

EFFECTS OF AGRICULTURAL CO-OPERATIVE ON WELL BEING OF FARMERS IN LAPAI LOCAL GOVERNMENT AREA OF NIGER STATE, NIGERIA.

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Abstract

The study examined the effects of agricultural cooperative societies on the well-being of farmers in Lapai Local Government Area, Niger State, Nigeria. The objectives were to, assess the level satisfaction of farmers participating in agricultural cooperative activities, determine the well-being status of farmers, examine the effects of agricultural cooperatives on farmers' well-being,. A multi-stage sampling technique was used to select 120 farmers across the selected areas for the study. Questionnaire complemented with an interview schedule ws used to elicit primary information. Data collected were analyzed using descriptive statistics and Probit regression analysis. The results of the analysis obtained showed that (81.7%) of farmers were satisfied with cooperative participation, with future income security ($\bar{X}=5.95$) ranking highest among well-being indicators. Also, the Probit regression analysis revealed that improved income, improved livelihood, improved inputs/market access, education, and bargaining power positively influenced farmers' well-being at various probability levels. The model was statistically significant with Pseudo R^2 of 0.4733. The study revealed that the most important constraints faced by farmers are corruption among officials ($\bar{X}=3.90$), limited awareness ($\bar{X}=3.88$), lack of trust among members ($\bar{X}=3.76$), and lack of continuity/limited access to information ($\bar{X}=2.90$), among others. The research conclude a positive impact of agricultural cooperative on farmers and recommended that government and financial institutions should provide low-interest loans and grants to cooperative members, while

transparency in financial management and resource distribution should be enhanced to build trust among members and ensure sustainable cooperative participation.

Keywords; Cooperatives, Participation, Farmers , wellbeing,

Introduction.

Agricultural cooperatives stand as a cornerstone of Nigeria's rural economy, empowering farmers to collectively tackle poverty, improve crop yields, and build resilience against economic and environmental challenges. Agricultural cooperatives have been widely promoted as an effective administration to overcome these challenges. By merging resources, cooperatives enable yam farmers to benefit from joint purchasing; access upgraded extension services, and secure better terms in the marketing chain. This collective approach helps reduce transaction costs and can lead to efficient use of resources and bulk purchasing advantages that are easily attainable by individual farmers. With the power of joint negotiations, members can get long term loans with lesser interest rates, invest in modern storage facilities, and adopt improved agricultural practices that ultimately boost yam yields and quality. Studies indicate that enhanced access to inputs and affordable financing via cooperative systems is closely linked with increased crop production (Akinola *et al.*, 2019).

Apart from economic gains, agricultural cooperatives contribute to social empowerment by promoting democratic governance and active participation among members. This inclusive structure builds local capacity and strengthens rural communities. According to United Nations Development Programme (UNDP) 2018, agricultural cooperatives in Nigeria have played a critical role in enhancing rural development by increasing access to essential services and empowering small holder yam farmers to improve their production outcomes. As cooperative members share decision-making responsibilities, they gain a collective voice in choosing policies that directly affect their livelihoods, thereby supporting broader rural development and poverty alleviation efforts.

Well-being status refers to an individual's overall quality of life, encompassing physical, emotional, social, and economic aspects. It measures how well a person is thriving and fulfilling their potential.

Agricultural cooperatives have been identified as an innovative approach to minimize the effects of various challenges by assisting farmers to jointly utilize resources, access credit facilities, benefit from subsidized inputs, and engage in collective marketing. Further studies have provided some evidence of the privileges attached to being a member of an agricultural cooperative for example, research by Obi-Egbedi and Ojo (2019) reported a significant increase in total factor productivity among cooperative members, and Nwezi and Umebali (2021) found that cooperatives can moderate production costs and enhance market returns. However, existing research on the effects of agricultural cooperatives on the well-being of farmers' is limited, and fails to fully capture the long-term effects and the detailed effects through which cooperatives influence access to credit, inputs and productivity. There is little empirical data on the precise effects of agricultural cooperatives on farmers' well-being and livelihood in the study area. Therefore, investigating the effects of farmer's cooperatives on their well-being status. in the Lapai Local Government Area of Niger State, this study seeks examined the effects of agricultural cooperative society on the well-being status of farmers in Lapai local government area of Niger state, with a view to describe the socioeconomic characteristics of farmers in the study area, determine the level of participation of farmers in cooperative society, examine the well-being status of farmers in participation in cooperative society in the study area and determine the effects of agricultural cooperative society on the well-being of farmers in the study area.

