the local government area was purposively selected based on the high number of registered and active agricultural cooperatives according to the previous information gathered about agricultural cooperatives from the Ministry of Cooperatives and Development. The third stage was also a purposive selection of one community each from the 10 local government areas selected, bringing the total number of selected communities to 10. These communities were selected based on the number of functional and registered agricultural cooperatives. The fourth stage is the judgmental selection of two agricultural cooperative societies involved in businesses along with their traditional businesses from each of the 10 communities to make a total of 20 agricultural cooperative societies. The fifth stage involved the purposefully selected chairpersons from each of the selected agricultural cooperative societies because they were assumed to possess rich knowledge about agricultural cooperative businesses. The sixth stage involved a simple random selection of members from a selected cooperative society using the membership list as a sampling frame.



Sample Size Determination

The total number of 20 functional agricultural cooperative societies with a membership strength of 1,644 was used as a sampling frame. The sample size was calculated using the Yamane formula for a finite population, and the formula gave a sample size of 347 respondents.

$$n = \frac{N}{1 + Ne^2}$$

A total of 347 questionnaires were disseminated among the members of selected agricultural cooperatives societies involved in profit making businesses, yet out of the 347 questionnaires dispatched 312 were returned and considered suitable for analysis

Source of data

Primary data were used for this study and this was obtained through the administration of a structured questionnaire to select the members from each of the selected agricultural cooperative societies.

Instrument of Data Collection

A structured questionnaire was used for the collection of data. The questionnaire consisted of three parts (A and B). Part A covered the background of the respondents, that is, the socioeconomic profile of agricultural cooperative members; part B covered the wellbeing of the members before and after the establishment of the businesses.

Validity of Research Instruments

An instrument has content validity if there is a general consensus among researchers that the instrument includes items that cover all aspects of the variables to be measured (Rahman, 2001). As noted by Cooper and Schindler (2001), the content validity of an instrument is deemed good if it contains a representative sample of the universe of the subject matter of interest. The research instrument was validated to ensure face and content quality after undergoing a series of scrutiny by some experts from the Agricultural Economics unit of Babcock University, Ilisan Remo, Ogun State, to ascertain if the instrument contains questions that are relevant and in sync with the objectives of the study. Their corrections and suggestions were made before copies of the questionnaires were administered to the respondents.

Reliability of Research Instruments

To ensure the reliability of the instrument, the researcher adopted Cronbach's alpha coefficient. Cronbach's alpha is the most common measure of reliability; a Cronbach alpha coefficient value greater than 0.70 is considered satisfactory.

Analytical tools/procedure

Descriptive statistics, including means, frequency counts, and percentages, were used to analyze the data, while a paired sample test was used to test the wellbeing status of members before and after the establishment of cooperative businesses. Wellbeing status was measured by a self-assessment report using the subjective wellbeing indicators, which include housing



and shelter status, education status, healthcare status, nutrition status, income and expenditure status, asset status, and utility status. A three-point Likert type of scale was used to determine the wellbeing status of the members before and after the establishment of the businesses in the study area.

RESULTS AND DISCUSSION

4.1 : Socio economic characteristics of members in the study area.

Table 4.1: Socio economic characteristics of members

Variable	Frequency	Percentage
Age		
< 20	21	7
21-30	49	16
31-40	78	25
41-50	62	20
51-60	56	18
> 60	44	14
Gender		
Male	243	78
Female	69	22
Marital Status		
Single	62	20
Married	212	68
Widow/widower	16	5
Divorced	22	7
Farming Experience		
Below 5 years	103	33
5 -10	122	39
Above 10	87	28
Educational level		
No formal education	59	19
Primary	93	30
Secondary	106	34
Tertiary	54	17
House Hold size		
1 -5	16	5
6-10	237	76
Over 10	059	19
Years of joining association		
1 -5	75	24
6 -10	115	37



11 -15	78	25
Above 16	44	14
Primary Occupation		
Farming	134	43
Non farming	178	57
Access to credit		
Yes	190	61
No	122	39
Access to extension service		
Yes	168	54
No	144	46

Field Survey 2024

Table 4.1 summarizes the participants' socio-economic profiles. The table shows that the average age of the responders was 39 years. This could indicate that most members are of an active age, which is beneficial to the physical demands of the farming business. The majority (78%) of responders are male, indicating that farming is still mostly perceived as a male occupation. A significant proportion of them (30%) attended primary school. Education, in this study, referred to the ability to read and write. According to Lu (2009) education has a favourable effect on farmers' sensitivity to adopting innovations and contemporary farming techniques, as human capital investment increases income.

