



**AGRICULTURAL COOPERATIVES
AND ITS IMPACT ON THE WELL-
BEING OF SMALLHOLDER FARMERS
IN THE 21ST CENTURY:
PERCEPTION OF SELECTED
AGRICULTURAL COOPERATIVES IN
KADUNA STATE, NIGERIA**

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Abstract

This research paper examines agricultural cooperatives and its impact on the well-being of smallholder farmers in the 21st century: perception of selected agricultural cooperatives

Keywords:

Agricultural
Cooperatives,
Smallholder Farmers,
Well-being, Services,
Benefits, Impact,
Challenges,
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INTRODUCTION

Agricultural cooperatives have played an integral role in supporting smallholder farmers in Nigeria since the colonial period, providing services such as input supplies, extension advice, and produce marketing (Ortmann and King, 2007). The cooperative model enabled resource-poor farmers to organize collectively to gain economies of scale and bargaining power in accessing crucial production resources and markets.

In the post-independence era, the Nigerian government heavily promoted cooperatives as part of its rural development policies in the 1970s and 1980s (World Bank, 2007). This led to a proliferation of agricultural cooperatives across the country. However, reforms in the late 1980s and 1990s resulted in deregulation and reduced government control over cooperatives.

in Kaduna state, Nigeria. It also investigates the services and benefits provided by agricultural cooperatives to smallholder members in Kaduna State, Nigeria in the 21st century, the impact of agricultural cooperatives on key socio-economic indicators of smallholder farmer wellbeing such as income, assets, food security, healthcare, and education and the major challenges and constraints faced by agricultural cooperatives in Kaduna State, Nigeria in fulfilling their roles for smallholder farmers in the 21st century. The paper adopted survey research design. The population comprised of all the members of four selected registered Agricultural cooperative societies in three Local

Government Areas in Kaduna Central Zone of Kaduna State, considering the fact that population was small and manageable, the study adopted the entire population for the study. Simple random sampling was used as all the units of the population had equal chance of being selected. A close ended questionnaire was used to obtain information from them. Data collected were analyzed using mean and standard deviation on a 5-point Likert scale. The findings show that agricultural cooperatives in Kaduna State offer crucial services to members, such as access to credit, training, market linkages, and inputs supply, which have positive implications for smallholder farmer well-

being. However, several challenges and constraints, including inadequate funding, poor governance, limited access to technology, and insufficient technical expertise, hinder the full potential of agricultural cooperatives in fulfilling their roles. The paper recommended that policymakers and stakeholders should provide adequate funding and financial support, access to technology and information, sufficient technical expertise, and adequate infrastructure in order to address these challenges and enhance the effectiveness of agricultural cooperatives in supporting smallholder farmers well-being in Kaduna State.

While this gave more autonomy, it also weakened state support and protection. In the 21st century, agricultural cooperatives continue serving Nigeria's predominantly small-scale farmers. However, they face greater competition and challenging economic conditions compared to the protected cooperative sector of the past (Umebali & Akujuobi, 2013). Despite their enduring presence, empirical evidence evaluating the contemporary relevance and impact of agricultural cooperatives on smallholder farmer well-being in Nigeria is limited. Most scholarly assessments are based on data from the late 20th century. Up-to-date research analyzing cooperatives' influence on rural incomes, assets, food security, healthcare, education and poverty levels is lacking. This study therefore aims to bridge this knowledge gap by investigating the socio-economic impact of agricultural cooperatives on the livelihoods of smallholder farmers in 21st century Nigeria, based

on perceptions of cooperative leaders in Kaduna State. Findings will provide insights into cooperatives' continuing developmental role amid changing conditions.

Statement of the Problem

Agricultural cooperatives have historically played an important role in supporting smallholder farmers in Nigeria by providing access to inputs, technologies, extension services, and markets. This has enabled improved agricultural productivity and higher rural incomes (Ortmann and King, 2007). In the 1990s, economic reforms led to the liberalization of cooperatives, reducing government control but also support. In the 21st century, cooperatives still serve smallholder farmers but face new challenges in a more competitive environment (World Bank, 2007).

