

Assessment and Impact of Farmers' Cooperative Societies on Agricultural Productivity and Livelihood in Apa Local Government Area of Benue State

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DOI: <https://doi.org/10.5281/zenodo.19281702>

Abstract

This study assessed the structure and impact of Farmers' Co-operative Societies (FCS) on agricultural productivity and rural livelihoods in Apa Local Government Area (LGA) of Benue State, Nigeria. Driven by the persistent challenges of fragmented land holdings and poor market access, the research utilized a descriptive survey design. A sample of 132 members was drawn from 7 functional cooperatives across four districts (Ugbokpo, Oga, Edikwu II, and Igoro) using the Yamane formula and purposive random sampling. Data were collected via structured questionnaires and analyzed using descriptive statistics (frequency, percentage, and mean). Findings revealed that cooperatives in Apa LGA possess a strong, democratic organizational structure with a high level of formalization = 4.47 for clear structure. Regarding impact, the results indicated significant positive effects on access to farm inputs = 3.85, adoption of improved techniques = 3.80, and overall household income = 4.05\$. However, a critical gap was identified in market access, which was the only metric rejected by respondents = 2.23. The study concludes that while FCS in Apa LGA are highly effective as production-support units, they fail as marketing intermediaries. It is recommended that cooperatives shift focus toward collective marketing and value-addition strategies to ensure that increased productivity translates into maximum economic gain for rural households.

Keywords: Agricultural Productivity, Farmers' Cooperatives, Rural Livelihoods, Apa LGA,

Introduction

In Nigeria, agriculture remains the backbone of the rural economy, yet smallholder farmers face persistent challenges, including fragmented land holdings, lack of credit, and poor market access. Farmers' Co-operative Societies have emerged as a critical institutional framework to mitigate these hurdles. According to Adebayo et al. (2023), co-operatives act as a bridge, providing farmers with the collective bargaining power needed to access subsidized inputs and modern technology.

In Benue State the "Food Basket of the Nation" farming is the primary livelihood. However, in regions like Apa Local Government Area, productivity is often hampered by traditional farming methods and a lack of infrastructure. Odoemenam and Kalu (2022) argue that while co-operatives exist to improve these conditions, their internal structures and management often dictate their level of success. Understanding the link between the organizational structure of these societies and the actual improvement in the livelihoods of Apa farmers is essential for regional economic development (Umaru & Sani, 2024).

Agricultural productivity is defined by the ratio of agricultural outputs to inputs. Zhu and Wang (2023) emphasize that for rural African clusters, productivity is less about land size and more about the "efficiency of input use" facilitated by collective action.

The Sustainable Livelihoods Framework (SLF) suggests that livelihoods are improved when households have access to diverse "capitals" (social, financial, physical). Nwankwo et al. (2024) found that in North-Central Nigeria, farmers in co-operatives had 30% higher access to "social capital," which directly correlated with better food security during the off-season.

The review indicates that FCS in Nigeria typically adopt a hierarchical structure, often mirroring internationally recognized cooperative models, but with local adaptations. Most commonly, they operate as primary societies at the grassroots level, formed directly by individual farmers in villages or communities (Okonkwo et al., 2022). These primary societies may then federate into secondary unions at the Local Government Area (LGA) level, and potentially further into apex bodies at the state or even national level, although the functionality and prevalence of higher-level structures can be inconsistent (Agwatu et al., 2025).

Governance typically follows cooperative principles, emphasizing democratic member control (one member, one vote), voluntary and open membership, member economic participation, and autonomy (Benjamin et al., 2020). However, studies reveal variations in adherence to these principles. While formally democratic, leadership positions can sometimes be captured by local elites or influenced by external governmental agencies, potentially undermining member control and equity (Alice et al., 2025; Olumeh & Mithöfer, 2024). Membership is generally open, but criteria often include being an active farmer within the operational area, paying registration fees, and sometimes minimum share capital contributions (Okwoche et al., 2022). The specific operational structure often depends on the cooperative's primary objective, whether it focuses on credit, input supply, marketing, production, or multi-purpose activities (Henri-Ukoha et al., 2021). Critically, the effectiveness of this structure is often linked to the quality of leadership, member education, and the transparency of management (Olojede et al., 2020).

