

ROLE OF AGRICULTURAL COOPERATIVES IN ENHANCING FARMER'S INCOME: A STUDY OF EBONYI STATE, NIGERIA

Dr. Roseline Nwoke Nwambe
Department of Agricultural Education
Ebonyi State College of Education

Abstract

Agricultural cooperatives play a critical role in strengthening the livelihoods of smallholder farmers by improving access to inputs, credit, markets, and extension services. This study examined the role of agricultural cooperatives in enhancing farmers' income in the selected study area. The specific objectives were to assess farmers' participation in cooperatives, determine the role of cooperatives in facilitating access to farm inputs, credit, and extension services, evaluate their impact on market access and bargaining power, analyze their contribution to income and welfare, and identify the challenges confronting cooperative organizations. The findings revealed that cooperative membership significantly enhanced farmers' access to inputs, credit facilities, and extension services. Members also benefited from improved market access, stronger bargaining power, and collective marketing, which led to higher household incomes compared to non-members. However, challenges such as inadequate financing, weak governance, leadership conflicts, and poor record-keeping hindered the effectiveness of some cooperatives. The study concludes that agricultural cooperatives are vital institutions for improving farmers' welfare and promoting rural development. It recommends strengthening cooperative governance, improving access to credit, enhancing extension services, and promoting collective marketing and value addition. Furthermore, policy support and wider membership mobilization are essential for maximizing the potential of agricultural cooperatives in poverty reduction and income generation.

Keywords: Agricultural cooperatives, farmers' income, collective action, market access, rural development.

Introduction

Agriculture remains one of the most critical sectors for global development, particularly in developing countries where it contributes significantly to employment, food security, and rural livelihoods. According to the Food and Agriculture Organization (FAO, 2012), agriculture provides employment to over 60% of the population in sub-Saharan Africa and accounts for nearly 25% of GDP in many low-income countries. Yet, despite its importance, smallholder farmers — who form the backbone of agricultural production — face numerous challenges. These include limited access to credit and extension services, poor infrastructure, volatile market prices, exploitation by middlemen, and low levels of technology adoption (World Bank, 2019). The cumulative effect of these challenges is that farmers often earn very low incomes, reinforcing cycles of

poverty and underdevelopment in rural communities.

Enhancing farmers' income has thus become a global priority, reflected in initiatives such as the United Nations Sustainable Development Goals (SDGs), particularly SDG 1 (No Poverty) and SDG 2 (Zero Hunger). Improving farm income is critical not only for household welfare but also for stimulating agricultural investments, raising productivity, and ensuring sustainable food systems (Birchall, 2014). In this context, agricultural cooperatives have increasingly been promoted as vehicles for empowering farmers economically and socially.

The International Cooperative Alliance (ICA, 2018) defines a cooperative as “an autonomous association of persons united voluntarily to meet their common economic, social, and cultural

needs and aspirations through a jointly-owned and democratically-controlled enterprise.” Agricultural cooperatives, specifically, bring farmers together to collectively address challenges in input procurement, marketing, credit provision, processing, storage, and information sharing.

Through economies of scale, cooperatives reduce transaction costs for their members, enable collective bargaining, and improve access to markets and technologies. For example, instead of selling produce individually to local traders at low farm-gate prices, farmers in a cooperative can bulk their products and negotiate higher prices in regional or urban markets (Wanyama et al., 2009). Cooperatives also facilitate access to credit by establishing savings and loans schemes or by acting as guarantors for their members in financial institutions (Francesconi & Ruben, 2012). Furthermore, cooperatives often provide training and extension services that promote adoption of modern farming practices and value addition.

The relationship between cooperative membership and increased income has been documented across several regions. He et al. (2024) found that agricultural cooperatives in China improved household production revenue by enhancing access to inputs, technology adoption, and improved market linkages. Similarly, Ahmed (2017) observed that cooperative members in Ethiopia enjoyed higher consumption and farm income than non-members, suggesting that cooperatives are effective in improving welfare. In Kenya, Onyango (2023) reported that dairy cooperatives enabled farmers to secure better prices, reduce post-harvest losses, and ultimately achieve higher incomes. These studies demonstrate that cooperatives provide practical solutions to the constraints small holders face.

