INFLUENCE OF COOPERATIVES ON FINANCIAL INCLUSION OF MEMBERS OF AGRICULTURAL COOPERATIVES IN ANAMBRA AND AWKA AGRICULTURAL ZONES, ANAMBRA STATE NIGERIA

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ABSTRACT

The study examined the Influence of Cooperatives on Financial Inclusion of Members of Agricultural Cooperatives in Anambra and Awka Agricultural zones, Anambra State, Nigeria. The study was motivated by the need to deliver quality financial services at an affordable cost to the vast sections of disadvantaged and low-income groups at the various levels of government in Nigeria, particularly in Anambra State. The study was anchored on the public good theory of financial inclusion. The area of study is Anambra state where 383 members of agricultural cooperatives were selected from 865 registered agricultural cooperatives across Anambra and Awka agricultural zones. The instrument used for data collection was the questionnaire. The study employed regression technique, one sample t-test, mean, frequency, and percentage in analyzing the data obtained. The study found that the savings procedure and credit operations procedure of the cooperative had significant effects on the financial inclusion of members in Anambra State at 5% level of significance. Therefore, the study recommends, among others, that governments at all levels in the State should improve their cooperative promotion efforts, to attract more people into cooperative membership to enhance financial inclusion in rural areas.

Keywords: Cooperatives, savings, loan/credit, financial inclusion, regression analysis

INTRODUCTION

1.1 Background to the study

Financial exclusion, or not having access to formal financial services such as bank accounts, is a pressing and pervasive global issue. Globally, about 1.7 billion adults remain unbanked - without an account at a financial institution or through a mobile money provider. In 2014 that number was 2 billion (World Bank's Global Findex database, 2017) The majority of the people who are financially excluded are the poor, living on incomes of less than $2.00 per day, most commonly referred to as the "Base of the Pyramid" (BoP).

It has been widely studied and documented that financial inclusion, or providing access to affordable financial products and services, generates significant benefits to the poor, marginalized and MSMEs, and is also an important engine of economic development. Access to formal financial services and products allows households to expand consumption, manage risks and invest in durable goods, health and education. Financial inclusion is an important policy issue that is being addressed globally by many international agencies, the private sector and government bodies. The World Bank (2019) declared that one of its key objectives is to achieve universal financial access by 2022. Sequel to this, it has already received commitments and pledges from 32 partners towards achieving this ambitious goal. The G20 launched the Global Partnership for Financial Inclusion (GPFI) in 2010 to carry forward work on financial inclusion, by developing a concrete action plan to accelerate financial inclusion through policies and regulations. Governments around the world have made significant progress in incorporating financial inclusion considerations and strategies into their guidelines for banking regulation and supervision.

The Nigerian financial sector comprises of commercial banks, development banks (including Bank of Agriculture, Bank of industry and Federal Mortgage Bank), credit cooperatives, primary mortgage finance institutions, insurance and capital/securities market etc. However, the deposit taking market is dominated by commercial banks (Nwankwo & Ogbodo, 2017). EFInA (2014) as cited in Nwankwo & Ogbodo (2017) reports that 36.3% of the adult population in Nigeria have and/or use a bank account, which is equivalent to 33.9 million people; while 61.0% of the adult population has never been banked, which is equivalent to 57.1 million people. Furthermore, 12% had access to including Insurance companies, microfinance banks, pension schemes, cooperatives etc.; while another 12% had access to informal financial institutions such as Isusu, money lenders, savings clubs, etc. Indeed, EFInA (2014) emphasizes that about 40% of Nigeria's adult population is financially excluded.