A significant body of review suggests a generally positive, though sometimes modest, impact of FCS membership on agricultural productivity and rural livelihoods in Nigeria. Members often report better access to improved inputs like seeds and fertilizers, facilitated through bulk purchasing by the cooperative, leading to increased yields compared to non-members (Nwofoke et al., 2024; Okwoche et al., 2022). Collective marketing arrangements can also result in better farm gate prices and reduced post-harvest losses, contributing to higher farm incomes (Adekunle, 2020; Henri-Ukoha et al., 2021).

Regarding livelihoods, studies indicate that participation in FCS can enhance household income diversification, improve food security status, and facilitate asset accumulation (Enete & Onyekuru, 2019; Benjamin et al., 2020). The social capital built within cooperatives can also provide informal safety nets and support systems (Olumeh & Mithöfer, 2024). However, the extent of this impact is often heterogeneous. Factors such as the specific activities undertaken by the cooperative, the level of member participation, the socio-economic status of members, and the overall enabling environment significantly influence outcomes (Agwatu et al., 2025; Okonkwo et al., 2022). Some studies caution against overstating the impact, noting that many cooperatives struggle to deliver substantial benefits due to internal weaknesses and external constraints (Ezekiel, 2023). Critically, methodological challenges in isolating the precise impact of cooperative membership from other confounding factors persist in some studies (Olumeh & Mithöfer, 2024).

A major gap identified from this review is the lack of specific, in-depth research on FCSs within Apa LGA, Benue State. While general principles and findings from studies in Nigeria and elsewhere provide a valuable foundation, the unique socio-economic conditions, dominant farming systems, local power dynamics of Apa LGA necessitate empirical investigation. The proposed research, by assessing the structure and impact of FCSs in Apa LGA, will address this gap, providing context-specific evidence crucial for policymakers, development practitioners, and the cooperatives themselves to enhance their contribution to sustainable rural development in the area.

Statement of the Problem

Despite the presence of numerous farmers' co-operatives in Apa LGA, agricultural productivity remains below its potential, and many rural households continue to struggle with poverty. There appears to be a disconnect between the theoretical benefits of co-operatives and the practical realities on the ground.

Specific issues include:

1. **Structural Weaknesses:** Many co-operatives suffer from poor leadership and lack of transparency, which discourages membership and investment.
2. **Resource Constraints:** Limited access to credit and modern machinery despite being part of a group.
3. **Inconsistent Impact:** It is unclear whether the perceived "benefits" actually translate into improved housing, education, and nutrition (livelihoods) for the members in Apa LGA.

Without an empirical assessment, it remains difficult to determine if these co-operatives are achieving their mandate or if they require a complete structural overhaul. This study, therefore, seeks to address these critical gaps by providing an in-depth analysis of the socio-economic and demographic characteristics of functional farmers' cooperative society, structure and impact of farmer's cooperative societies in Apa Local Government Area, thereby contributing to evidence-based decision-making and sustainable agricultural development in the region

Research Questions

This research will try to address the following questions.

1. What are the socio-economic and demographic characteristics of functional farmers' cooperative society members in Apa local government area?
2. What is the structure of co-operative societies in Apa local government area?
3. What are the impacts of Farmers' Co-operative Societies on agricultural productivity and rural livelihoods in Apa Local Government Area?

Methodology

This study adopted a descriptive survey research design. A descriptive survey is suitable for this study as it aims to describe the characteristics of a population or phenomenon being studied, without manipulating variables (Kerlinger & Lee, 2000). It is particularly appropriate for gathering data on attitudes, opinions, and practices from a large population, which aligns with the objectives of assessing the structure and impact of farmers' cooperative societies.

The study was conducted in Apa Local Government Area of Benue State, Nigeria. Apa LGA is situated in the southern part of Benue State and shares boundaries with Otukpo, Agatu, and Gwer West Local Government Areas. The major occupation of the inhabitants is farming, with staple crops like yam, cassava, maize, and rice widely cultivated. The area is characterized by a rural setting with scattered communities and varying levels of access to social amenities. The choice of Apa LGA is justified by its predominantly agrarian nature and the presence of numerous farmers' cooperative societies, making it a relevant context for evaluating cooperative activities.