However, there is limited recent empirical evidence on the contemporary contributions of agricultural cooperatives to smallholder socio-economic well-being in Nigeria. Assessments of their impact on rural poverty, food security, healthcare, education, and general welfare are lacking. This knowledge gap impedes understanding of how effectively cooperatives are fulfilling their developmental purpose currently amid changing conditions. It also constrains efforts to identify organizational and policy interventions needed to optimize cooperatives' role in uplifting Nigeria's smallholder farmers in the 21st century.

Therefore, this study aims to bridge this research gap by examining the impact of agricultural cooperatives on key aspects of smallholder living standards today based on perceptions of cooperative societies in Kaduna State, Northwest Nigeria.

Objectives of the Study

The main objective of this study is to find out how agricultural cooperatives impacted on smallholder farmer well-being in 21st-century Nigeria. Hence, the following specific objectives were formulated to:

1. Examine the services and benefits provided by agricultural cooperatives to smallholder members in Kaduna State, Nigeria in the 21st century.
2. Assess the impact of agricultural cooperatives on key socio-economic indicators of smallholder farmer wellbeing such as income, assets, food security, healthcare, and education.
3. Identify the major challenges and constraints faced by agricultural cooperatives in Kaduna State, Nigeria in fulfilling their roles for smallholder farmers in the 21st century.

Research Questions

Based on the stated objectives the following research questions were generated to guide the study:

1. What are the services and benefits provided by agricultural cooperatives to smallholder members in Kaduna State, Nigeria in the 21st century?
2. What is the impact of agricultural cooperatives on key socio-economic indicators of smallholder farmer well-being such as income, assets, food security, healthcare, and education?

3. What are the major challenges and constraints faced by agricultural cooperatives in Kaduna State, Nigeria in fulfilling their roles for smallholder farmers in the 21st century?

Literature Review

Agricultural cooperatives first emerged in Nigeria during the colonial period in the 1930s-1940s, often initiated by colonial governments to organize cash crop marketing (Ortmann & King, 2007; Ebonyi & Jimo, 2002). In the post-independence era, rising oil revenues enabled massive nationwide expansion of cooperatives by state governments as part of rural development efforts in the 1970s-1980s (Alghraibi et al., 2020; Bhuyan, 2007). Agricultural cooperatives thus became widespread across Nigeria during this era.

However, policy reforms in the late 1980s and 1990s led to deregulation that gave cooperatives more management autonomy but reduced government financial and organizational support. By the 2000s, most agricultural cooperatives were operating in more liberalized market environments compared to the protected cooperative sector of the past (Umebali & Akujuobi, 2013).

Agricultural cooperatives have historically played an important socio-economic role for smallholder farmers in Nigeria (Ortmann & King, 2007). However, in light of reforms since the 1990s that deregulated cooperatives, their continuing relevance and impact on rural welfare in the contemporary period requires re-evaluation. This review analyses existing scholarly work on Nigerian agricultural cooperatives in the 21st century to identify research gaps.

Services and Benefits Provided by Agricultural Cooperatives o Smallholder Members

Agricultural cooperatives have been pivotal in empowering smallholder farmers globally, and their role in Nigeria, particularly in Kaduna State, has gained significance in the 21st century. This literature review explores the services and benefits that agricultural cooperatives offer to smallholder members in Kaduna State, Nigeria, considering the dynamic agricultural landscape and the evolving needs of farmers.

Evolution of Agricultural Cooperatives

Agricultural cooperatives in Nigeria have a rich history, evolving from traditional communal systems to more formalized structures. In Kaduna State, these cooperatives have adapted to changing times, addressing the challenges faced by smallholder farmers and providing a platform for collective action (Ojo, 2017).