4.2: Types of businesses agricultural cooperative societies operate in the Study Area.

Identified Businesses

The summary of businesses involved in by the cooperatives societies aside the traditional line of action is presented in Table 4.2.

Table 4.2 : Distribution of agricultural cooperative societies by the types of businesses operated

Diversification Businesses	Numbers of society	Percentage
Supply of agricultural inputs such as seeds, fertilizer and chemicals	15	6.5
Storage facilities	22	9.6
Farm machinery hiring	10	4.3
Marketing of the agricultural products.	15	6.5
Credit and loan	35	15
Processing of farm products (e.g. 'garri', palm oil, fish)	25	11
Savings and deposits	20	8.7
Animal feed Industry	15	6.5
Storage of farm produce	12	5.2
Collective farming	15	6.5
Exportation of farm produce	10	4.3
Consumers Store	5	2.1



Transportation scheme (e.g Okada higher purchase)	15	6.5
Soap Making.	4	1.7
Housing scheme services	4	1.7
Health care services	-	
General skill acquisition Centre	2	0.8
Selling of house construction materials	5	2.1
Insurance Scheme	-	
Total	229	100

Table 4.2 shows multiple response of the cooperative society diversifying into more than one business aside from their core business line. The table revealed that all the sampled cooperatives are involved in credit and loan business. This attest to the view of Bako (2020) that credit through agricultural cooperatives improve productivity, enhances wellbeing and give absolute support to agro business enterprises. The next is processing of farm products (e.g. 'garri', palm oil, fish). Others are also involved in non- agricultural related businesses such as higher purchase of okada. The cooperatives sampled do not have insurance and health care services.

Additional Source of Income for Agricultural Cooperative through their businesses.

4.3 : Benefits derived from agricultural cooperative businesses by the members

Table 4.3: Distribution of benefits derived from agricultural cooperative businesses by the members

Benefits derived from agricultural cooperative businesses	Mean	SD
Access to Credit/Loan	3.73	0.985
Increase saving	4.11	0.882
Enhance knowledge and skills	4.02	0.618
improve access to farming inputs	3.48	0.716
improve access to land		
improves access to farming machinery	3.83	0.84
provide job opportunities	3.69	1.026
Access to Subsidy	3.76	0.714
Access to personal shelter	3.66	0.714
Better access to Expenditure on health	3.89	0.64
Increase in income	3.92	0.812
Market Access	3.73	0.987
Access to training	3.60	0.745
Low interest loan	3.80	0.995

Table 4.3 also revealed that members have access to information through the help of cooperative society. Majority strongly claimed that their savings were increased through the cooperative. Large number of the cooperators strongly agreed that the interest on the cooperative loan is very low. Respondents generally agreed that they have their income increased through the aid of cooperatives economic activities. Large number of the respondents claimed that they were able to spend more money on their family health when their cooperative societies established businesses to get more profit. It was generally agreed by the respondents that they have better access to quality food through agricultural



cooperative businesses. This is in line with the findings of Yusuf (2018) that co-operators benefitted from credit service delivery to members, market access for members' produce, capital formation for joint purchasing of input and collective processing of farm produce.

4.4 Wellbeing status of members before and after the establishment of the businesses

Wellbeing status was determined by a member's income, asset ownership, and a consumption expenditure status.

4.4.1: Income level before and after establishment Agricultural Cooperatives businesses

Table 4.4: Distribution of respondents according to income level before and after establishment Agricultural Cooperatives businesses

Income level(₦)	Before			After			Percentage Change in income
	Freq	%	Mean	Freq	%	Mean	
<10,000	25	8		12	04	α	4
10,100 -19,000	100	32		16	05		9
20,000 – 29,000	50	16		44	14		02
30,000 – 39,000	44	14		47	15		27
40,000 – 49,000	59	19		62	20		01
≥ 50,000	34	11		131	42		31
		100	23,556	312	100	36,833	

The income level of the respondents before the establishment of agricultural cooperative businesses, as observed in table 4.4 indicated that 8% of the members earn between ₦10,000 per month. 14% of the respondents earn between N10,100 and \$19,000 per month. 16% of the respondents earn between N20,000 and N29,000 per month. However, it was further observed that after the establishment of the cooperative businesses, there was a significant difference in the income level of the respondents, as indicated in the table. Indeed, there was a significant difference in the income level of members of agricultural cooperatives after the establishment of the businesses. Income was compared before and after the establishment of cooperative businesses. In terms of overall income, on average, members have a higher income after the establishment of the cooperative businesses ($\bar{x}=36,833$) compared to their income before the establishment of the businesses ($\bar{x}= 23,556$).