Methodology

This study was conducted in Niger State, Nigeria. Niger state is a state in Central Geopolitical zone of Nigeria and the largest state in the country. With its capital at Minna, The State lies on latitude 80° to 11° 30' North and Longitude 03° 30' to 07° 40' East. The State is bounded by the State of Kebbi and Zamfara to the North, Kaduna to the North and North East, Kogi to South East and Kwara State to the South, The State also has an International Boundary with the Republic of Benin along Agwara and Borgu LGAs to the North West. The Nupe, Gbagyi, Kamuku, Kambari, Dukawa and Koro form the majority of numerous indigenous tribes of Niger State. It covers approximately an area of 76,363 square kilometer and is ranked 1st by size and ranked 18th by population (State Bureau of Statistics, 2012). According to Niger State Bureau of Statistics, 2012, the estimated population of Niger States was 3,954, 772. Three-stage sampling technique was employed to select farmers in the study area. The first stage was random selection of three (3) wards from the Local Government; (Birnin-

maza, Ebbo ward, Gulu ward). The second stage was random selection of two villages from each of the selected wards (Shaku / Lapai, Angwan hausawa / Baka tako, Abugi-jankara / Abugi-kanigi). The final stage was random selection of farmers in each of the villages selected. Comprehensive list of registered farmers with cooperative was obtained from Niger State Agricultural Mechanization and Development Authority (NAMDA). A total number of 120 respondents was used as sample size. This was achieved by sampling 10% of the sample frame.(Olaleye,2025)

Table 1: Sample outlay of respondent

State	LGAs	selected Villages	Sampling frame	Sampling size 10%
Niger State	Birnin maza ward	Shaku	190	19
		Lapai	220	22
	Ebbo ward	Angwan hausawa	220	22
		Baka tako	180	18
	Gulu ward	Abugi-jankana	200	20
		Abugi-kanigi	190	19
Total	3	6	1200	120

Source: Niger State Agricultural Mechanization and Development Authority, (NAMDA) (2025)

Primary data was used for the study. Data was obtained from the respondent with the aid of a structured questionnaire in kobo tool apps and interview schedule to elicit information from farmers who cannot read with the help of trained enumerators to elicit information on the, their level of participation in cooperatives, well-being status, effects of cooperative on the farmers wellbeing. The effects of agricultural cooperative on the well-being of farmers was analyzed using binary probit regression following Eze *et al.* (2021)

Results and Discussions

Finding in Table 2, shows the well-being status of farmers' in the study area. The evidence revealed that 81.7% of farmers' in the study area were satisfied with participation in agricultural cooperative, while 18.3% of farmers' in the study area were not satisfied in

participating in agricultural cooperative society. This suggests that cooperative offered opportunity for farmers' to access production inputs and access to financial management in Nigeria. However, for the farmers' not satisfied, this might be as a result of inconsistency and lack of trust cooperative in the study area .Ogunremi, *et al.* (2020)

Table 2. Satisfaction of farmers in participating in agricultural cooperative

Score	Well-being status	Frequency	Percentage (%)
≥ 5.5	Satisfied	98	81.7%
< 5.5	Not satisfied	22	18.3%

Source: Field Survey, 2025.