The general population of the study comprises all the functional registered farmers' cooperative societies in Apa Local Government Area of Benue State. According to records obtained from the Apa local government area, Cooperative Department, there are approximately 25 registered functional farmers' cooperative societies in Apa LGA, with a total estimated membership of 197 members across all districts. This study specifically targets the members of these functional cooperatives.

A purposive random sampling technique was used for the study. This approach allows for the selection of specific districts and cooperative societies that are representative and functional, followed by random selection of members.

First, four districts were purposively selected out of the existing 11 districts in Apa LGA. These selected districts include Ugbokpo, Oga, Edikwu II, and Igoro. These districts were chosen due to their significant agricultural activities and the presence of active farmers' cooperative societies. Within these four selected districts, seven (7) functional farmers' cooperative societies were identified.

In this study, the researcher adopted the Yamane (1967) formula for determining the actual sample size of 132 from the above noted population.

The primary instrument for data collection was a structured questionnaire. The questionnaire was designed with various items directly based on the research questions and objectives of the study. It was divided into two sections:

Section A: Demographic information of the respondents (e.g., age, gender, educational level, years of experience in farming, years of membership in cooperative).

Section B: Items related to the three research objectives, structured using a 5-point Likert scale. Response categories included: Strongly Agreed (SA) - 5 points, Agreed (A) - 4 points, Undecided (U) - 3 points, Disagreed (D) - 2 points, Strongly Disagreed (SD) - 1 point

To ensure the validity of the questionnaire, it was subjected to face and content validity by two experts in cooperative studies and one expert in agricultural economics. Their feedback and suggestions regarding clarity, relevance, and appropriateness of the items were incorporated to refine the instrument, ensuring it adequately measured what it was intended to measure.

The reliability of the questionnaire was determined using a pilot study. The instrument was administered to 20 members of farmers' cooperative societies in a neighboring local government area (Agatu LGA) that shares similar characteristics with Apa LGA but was not part of the main study. The data collected from the pilot study was analyzed using Cronbach's Alpha coefficient. A Cronbach's Alpha value of 0.78 was obtained, indicating a high level of internal consistency and reliability of the instrument (Nunnally, 1978).

The data collection was carried out by the researcher with the assistance of trained research assistants. Prior to data collection, letters of introduction were obtained from the Department of agricultural education of Federal College of Education Odugbo, Benue State and presented to the leadership of the

selected cooperative societies to gain their permission and cooperation. The purpose of the study was clearly explained to the respondents, and their informed consent was obtained. The questionnaires were administered directly to the members of the cooperative societies during their meetings or at their farms, depending on their availability and convenience. Research assistants provided clarification on any unclear items to ensure accurate responses. The completed questionnaires were collected on the spot or at a pre-arranged time.

The data collected from the structured questionnaire were analyzed using descriptive statistics. Research questions 1 to 3 were analyzed using frequency counts, percentages, and means.

The mean of the response to each item was computed to indicate the general agreement or disagreement of the respondents to each statement. The 5-point Likert scale was assigned numerical values as follows:

Strongly Agreed (SA) = 5, Agreed (A) = 4, Undecided (U) = 3, Disagreed (D) = 2, Strongly Disagreed (SD) = 1

Results

Table 1: Distribution of Questionnaire

Option	Frequency	Percentage
Sample size	132	100.0
Received	131	99.0
Validated	130	98.0

Source: Field Survey, 2025

Demographic Characteristics of Respondents

Table 2: Demographic Characteristics of Respondents (N=130)