Expenses of respondents before and after establishment of agricultural cooperative businesses

Table 4.5 : Expenditure of respondents before and after establishment of agricultural cooperative businesses

Expenses (N)	Before			After		
	Freq	%	Mean	Freq.	%	Mean
<10,000	19	6				-
10,100 -19,000	69	22		6	2	
20,000 – 29,000	78	25		9	3	
30,000 – 39,000	69	22		47	15	
40,000 – 49,000	47	15		62	20	
≥ 50,000	31	10		187	60	
		100	(N)11,262		100	(N)26,929

Table 4.5 shows the comparisons of members' spending before and after the establishment of cooperative businesses. The study found that after establishing cooperative businesses, members expenses increased marginally (\bar{x} = N 26,929) compared to before (\bar{x} = N 11,262).

Subjective wellbeing before establishment of agricultural cooperative businesses

Table 4.6 : Self-assessment of subjective wellbeing before establishment of agricultural cooperative businesses

Subjective wellbeing indicator	Satisfied	Dissatisfied	Very Dissatisfied	Mean score of Before
Housing and shelter Status	68	37	207	1.55
Household education Status	82	83	147	1.79
Healthcare Status	40	28	244	1.34
Nutrition Status	66	54	192	1.59
Income and expenditure Status	67	60	185	1.62
Household assets status	24	54	234	1.32
Household utilities status	42	35	235	1.38

Table 4.6 represents the responses of the members on their self-report assessment of their subjective wellbeing before establishment of agricultural cooperative businesses



Table 4.7: Wellbeing of agricultural cooperative members after establishment of the businesses

Subjective wellbeing indicator	Satisfied	Dissatisfied	Very Dissatisfied	Mean of After establishment
Housing and shelter Status	250	44	18	2.74
Household education Status	184	64	64	2.38
Healthcare Status	72	198	42	2.09
Nutrition Status	144	101	67	2.24
Income and expenditure Status	140	104	68	2.23
Household assets status	148	139	25	2.39
Household utilities status	144	123	45	2.31

Table 4.7 represents the responses of the members on their self-report assessment of subjective wellbeing after establishment of agricultural cooperative businesses.

Paired sample t-test

In this study, a t-test was used to compare the difference in income and expenditure before and after the establishment of cooperative businesses. A paired sample test was used to determine the effect of agricultural cooperative businesses on the wellbeing status of the members before and after establishment.

Table 4.8: Paired sample t-test showing the significance of the mean increases of cooperative members' income and expenditure before and after establishment of the cooperative businesses

Variables		Mean	Difference	N	t
Income	Before	₦ 23,556	₦ 13277	312	14.097
	After	₦ 36,833			
expenditure	Before	₦ 11,262	₦ 15,667	312	4.156
	After	₦ 26,929			

The difference in income before and after the establishment of the businesses was found to be significantly 5%. The same is true for expenditure on vital needs as a result of increased income. Therefore, the null hypothesis on the relationship between the establishment of businesses and wellbeing is hereby rejected.



Table 4.9: Pairwise T-test on Wellbeing Status Before and After Cooperative businesses establishment

	Housin g and shelter Status	Healthcare Status	Nutritio n Status	Educatio n Status	Income and expenditur e Status	Househol d assets status	Housing and shelter Status
t- calculated	7.48	8.16	9.16	8.67	7.48	6.712	3.156
t-critical	1.96	1.96	1.96	1.96	1.96	1.96	1.96
Sig. (2- tailed)	0.001*	0.021*	0.026	0.001**	0.001**	0.013**	0.352

A pairwise t-test revealed significant differences between the income and expenditure levels of respondents before and after the establishment of businesses. The overall t-test value of 7.48 exceeded the critical t-value of 1.962, indicating that the establishment of businesses by cooperative societies had a positive impact on the income levels of cooperative members. This finding is consistent with Ezeokafor *et al.* (2019) assertion that there was a significant difference in the cooperative members' income before and after joining cooperatives. Additionally, Hassan and Garandi (2018) revealed that cooperative societies play a significant role in the wellbeing status of their members.

CONCLUSION AND RECOMMENDATIONS

The result of the study concludes that there was a difference in assets ownership, income and expenditure of the members after establishment of agricultural cooperative businesses. Therefore, one can easily conclude that agricultural cooperative businesses play a great role in enhancing the wellbeing of the members of the societies.

Delving from non-profit orientation to a profit making businesses has led to improvement in the wellbeing status in terms of increase in asset ownership and increase in income. Most of the members have a much better housing, health and better educational status in the community

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