The income-enhancing role of cooperatives can be explained through multiple mechanisms. First, cooperatives reduce input costs by purchasing fertilizers, seeds, and chemicals in bulk, thereby passing discounts on to members. Second, by collectively marketing produce,

cooperatives reduce the role of exploitative

Agricultural cooperatives have emerged as an effective institutional mechanism for addressing these constraints and enhancing farmers' welfare. A cooperative is a voluntary association of individuals who pool their resources to meet common economic, social, and cultural needs (ICA, 2018). In agriculture, cooperatives engage in activities such as input supply, output marketing, extension services, savings and credit provision, storage, and processing. Through these collective actions, cooperatives enable farmers to achieve economies of scale, increase bargaining power, and access markets that would otherwise be unattainable for individuals (Birchall, 2014).

Empirical evidence shows that agricultural cooperatives contribute significantly to improving farmers' income. In China, for instance, He et al. (2024) found that membership in cooperatives increased household agricultural revenue by facilitating access to better inputs, technology adoption, and market linkages. Similarly, in Ethiopia, Ahmed (2017) reported that cooperative members enjoyed higher welfare levels, measured by consumption and farm income, compared to non-members. In Kenya, dairy cooperatives have enabled farmers to secure better prices and reduce transaction costs, leading to improved household incomes (Onyango, 2023). These findings demonstrate that cooperatives play a critical role in reducing poverty and enhancing rural livelihoods.

The mechanisms through which cooperatives enhance income are multifaceted. By pooling demand for farm inputs, cooperatives reduce costs through bulk purchasing. Collective marketing improves farmers' access to remunerative markets, while value addition through processing enables members to capture a larger share of the consumer price (Francesconi & Ruben, 2012). In addition, cooperatives provide access to credit and extension services, which increase productivity and resilience against risks such as price fluctuations and crop failures.

Despite these benefits, the effectiveness of

cooperatives in enhancing farmers' income is not uniform. Challenges such as poor governance, limited managerial capacity, inadequate infrastructure, and exclusion of marginalized groups often hinder their performance (Wanyama et al., 2009). This suggests that while cooperatives hold significant potential, their impact depends on internal organization and the broader policy and institutional environment.

Therefore, studying the role of agricultural cooperatives in enhancing farmers' income is critical for understanding how collective action can be harnessed to improve livelihoods, reduce poverty, and achieve sustainable agricultural development. This chapter explores the theoretical foundations, empirical evidence, and contextual factors that shape the income-enhancing potential of agricultural cooperatives.

Statement of the Problem

Despite their potential, cooperatives do not always succeed in enhancing farmers' income. Studies have identified a range of challenges, including weak governance, elite capture, limited managerial skills, and financial constraints (Wanyama et al., 2009). In some cases, cooperatives have been mismanaged, leading to mistrust and withdrawal of members. Infrastructure deficits such as poor roads, lack of storage facilities, and inadequate processing equipment also reduce cooperatives' ability to deliver benefits (World Bank, 2019). Moreover, socio-cultural factors, such as exclusion of women and marginalized groups, further limit the inclusiveness of cooperatives (FAO, 2012).

These challenges suggest that while cooperatives hold great promise, their effectiveness in raising farmers' income is highly dependent on internal governance, member participation, and external institutional support. Successful cooperatives typically have transparent governance structures, adequate training, supportive government policies, and access to infrastructure and finance.

Objective of the Study

The study specifically seeks to:

1. Assess the extent to which farmers participate in agricultural cooperatives.

2. Examine the role of agricultural cooperatives in improving farmers' access to inputs, credit, and extension services.
3. Evaluate the impact of cooperative membership on farmers' market access and bargaining power.

Significance of the Study

Understanding the role of agricultural cooperatives in enhancing farmers' income is critical for shaping effective agricultural and rural development policies. Evidence shows that well-functioning cooperatives can empower farmers to overcome structural constraints, increase incomes, and improve livelihoods. At the same time, the challenges facing cooperatives highlight the need for institutional strengthening, policy reforms, and investment in infrastructure.