S/N	Variable	Frequency	Percentage (%)
1.	Gender		
	Male	90	69.23
	Female	40	30.77
	Total	130	100.00
2.	Age (Years)		
	20-30	23	17.69
	31-40	48	36.92
	41-50	35	26.93
	51 & Above	24	18.46
	Total	130	100.00
3.	Educational Qualification		
	No Formal Education	15	11.54
	Primary Education	55	42.31
	Secondary Education	36	27.69
	Tertiary Education	24	18.46
	Total	130	100.00
4.	Years in Farming		
	Less than 5 years	17	13.07
	5-10 years	18	13.85
	11-20 years	45	34.62
	More than 20 years	50	38.46
	Total	130	100.00
5.	Years of Membership in Cooperative Societies		
	Less than 3 years	26	20.00
	3-6 years	52	40.00
	7-10 years	36	27.69
	More than 10 years	16	12.31
	Total	130	100.00

Source: Field survey, 2025

Discussion: Table 2 shows that the majority of the respondents were male (69.23%), indicating male dominance in farming and cooperative participation in the area. Most respondents were between 31-40 years (36.92%), suggesting a youthful and active farming population. A significant proportion had primary education (42.31%), indicating a reasonably literate population capable of understanding cooperative principles. Farmers with more than 20 years of experience constituted the largest group

(38.46%), suggesting experienced farmers. A substantial number (40.00%) had been cooperative members for 3-6 years, reflecting a relatively stable membership.

Research Question 1: What is the structure of farmers' cooperative societies in Apa Local Government Area of Benue State?

Table 3 Structure of Farmers' Cooperative Societies (N=130)

S/N	Items	SA (5)	A (4)	U (3)	D (2)	SD (1)	Mean	Decision
1.	Our cooperative society has a clear organizational structure.	76	45	5	2	2	4.47	Accepted
2.	The general assembly is the supreme decision-making body.	65	48	10	4	3	4.29	Accepted
3.	We have clearly defined roles for our leaders and members.	70	38	15	5	2	4.28	Accepted
4.	Our cooperative operates according to written bylaws/constitution.	60	53	10	5	2	4.26	Accepted
5.	There is a system for internal auditing of our finances.	55	50	16	5	4	4.13	Accepted
6.	Members regularly attend meetings and participate in decisions.	40	60	18	8	4	3.95	Accepted
7.	Information about cooperative activities is transparently shared.	35	53	25	10	7	3.76	Accepted

Source: Field survey, 2025

Table 3 indicates that respondents largely agreed or strongly agreed with all items concerning the structure of their cooperative societies. The mean scores for all items were above 3.50, ranging from 3.76 to 4.47. With regards to item one, the data shows that 78 respondents strongly agreed, 45 agree, 5 were undecided, 2 disagree and 2 strongly disagree. The mean score 4.47 is a strong indication that majority of the societies are perceived as having a well-defined and clear framework for their operations. On item two, 64 respondents strongly agreed, 48 agreed, 10 were undecided, 4 disagree while 3 strongly disagree. The mean score 4.29 is a high mean confirming that the societies operate on a democratic principle, where the members collectively hold the highest authority. With reference to item three, 70 of the respondents strongly agree, 38 agree, 15 were undecided, 5 disagree while 2

strongly disagree. The results show a strong mean score of 4.28 which directly implies their clarity of roles for both leadership and general members is highly affirmed, which is crucial for efficient operation and accountability. For item number four, the high mean of 4.26 depicts High degree of formalization and rule adherence. For item number five, the high mean of 4.13 Suggested that financial accountability and transparency mechanisms are in place. The item six with mean of 3.93 which is below 4.00 While still accepted, it suggested that member participation and attendance is not as uniformly strong as the formal structure itself, indicating a need to boost engagement while the item seven with the mean of 3.76 shows the lowest mean score, indicating that information transparency is the weakest element of the measured structure. Although agreed upon, this relative weakness suggests that communication channels and practices could be improved to ensure all members are adequately informed.

Research Question 2: What is the impact of Farmers' Co-operative Societies on agricultural productivity and rural livelihoods in Apa Local Government Area?