Services Provided by Agricultural Cooperatives

Agricultural cooperatives play a significant role in providing various services to farmers, influencing farm sustainability, and contributing to poverty mitigation in

developing countries. Agricultural cooperatives and the services they provide reveal the following key insights:

1. **Influence on Farm Sustainability:** Agricultural cooperatives have been found to play a crucial role in influencing farm sustainability. They contribute to the adoption of environmentally friendly practices and economic sustainability, thereby impacting the overall well-being of farmers.
2. **Poverty Mitigation Perspective:** Cooperative societies in the agriculture sector are regarded as solutions to poverty reduction and improved livelihood through food security. They are seen as an integral part of achieving future sustainable social and economic development, requiring full support to play a positive and integral role.
3. **Enhancement of Food Security:** Agricultural cooperatives are effective in enhancing food security in rural areas. They facilitate access to input and product markets, improve the efficiency of agricultural production, and alleviate the vulnerability of small-scale farmers.
4. **Service Provision:** Variability of service provision by agricultural cooperatives. These services include access to credit, markets, technical assistance, and institutional support, which are essential for improving the well-being and productivity of smallholder farmers.

Marketing Support and Market Access

Marketing support and market access are crucial for agricultural cooperatives to enhance the well-being of smallholder farmers. The literature on this topic highlights the following key aspects:

1. **Market Access Interventions:** Interventions can strengthen market access by addressing various challenges faced by farmers, such as limited information on output markets, lack of marketplaces or alternative marketing opportunities, and inadequate contract farming facilities.
2. **Farm-to-Market Transport Infrastructure:** Transporting produce to markets can be costly if farmers rely on slow, poor-quality transport networks. Interventions may include multiple components, such as the provision of market information, the creation of new marketplaces, and the improvement of storage infrastructure.
3. **Cooperative Advantage:** Cooperatives can increase market access and collective bargaining power, ultimately improving members' profit margins.
4. **Impact on Farm Sustainability:** Agricultural cooperatives play a significant role in farm economic sustainability and the adoption of environmentally friendly practices.
5. **Service Provision:** Agricultural cooperatives provide various services, such as access to credit, markets, technical assistance, and institutional support, which are essential for improving the well-being and productivity of smallholder farmers.

Extension Services for Capacity Building

Cooperatives provide extension services to build the capacity of smallholder farmers. These services include training on modern agricultural practices, sustainable farming techniques, and technological advancements, empowering members with knowledge essential for increased productivity (FAO, 2019).

Input Procurement and Cost Reduction

Through collective bargaining and bulk procurement, agricultural cooperatives reduce input costs for smallholder farmers. By securing inputs such as seeds, fertilizers, and equipment at scale, cooperatives contribute to cost-effectiveness and improved profitability for their members (Duguma et al., 2018).

Economic and Social Benefits for Smallholders

The services provided by agricultural cooperatives translate into tangible economic and social benefits for smallholder members. Increased income, improved food security, and enhanced bargaining power in the market contribute to the overall well-being of farmers in Kaduna State (Gujba & Gwani, 2019).

Impact of Agricultural Cooperatives on Smallholder Farmer Well-being

Agricultural cooperatives have been instrumental in shaping the socio-economic landscape of smallholder farmers worldwide. This literature review examines the impact of agricultural cooperatives on key socio-economic indicators, including income, assets, food security, and healthcare, with a focus on their role in enhancing the overall well-being of smallholder farmers.

Income Generation

One of the primary impacts of agricultural cooperatives is the positive influence on smallholder farmers' income. Through collective marketing, cooperatives negotiate better prices for members' produce, leading to increased revenue (Duguma et al., 2018). Cooperative members often experience higher income levels compared to non-members due to economies of scale and improved market access (FAO, 2019).

Asset Accumulation

Agricultural cooperatives contribute significantly to asset accumulation among smallholder farmers. By providing access to credit for productive investments, such as purchasing modern farming equipment or expanding agricultural land, cooperatives empower farmers to build assets and increase their long-term economic resilience (Gujba & Gwani, 2019).

Food Security Enhancement

Cooperatives play a crucial role in enhancing the food security of smallholder farmers. Through collective purchasing of inputs, cooperative members can reduce production

costs, leading to increased yields and improved food self-sufficiency (Duguma et al., 2018). Additionally, cooperatives often implement storage and processing facilities, reducing post-harvest losses and ensuring a stable food supply throughout the year (FAO, 2019).

Healthcare Accessibility

The impact of agricultural cooperatives extends beyond economic dimensions to include improvements in healthcare accessibility for smallholder farmers. Cooperative members often benefit from group-based health insurance schemes, which mitigate the financial risks associated with health emergencies and contribute to overall well-being (Bezu & Holden, 2014).