Agricultural cooperatives play a prominent role in the agricultural sector, both in developed and developing countries. Historically, cooperatives have been the main institutional and organizational tool through which independent farmers were able to withstand the market power held by local and transnational retailers. They also serve to shorten the supply chain by allowing farmers to integrate most or all of the processing and marketing processes into one or few steps, thus allowing substantial savings on transaction and other intermediation costs. Financial Inclusion is both a crucial link and a substantial first step towards maximizing agricultural productivity

Delivering financial services at an affordable cost to the vast sections of disadvantaged and low income groups has posed significant challenge to the various levels of government in Nigeria and other developing countries and Anambra State is not an exception. Over the years, the government of Nigeria and monetary authorities has introduced various policies aimed at deepening financial inclusion within the economy. The policies ranged from various institutional involvements such as the establishment of community and microfinance banks to specific policies and programmes designed to facilitate access of the financially excluded to formal financial services.

However, in a report by Enhancing Financial Innovation and Access (EFInA), only 64% of Nigerian adults were financially included by the end of 2020. This means that 36% of Nigerian adults or 38 million adults remain completely financially excluded. But Nigeria's financial inclusion landscape includes great hope and challenges. As Africa's largest economy, Nigeria has the potential to drive consumers toward financial inclusion, yet economic instability amongst other factors has made progress uncertain..

Cooperative as a major player in financial intermediation in Nigeria could leverage in on this gap. Cooperatives are ubiquitous in Nigeria and they provide locally needed services, employment, circulate money locally and contribute to a sense of community or social cohesion (Dogarawa, 2010). Indeed, cooperatives offer financial services which enable members to have affordable and convenient savings avenue for cash transfers, depositing and withdrawing money without having to carry cash. The main question hereafter is therefore whether the structure of cooperative is robust enough to support provision financial services that could meet the needs of the financially weak and rural dwellers. This in turn requires answers to the questions of competence of cooperatives in the core areas of financial intermediation such as provision of savings facilities;

extension of credit/loan; credit/loan recovery; and a seamless integration of the various services in a form that is devoid of complexities.

There are numerous cooperatives in Anambra and Awka Agricultural Zones in Anambra State, offering services that promote small scale agriculture and welfare of the residents that there are contentions. Cooperative can play a very constructive role in meeting the objective of greater degree of financial inclusion in the Zone. However, available researches on cooperative in the area were focused mainly on provision of farm inputs, marketing of agricultural output, and member welfare. Thus, there is dearth of research efforts that is focused on the use of cooperative as a financial inclusion platform in the Zone. This necessitates the current investigation on the effect of cooperatives on the financial inclusion of members of Agricultural cooperatives in the Anambra and Awka Agricultural Zones. The study aims at determining the effect of cooperative savings procedure on the financial inclusion of members of agricultural cooperatives and ascertaining the effect of credit extension procedure on the financial inclusion of members of agricultural cooperatives in Anambra and Awka Agricultural zones

Hypotheses of the study

Ho_1: Savings operations procedure of cooperative does not have significant effect on financial inclusion of members of Agricultural cooperatives in Anambra and Awka Agricultural zones.

Ho_2: Loan/credit operation procedures do not have significant effect on financial inclusion of members of Agricultural cooperatives in Anambra and Awka Agricultural zones.

REVIEW OF RELATED LITERATURE

2.1 Concept of Financial Inclusion

Access to formal financial services and products allows households to expand consumption, manage risks and invest in durable goods, health and education. Financial inclusion is the process of extending financial products and services to the unbanked and vulnerable populace. This process enables businesses and individuals to gain access to financial services such as deposit, loans, insurance, payments and remittances at their convenience and to meet basic economic needs. In the words of Gwalani and Parkhi (2014) it entails the bringing home of financial services at an affordable cost to the disadvantage group in the society, especially the low-income, underprivileged and vulnerable.

Generally, financial inclusion is an essential means to an end and not an end in itself. It has been revealed to be a means to achieving financial services accessibility, capital accumulation, and poverty alleviation, increasing savings and investments, greater financial stability as well as entrepreneurial and economic growth in both developed and developing countries (Terzi, 2015; Onaolapo, 2015). Beck and Demirguc-Kunt's as cited in Lakuma, Marty, & Muhumuza, 2019) also pointed out the importance of financial inclusion by saying that it helps to alleviate enterprises' growth constraints and increases their access to finance thus leveling the playing field between firms of different sizes. Chong and Chan's as cited in Kama & Adigun, (2013) emphasized that access to a well-functioning financial system through creation of equal opportunities enables socially and economically excluded people to integrate into the economy and actively contribute to economic growth.