Well-being indicators of farmers' participating in agricultural cooperative

Finding in Table 3, revealed that farmers in the study area were satisfied with the following well-being indicators namely; future income secured ($\bar{X}$ =5.95) self-recognition and community participation ($\bar{X}$ =5.90), personal savings ($\bar{X}$ =5.81), self confidence ($\bar{X}$ =5.80), personal relationship ($\bar{X}$ =5.70), life achievement ($\bar{X}$ =5.66), Community connectedness ($\bar{X}$ =5.61), personal health ($\bar{X}$ =5.55), and availability of quality food ($\bar{X}$ =5.53) were the most satisfied well-being indicators in the study area and also they were ranked 1st, 3rd and 4th respectively, This recorded the highest satisfaction and were ranked 1st, 2nd, and 3rd respectively signifying some kind of strong bond that exist in a social groups and involvement in the activities of social group and ability to be recognized in the society. This finding is in agreement with Afolabi *et al.*,(2022) who reported that rice farmers in Nasarawa State recorded significant well-being index in the area of future income secured, community connectedness and participation in community activities.

However, farmers' were not satisfied with disposable income ($\bar{X}$ =4.95), and availability of quality and quantity food ($\bar{X}$ =4.70). This implies that farmers' were not satisfied with inadequate disposable income to improve the well-being status of farmers' and inadequacy of asset acquisition by farmers' in the study area.

Table 3: Well-being indicators of farmers' participating in agricultural cooperative

Well-being indicators	Mean (x)	Rank	Decision
Future income secured	5.95	1 st	Satisfied
Self-recognition and community participation	5.90	2 nd	Satisfied
Personal savings	5.81	3 rd	Satisfied
Self confidence	5.80	4 th	Satisfied
Personal relationship	5.70	5 th	Satisfied
Life achievement	5.66	6 th	Satisfied
Community connectedness	5.61	7 th	Satisfied
Personal health	5.55	8 th	Satisfied
Avail. of quality of food	5.50	9 ^t	Satisfied
Disposable income	4.95	10 th	Not sat.
Asset acquisition	4.70	11 th	Not sat.

Sources: Field Survey, 2025

Note;

≥5.5:Satisfied

<5.5:- Not sat.

Effects of agricultural cooperative on the well-being of farmers

Probit regression analysis on the effects of agricultural cooperative on the well-being of farmers. The pseudo R^2 value of 0.4733 indicates that the model explains approximately 47.3% of the variation in the likelihood of farmers having satisfied well-being and being associated with participation in agricultural cooperatives. The log-likelihood value of -59.303535 and a statistically significant Chi-square statistic (106.57) at the 1% probability level further support the model's goodness-of-fit. The coefficient of increased income (1.023405; $p < 0.01$), improved livelihood (0.6628522; $p < 0.10$), improved inputs/market access (1.756842; $p < 0.10$), improved education (.13078; $p < 0.01$) and social cohesion (.1165806; $p < 0.05$) were positive. This implies that a unit increase in any of these variables will increase the well-being of the farmers.

The coefficients of improved income (1.023405; $p < 0.01$), improved livelihood (0.6628522; $p < 0.10$), improved inputs/market access (1.756842; $p < 0.10$), improved education (.13078; $p < 0.01$) and farming experience (.1165806; $p < 0.05$) being positive indicates that these variables significantly contribute to the well-being of farmers. This implies that a unit increase in these variables such as improved income, improved livelihood, improved inputs/market access, as well as an increase in socio-institutional variables like education and social cohesion, will enhance the well-being status of farmers. Participation in agricultural cooperative will lead to an increase in the above variables which translate to a satisfied well-being of the farmers' in the study area. This shows that agricultural cooperative have significant effects on the well-being status of farmers' in the study area.

The positive coefficient of improved livelihood (0.6628522) indicates that participation in agricultural cooperative can positively influence the well-being of farmers'. This is because cooperative allow farmers' to pool resources together and engaged in activities that improved their livelihood and thus enhanced well-being. These benefits translate into lower production costs and higher profitability for farmers. Improved access to inputs/market (1.756842) has a significant positive influence on the status of the farmers. This is because effective participation in agricultural cooperative improved financial management of the farmers' there giving the farmers' access to inputs and marketing of their products.