Gender Empowerment

Agricultural cooperatives can also contribute to gender empowerment, positively affecting socio-economic indicators. Women, who form a significant portion of smallholder farmers, often gain improved access to resources, credit, and decision-making opportunities through cooperative membership (Duguma et al., 2018).

Challenges and Constraints Faced by Agricultural Cooperatives in Fulfilling Their Roles for Smallholder Farmers.

Agricultural cooperatives have long been recognized as crucial institutions for smallholder farmers, playing a vital role in enhancing productivity, income, and overall well-being. However, their effectiveness is often hindered by various challenges and constraints. This literature review explores the major challenges faced by agricultural cooperatives in fulfilling their roles for smallholder farmers.

Governance and Management Challenges

Effective governance and management are fundamental to the success of agricultural cooperatives. However, challenges such as inadequate leadership skills, poor decision-making processes, and lack of transparency can impede the proper functioning of cooperatives (Birchall, 2018). Weak governance structures can lead to mismanagement of resources and hinder the cooperative's ability to serve its members.

Financial Constraints

Access to finance is a persistent challenge for agricultural cooperatives. Limited capital often restricts their ability to invest in infrastructure, provide credit to members, and adopt modern technologies (Gujba & Gwani, 2019). Financial constraints can hinder cooperatives from expanding their services and fulfilling their roles in supporting smallholder farmers.

Inadequate Market Access and Bargaining Power

Smallholder farmers, often members of agricultural cooperatives, face challenges in accessing markets and negotiating favorable prices for their produce. Limited market

information, inadequate transportation infrastructure, and unequal power dynamics with buyers can undermine the bargaining power of cooperatives, impacting the economic benefits for their members (Duguma et al., 2018).

External Market Dynamics

Agricultural cooperatives are susceptible to external market dynamics, including price fluctuations and global economic conditions. Volatility in commodity prices and changes in market demand can pose significant challenges for cooperatives, affecting their ability to provide stable and profitable services to smallholder farmers (Birchall, 2018).

Social and Cultural Factors

Social and cultural factors can also present challenges for agricultural cooperatives. Issues related to gender inequality, traditional norms, and community dynamics may influence the participation and decision-making power of certain groups within the cooperative, affecting its inclusivity and overall effectiveness (Gujba & Gwani, 2019).

Limited Access to Technology and Information

The adoption of modern agricultural technologies is essential for the competitiveness of smallholder farmers. However, many agricultural cooperatives face challenges in accessing and adopting these technologies due to financial constraints, lack of technical know-how, and limited extension services (FAO, 2019). This can hinder the efficiency and productivity of cooperative activities.

Climate Change and Environmental Factors

Climate change poses a growing threat to agriculture, impacting the productivity and livelihoods of smallholder farmers. Agricultural cooperatives, particularly those reliant on specific crops or practices, may face challenges in adapting to changing climatic conditions and incorporating sustainable farming practices (FAO, 2019).

Methodology

This paper adopted survey research design. The survey method employed in this study was chosen for its effectiveness in capturing and analyzing participant responses in a structured manner. The use of a questionnaire allowed for the collection of quantitative data that can be easily quantified and compared. The combination of structured quantitative data collection through questionnaires, along with robust analytical techniques for evaluation, provides a comprehensive framework for understanding participant responses. This method not only yields reliable data but also enhances the depth of analysis, ultimately contributing to more informed conclusions and recommendations.