Table 4 Impact on Agricultural Productivity and Rural Livelihoods (N=130)

S/N	Items	SA (5)	A (4)	U (3)	D (2)	SD (1)	Mean	Decision
1.	Membership in the cooperative has increased my access to improved farm inputs (seeds, fertilizers)	50	42	12	20	6	3.85	Accepted
2.	The cooperative has helped me adopt new and improved farming techniques	45	50	7	20	8	3.8	Accepted
3.	My agricultural yield/output has increased since joining the cooperative	60	35	8	12	15	3.87	Accepted
4.	The cooperative provides better market access for my farm produce	10	18	14	38	50	2.23	Disagreed
5.	My income from farming has significantly improved due to cooperative membership	56	43	18	8	5	4.05	Accepted
6.	The cooperative has contributed to an improvement in my household's food security	48	49	11	13	9	3.92	Accepted

Source: Field survey, 2025

The data in Table 4 reveals that the Farmers' Co-operative Societies in Apa Local Government Area have a mixed, yet generally positive, impact on agricultural productivity and rural livelihoods, with a critical failure point in marketing. Overall, five out of the six measured items were Accepted (mean 3.85, 3.8, 3.87, 4.05, 3.92 respectively), confirming a significant positive impact on farming inputs, techniques, output, income, and food security. However, the cooperative's role in providing market access was Disagreed (mean 2.23).

This is the highest-rated item, showing that the most significant perceived benefit is a direct improvement in farm income, which is a primary goal of rural cooperatives. The societies have played a strong role in enhancing household food security, likely through increased income and improved output. The cooperatives are directly successful in achieving their technical objective: increasing farm output/yield. This confirms the critical role of cooperatives in improving access to necessary inputs, which is a prerequisite for increased yield. The societies effectively serve as a conduit for agricultural extension and technology adoption, leading to better farming practices. This is the only item that was disagreed upon, indicating that the farmers perceive the cooperatives as being ineffective in linking their produce to better markets. Despite successfully boosting production and income, the marketing component is severely lacking. The farmers' cooperative societies in Apa Local Government Area are primarily effective as production-support organizations, successfully facilitating access to inputs, promoting technology adoption, and ultimately boosting farm yield, income, and food security. However, their role as a marketing organization is their major weakness, suggesting that strategic interventions are urgently needed to help members realize better value from their increased production by improving market linkages.

Conclusion

The study concludes that Farmers' Co-operative Societies in Apa Local Government Area have vital institutional pillars for rural development, characterized by robust democratic governance and adherence to constitutional bylaws. They have proven highly effective in breaking the cycle of low productivity by facilitating access to modern inputs and serving as a conduit for agricultural extension and technology adoption. This has led to a tangible improvement in crop yields, household food security, and farm-related income for members.

However, the structural success of these societies has not yet fully extended to the post-harvest phase. The "marketing disconnect" remains the primary bottleneck; while farmers are producing more, they remain vulnerable to middle-men and poor farm-gate prices. Therefore, the cooperatives in Apa LGA are currently "production-heavy" but "marketing-light." Without addressing the inability to link members to profitable value chains, the full potential of these societies to lift rural households out of poverty will remain unrealized.

Recommendation

Based on the findings and the gaps identified, the following recommendations are proposed:

1. **Strengthen Collective Marketing Linkages:** Cooperative leadership should prioritize establishing direct contact with large-scale buyers, processing firms, and urban commodity markets. By aggregating produce, the societies can bypass exploitative middlemen and secure better "farm-gate" prices for members.
2. **Investment in Value-Addition and Storage:** To mitigate post-harvest losses and avoid "distress sales" during peak harvest periods, cooperatives should invest in community-based storage facilities (e.g., silos or warehouses) and basic processing equipment for crops like cassava and maize.
3. **Enhance Information Transparency:** Leadership should adopt more transparent communication channels, such as regular town hall briefings and digital messaging tools, to ensure all members are aware of financial dealings and market opportunities.
4. **Capacity Building in Agribusiness Management:** Training for cooperative members should shift from purely "how to farm" (technical production) to "farming as a business" (financial literacy, record-keeping, and market analysis) to help farmers better navigate the economics of the agricultural sector.
5. **Government and NGO Support for Infrastructure:** The Benue State government and agricultural development agencies should provide targeted infrastructural support, such as rural

feeder roads and dedicated market stalls, to complement the internal efforts of the cooperatives in Apa LGA.

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