The positive coefficient for education (0.13078) suggests that higher levels of education among farmers are associated with higher income and thus, improved well-being status. This is because education enhances farmers' ability to access and utilize information, make informed decisions, and adopt new technologies and practices. Educated farmers are more likely to understand the benefits of agricultural cooperative society, leading to improved productivity and income which translate to satisfied well-being status. Education also empowers farmers to engage more effectively with markets, financial institutions, and extension services, further enhancing their economic opportunities that improved their well-being status.

The positive coefficient for bargaining power (0.1165806) indicates that farmers' who participated in cooperative society are more experienced and has improve their bargaining power and tend to have higher incomes that improve their well-being. This is because agricultural cooperative provide vital information that equips farmers with practical knowledge and skills that are critical for successful farming. Experienced farmers are better at managing risks, optimizing resource use, and adapting to changing environmental and market conditions. They are also more likely to have established networks and relationships that can provide support and opportunities for improving their farming practices and income. This corroborate the findings the study of Eze *et al.* (2021)

who reported that education and farming experience gives farmers' opportunity to participate in cooperative society and has direct influence on their well-being status.

Table 4 ;Effects of agricultural cooperative on the well-being of farmers

Variables	Coefficient	Std. Error	Z-value
capacity building (training)	1.46063 1	0.81110 303	1.80*
	.115324 8	0.8648 948	0.13
Improved income	1.02340 5	0.4088 601	2.50* **
Improved livelihood	.662852 2	0.3985 363	1.66*
Empowerment	.18279	0.9283 376	0.20
Household size	.231874 8	0.6700 709	0.35
Improved access to inputs/market	1.75684 2	0.4149 646	4.23* **
Age	- .197813 7	0.0492 768	- 4.01* **
Education	.13078	.03685 61	3.55* **
Improved food security	.202131 6	.09666 87	2.09* *
Access to credit	-7.32e- 06	4.18e- 06	1.75*
Marital status	3.34055	.92739 77	3.60
Improved bargaining power	.116580 6	.05906 55	1.97* *
Extension contact	- .435391 5	.21729 89	- 2.00* *
Cooperative	- .230916 5	.20025 44	-1.15
Constant	- 1.09333	1.9779	-0.55
Log likelihood	- 59.3035 35		

chi2	106.57*
	**
Pseudo R2	0.4733

Sources: Field survey, 2025

*** = *Significant at 1%*

** = *Significant at 5%*

* = *Significant at 10%*

Conclusion

Based on the findings, it was concluded that agricultural cooperative societies play a pivotal role in improving farming activities among farmers in Lapai LGA. Membership in cooperatives enhances access to resources, credit, technology, training, and markets, thereby boosting productivity and farm profitability. However, the effectiveness of cooperative societies is moderated by financial, social, and policy-related constraints. Addressing these constraints is essential for maximizing the potential of cooperatives to improve the livelihoods and well-being of the farmers. Majority of the farmers' participated in agricultural cooperative and it was concluded that farmers' participation in cooperative society has improved their well-being status through improved income, improved livelihood, improved access to inputs and market.

Recommendations

1. This study recommended that cooperatives and financial institutions should provide low-interest loans, subsidies, and grants targeted at cooperative members to expand farm sizes and improve input procurement.
2. This study recommended that financial management, resources distribution and decision-making should be made transparent for equitable resources distribution.
3. This study recommended that measures should be instituted to create awareness for equitable participation in cooperative leadership, decision-making, and access to resources. Gender-sensitive policies should be implemented to remove cultural and institutional barriers.
4. Thus study recommended that government and regulatory bodies should enhance institutional support for cooperatives through monitoring, legal backing, infrastructure development, and integration into broader agricultural development progra.
5. To encourage farmers' participation in cooperative society, this research recommended that leaders of cooperative societies should facilitate access to improved inputs, and market networks to enhance productivity, reduce post-harvest losses, and improve profitability for members.

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