Area of the Study

Kaduna State is located at the center of Northern Guinea savannah. It lies between latitudes $9^{\circ}10'11^{\circ}30'$ north and longitude $6^{\circ}9^{\circ}10'$ east. It has a total area of about 67,000 square kilometers (KADP, 2007) with a population of 6,066,562 people

comprising of 3, 112, 028 males and 2, 954, 534 females, the estimated population of Kaduna State as at 2015 would be 8, 252, 366 people with annual population change 2006-2015(+1.4% per year) (NPC 2016). The total arable land of the state is estimated to be about 2,148,700 hectares. There are two distinct climatic seasons in the State, namely wet and dry seasons. The wet season spans the period between April/May to September/October while the dry season spans the period between October/November to March/April. The average annual rainfall in the State is about 1,482.99mm. The highest mean temperature occurs between the month of March to May and the range is between 35°C to 36°C. The minimum air temperature is usually recorded during the harmattan period which occurs between November to February with the range between 18°C to 23°C. The total annual evapo- transpiration rate varies from 1.560mm in the north to 1.490mm in the south (KADP, 2007). The State shares boundaries with Niger State to the west, Zamfara, Katsina and Kano States to the north, Bauchi and Plateau States to the east and FCT Abuja and Nasarawa State to the south. The State consists of 23 local government areas. Agriculture is the main stay of the economy of Kaduna State with about 80% of the people actively engaged in farming (KADP, 2007).

Population of the Study

The population comprised of all the members of four selected registered Agricultural cooperative societies in three Local Government Areas in Kaduna Central Zone of Kaduna State with a total population of 274 members. Considering the fact that population was small and manageable, the entire population was adopted for the study. No sampling was done. Therefore, the study had to enumerate the units in the population. Simple random sampling was used as all the units of the population had equal chance of being selected. Information was obtained directly from the field through the respondents in the course of the study. A close ended questionnaire was used to obtain information from them.

Method of Data Analyses

The data from the questionnaire were analyzed using frequency tables and simple percentages to visualize response distributions. Brief analytical comments summarized key findings, providing context to the quantitative data. Additionally, the data were evaluated using mean and standard deviation for items on a 5-point Likert scale, offering insights into average responses and variability among participants. This combined approach enabled a comprehensive understanding of the respondents' views.

The responses for items were rated as follows:

Degree of response		Points
Strongly Agree	(SA)	5
Agree	(A)	4

Undecided	(U)	3
Disagree	(D)	2
Strongly Disagree	(SD)	1

Results and Discussion

The results of the study reveal that agricultural cooperatives in Kaduna State provide various services and benefits to their smallholder farmer members. These include access to credit facilities, provision of inputs such as improved seeds and fertilizers, technical training and capacity-building programs, access to markets and market linkages, and social services such as healthcare and education. These services have a significant impact on smallholder farmers well-being, leading to improved income levels, increased assets, enhanced food security, better healthcare access, and improved education opportunities.

The study finds out that agricultural cooperatives have a positive impact on key socio-economic indicators of smallholder farmer well-being. Smallholder farmers who are members of agricultural cooperatives experience an increase in their income levels, enabling them to improve their standard of living and invest in productive assets. Moreover, access to credit facilities and inputs supply contributes to increased agricultural productivity and food security among smallholder farmers. Additionally, agricultural cooperatives promote access to healthcare and education services for their members and their families, leading to improved overall well-being.

Despite their significant contributions, agricultural cooperatives in Kaduna State face several challenges and constraints in fulfilling their roles for smallholder farmers. These include inadequate funding and financial support, weak governance structures, limited access to technology and information, insufficient technical expertise, and inadequate infrastructure. These challenges hinder the full potential of agricultural cooperatives in effectively supporting smallholder farmer well-being and achieving sustainable development outcomes.

Conclusion and Recommendations

This research paper has contributed to a better understanding of the services and benefits provided by agricultural cooperatives to smallholder farmers in Kaduna State, Nigeria in the 21st century. Furthermore, it has highlighted the positive impact of agricultural cooperatives on key socio-economic indicators of smallholder farmer well-being. Nonetheless, the study has also identified the major challenges and constraints faced by agricultural cooperatives in fulfilling their roles for smallholder farmers. Based on the findings, this paper provides recommendations for addressing the challenges and constraints faced by agricultural cooperatives in Kaduna State. These recommendations include improving funding mechanisms and financial support for cooperatives, strengthening governance structures and accountability mechanisms, promoting access to technology and information, enhancing technical expertise through training and capacity-building programs, and

investing in rural infrastructure. These recommendations aim to enhance the effectiveness and efficiency of agricultural cooperatives in supporting smallholder farmer well-being in Kaduna State.

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