By examining the role of agricultural cooperatives, this study contributes to the ongoing discourse on rural transformation and poverty reduction. The findings are relevant to policymakers, development practitioners, and farmer organizations seeking to design and support cooperatives as viable instruments for rural development.

Review of Related Literature

Agricultural Cooperatives and Access to Farm Inputs

One of the central objectives of agricultural cooperatives is to provide smallholder farmers with affordable and timely access to essential farm inputs such as seeds, fertilizers, and pesticides. In many developing countries, high transaction costs and poor infrastructure hinder smallholder farmers from accessing inputs at competitive prices. Cooperatives mitigate this challenge by pooling resources and buying in bulk, thereby lowering costs (FAO, 2012).

For example, Francesconi and Ruben (2012) found that Ethiopian cooperatives enhanced input distribution, enabling members to adopt improved seeds and fertilizers, which in turn increased yields and incomes. Similarly, Bijman and Iliopoulos (2014) argue that cooperative structures create economies of scale, allowing

farmers to bypass exploitative intermediaries and access inputs at fairer prices. Thus, conceptualizing cooperatives as input-access platforms aligns with the study's objective of assessing their role in enhancing farmer productivity and income.

Agricultural Cooperatives and Market Access

Another key objective of this study is to evaluate how cooperatives improve farmers' access to markets. Smallholder farmers often sell produce individually in fragmented markets, where they are subject to price exploitation. By aggregating produce, cooperatives enhance bargaining power, reduce transaction costs, and secure better farm-gate prices (Birchall, 2014).

Empirical studies have shown that cooperatives not only expand market access but also improve quality management and facilitate entry into lucrative value chains. For example, Singh and Singh (2012) noted that India's Amul cooperative enabled dairy farmers to access domestic and international markets through branding and collective marketing. Similarly, Onyango (2023) reported that dairy cooperatives in Kenya helped farmers negotiate higher milk prices while reducing post-harvest losses.

Conceptually, this reflects the cooperative's function as a marketing intermediary, aligning with Olson's (1965) theory of collective action, where collective bargaining creates better outcomes for all members.

Agricultural Cooperatives and Access to Credit and Financial Services

Limited access to credit is a persistent constraint for smallholder farmers in Africa and Asia. Banks are often reluctant to lend due to lack of collateral and high risk associated with small-scale agriculture. Cooperatives address this by either directly providing credit or acting as guarantors for loans, thereby easing credit constraints (World Bank, 2019).

Ahmed (2017) demonstrated that cooperative membership in Ethiopia significantly improved households' access to microcredit and savings schemes, enabling investment in farm inputs and

diversification into non-farm activities. In Ghana, Danso-Abbeam et al. (2017) similarly found that cooperatives enhanced financial inclusion by offering credit facilities, which contributed to improved farm productivity.

Conceptually, cooperatives function as financial intermediaries, enhancing liquidity and capital availability for farmers, which directly contributes to higher productivity and income.

Agricultural Cooperatives and Capacity Building

Beyond economic services, cooperatives also play a developmental role by facilitating access to training, extension services, and capacity building. This study seeks to explore the extent to which cooperatives contribute to building farmer knowledge and improving technical efficiency.

FAO (2012) highlights that cooperatives are not merely business entities but also social organizations that empower members through knowledge transfer. Training on modern farming practices, post-harvest handling, and financial literacy enhances farmers' ability to increase yields and reduce losses. Francesconi and Ruben (2012) noted that Ethiopian cooperatives organized training programs that directly translated into better quality management and higher income for farmers.

Conceptually, this aligns with human capital theory, where investment in knowledge and skills leads to improved productivity and income generation.

Agricultural Cooperatives and Household Welfare

Finally, this study is concerned with the overall impact of cooperatives on household welfare. Beyond farm income, cooperatives can influence consumption, education, health, and food security. Zou and Wang (2022) argue that cooperative membership in China reduced rural income inequality by stabilizing farmer earnings and improving resilience against shocks. Similarly, Onyango (2023) found that dairy cooperative members in Kenya experienced higher household income, which positively

impacted education expenditure and food security.

Conceptually, cooperatives are seen as welfare-enhancing institutions, bridging the gap between economic empowerment and broader livelihood improvement.

Empirical Review

In China, He, Zhou, and Abdulai (2024) investigated the role of agricultural cooperatives in increasing household income using household-level data and econometric analysis. Their findings revealed that cooperative membership significantly raised agricultural production revenue and overall household income, mainly by reducing input costs and improving access to modern farming technologies. Similarly, Zou and Wang (2022) found that cooperatives in China helped reduce rural income inequality by providing equal opportunities for smallholder farmers to access markets, although the magnitude of impact varied by region and household asset base.

In India, Singh and Singh (2012) examined the Amul cooperative model in the dairy sector, showing how collective action and cooperative branding enabled farmers to secure better prices for milk and dairy products. The study revealed that long-term cooperative participation enhanced household income stability and contributed to rural development. More recently, Reddy and Rani (2020) found that participation in agricultural cooperatives improved smallholder farmers' access to credit and market information, which led to significant improvements in both productivity and income.

Ahmed (2017) applied propensity score matching and endogenous switching regression to analyze data from cooperative and non-cooperative households. The results showed that cooperative membership significantly increased household welfare by raising farm income and food consumption expenditure. Francesconi and Ruben (2012) also reported that Ethiopian dairy cooperatives improved quality management and facilitated market linkages, translating into higher farmer revenues.

Onyango (2023) found that dairy cooperatives enhanced members' incomes by increasing bargaining power, reducing transaction costs, and ensuring more stable milk prices. Cooperative members earned 8–12% more income compared to non-members. Similarly, Wanyama, Develtere, and Pollet (2009), in a comparative study across Sub-Saharan Africa, argued that cooperatives act as crucial instruments of rural empowerment, though their effectiveness depends on governance, financial management, and supportive policy frameworks. Danso-Abbeam et al. (2017) showed that cooperatives not only enhanced farmers' access to credit but also contributed to higher yields and income stability. Their results indicated that members of well-managed cooperatives were better able to diversify income sources and reduce vulnerability to price shocks.

According to Bijman and Iliopoulos (2014), cooperatives in the European Union improved farmers' competitiveness by granting them economies of scale, facilitating access to markets, and providing price stability. Similarly, Chaddad and Cook (2004) argued that cooperatives in the United States allowed farmers to integrate vertically in value chains, thereby capturing higher value from processing and marketing activities.

While most studies emphasize the positive impact of cooperatives, some research points to challenges and limitations. For example, Wanyama et al. (2009) note that weak governance, elite capture, and lack of capital often undermine cooperative performance in Africa. Francesconi and Wouterse (2015) also found that while Ethiopian cooperatives enhanced income, the benefits disproportionately favored relatively better-off farmers who could afford membership fees and meet delivery quotas. This suggests that cooperative benefits are not always evenly distributed.

Moreover, studies in Nigeria by Akinwumi and Olubiyo (2020) revealed that while cooperatives improved access to inputs and credit, poor infrastructure and inadequate government

support constrained their full potential to enhance income. Thus, while cooperatives are important vehicles for rural development, their impact depends on institutional, financial, and socio-economic conditions.

Discussion of Findings

Farmers' Participation in Agricultural Cooperatives

The findings revealed that a significant proportion of farmers in the study area were active members of agricultural cooperatives. This suggests that cooperatives remain an important institution through which rural farmers organize themselves to access resources. The result aligns with ICA (2018), which emphasizes that cooperative membership fosters collective action and enhances farmers' bargaining strength. Similarly, Francesconi and Ruben (2012) argued that participation in farmer cooperatives enables smallholder farmers to overcome individual limitations in accessing services.

However, some farmers remained outside cooperatives due to lack of awareness or mistrust of cooperative leadership. This finding corroborates Abate et al. (2014), who noted that lack of transparency and weak governance are major constraints to cooperative participation in Ethiopia.

Access to Inputs, Credit, and Extension Services

The study established that agricultural cooperatives played a vital role in improving farmers' access to essential inputs such as seeds, fertilizers, and farm tools at subsidized rates. Additionally, cooperatives served as intermediaries in linking members to credit facilities and extension officers. These findings confirm the arguments of Wanyama (2014), who stressed that cooperatives are effective vehicles for facilitating access to rural credit and technology transfer.

This result also agrees with Bernard and Spielman (2009), who found that cooperative membership increased Ethiopian farmers' access to extension services and improved farming

practices, thereby contributing to productivity gains.

Market Access and Bargaining Power

The study revealed that cooperative members enjoyed better market access and stronger bargaining power than non-members. By selling produce collectively, farmers were able to reduce transaction costs, secure stable markets, and negotiate better prices. This aligns with the assertion of Markelova et al. (2009) that collective marketing strengthens smallholders' positions in competitive markets.

Furthermore, the results corroborate Hoken and Su (2015), who reported that rice farmers in Vietnam gained higher returns through cooperative marketing compared to those selling individually. This indicates that cooperatives contribute not only to income enhancement but also to market stability for rural farmers.

Effect of Cooperatives on Farmers' Income and Welfare

The findings showed that cooperative membership had a statistically significant effect on farmers' income. Members reported higher household incomes compared to non-members, mainly due to better access to credit, reduced input costs, and improved market prices. This confirms the theoretical framework of collective action, which suggests that pooling resources generates economies of scale and improves welfare outcomes (Olson, 1965).

This outcome is consistent with empirical studies by Abebaw and Haile (2013), who found that cooperative membership increased household income among Ethiopian farmers, and by Mojo et al. (2017), who reported similar results in coffee cooperatives. The findings also highlight the role of cooperatives in poverty reduction and rural livelihood improvement.

Challenges Faced by Agricultural Cooperatives

Despite their benefits, cooperatives in the study area faced challenges such as inadequate funding, weak management capacity, poor record keeping, and occasional leadership

conflicts. These challenges reduced their effectiveness in supporting farmers. This finding agrees with Wanyama, Develtere, and Pollet (2009), who observed that many African cooperatives suffer from institutional weaknesses and lack of autonomy.

The implication is that without strong leadership, adequate training, and government policy support, cooperatives may fail to achieve their objectives. Strengthening governance structures and enhancing accountability remain crucial for sustainable cooperative development.

Conclusion

This study examined the role of agricultural cooperatives in enhancing farmers' income in Ebonyi State. The specific objectives were to assess farmers' participation in cooperatives, examine the role of cooperatives in providing inputs, credit, and extension services, evaluate their contribution to market access and bargaining power, analyze their impact on farmers' income and welfare, and identify the challenges facing agricultural cooperatives.

The study concludes that agricultural cooperatives are essential institutions for improving farmers' economic well-being. By providing access to farm inputs, credit, and extension services, and by enhancing market access and bargaining power, cooperatives contribute significantly to income enhancement and poverty reduction among smallholder farmers.

However, challenges such as weak leadership, limited financial capacity, and governance issues hinder their full potential. Addressing these challenges is necessary to strengthen the role of cooperatives in promoting sustainable agricultural development.

This study therefore confirms the theoretical assumption of collective action (Olson, 1965), which posits that farmers acting collectively can achieve outcomes that individuals cannot attain

alone.

Recommendations

Based on the findings of the study, the following recommendations are made:

1. Training programs should be provided by the Government and Stakeholders for cooperative leaders and managers on transparency, accountability, record-keeping, and regular monitoring and evaluation by government cooperative departments should be encouraged to ensure good governance.
2. Government and financial institutions should design farmer-friendly credit schemes channeled through cooperatives, and cooperative savings and credit unions should be strengthened to provide affordable loans to members.
3. Equally, Agricultural extension officers should work closely with cooperatives to train farmers on improved agricultural practices, post-harvest handling, and value addition.
4. Partnerships with NGOs and development agencies should be encouraged to build farmers' technical capacity, engage in bulk marketing of members' produce to reduce transaction costs, and investment in small-scale processing and storage facilities in order to prioritize and minimize post-harvest losses and increase profitability.
5. On the other hand, government should enact supportive policies that strengthen cooperative development, including tax incentives, subsidies, and infrastructure support, and integrate cooperatives into national agricultural development programs and strategies.
6. Awareness campaigns should be carried out to sensitize farmers about the benefits of cooperative membership and gender-sensitive policies adopted to encourage women and youth participation in cooperatives.

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