The Center for Financial Inclusion at Accion, one of the largest non-profit organizations in the world, defines financial inclusion across five different dimensions (Conde, Bykere, Cheston, & Rhyne, 2016):

Access to a full suite of financial services – credit, savings, insurance and payments; Quality of products and delivery – convenient, affordable, suitable, provided with dignity and client protection; Financial capability – clients are informed and able to make good money management decisions; Inclusiveness – everyone who can and wants, has access including the poor, women, and rural; and Diverse and competitive marketplace – a range of providers, a robust financial infrastructure and a clear regulatory framework.

The World Bank's Global Findex database has become the most important, reliable and most frequently cited source of data to measure financial inclusion. The database provides information on more than 100 indicators, including age, gender and household income. The data provides tremendous amount of information and insights regarding financial inclusion around the globe. Of the 2 billion adults that do not have access to an account at a formal financial institution, 46% of them live in developing countries. This number is in stark contrast to only 6% of adults in developed countries that are unbanked (Demirgüç-Kunt et al., 2015).

2.2 Credit

Most of the empirical studies on the access to credit have been related to the effectiveness of MFIs to help lift the poor out of poverty, by providing them with small loans (also known as microcredit). Performing systematic reviews of numerous studies of the impact of microcredit on the poor, Cull et al. (2014) and Leora Klapper et al. (2017) both highlight that the results from most of these empirical studies have been mixed. Initial research on microfinance performed in the 1990s and early 2000s showed significant social and economic benefits, but were mostly based on anecdotal evidence and descriptive statistics (Banerjee, Karlan, &Zinman, 2015). More recent empirical studies and evaluations have shown more modest conclusions. Bauchet, Marshall, Starita, Thomas, &Yalouris (2011) corroborate this point and mention that while increasing access to credit does not produce dramatic effects of completely lifting people out of poverty, it allows for the creation of new businesses and moving away from the consumption of temptation goods such as tobacco and alcohol. Also, microloans help some households to smooth consumption – an important aspect for the poor which suffer from unpredictable and irregular income streams. Banerjee et al. (2015) analyzed six extensive RCT studies across four continents and six countries on the impact of microcredit under different models, and they concluded that the effects were "modestly positive, but not transformative". Stewart et al. (2012) conducted a broad review of 17 microfinance interventions globally, and they find mixed results on the effect of microcredit on higher income and more economic opportunities. Although the evidence at the individual level is not very strong, there is evidence that microcredit provides positive benefits to microentrepreneurs by allowing them to borrow so that they can grow their businesses (Cull et al., 2014).

2.3 Savings

Savings is an important financial tool that allows individuals to set aside funds for future expenses such as large purchases, education, old age and potential emergencies. Savings can also help households manage cash flow spikes and smooth consumption. In developing countries, savings mainly takes place through informal means – one of the most common methods is through rotating savings clubs, also known as ROSCAs. These clubs operate by having members make weekly deposits, pooling the deposits together and then disbursing the entire amount to a different member each week. Other forms of informal savings include cash under the mattress, jewelry, real estate or livestock. However, there are a few issues with these informal savings mechanisms. First, they tend to be risky due to potential theft and asset depreciation (in the case of jewelry and other physical assets). Second, informal savings options may not be very liquid, due to high transaction costs and how long it takes to sell the different items to get cash. Finally, the informal savings clubs tend to be community driven, and thus an individual's savings cannot be transferred to another community, if the individual is seeking better opportunities elsewhere. Saving at a formal financial institution can provide many potential advantages, including lower risk of theft and curbing impulse spending. Micro-savings, which is the ability to save small amounts at a high frequency in formal financial institutions, seem to provide a significant benefit for the poor. Similar to microcredit, Cull et al., (2014) and Leora Klapper et al. (2017) have reviewed empirical studies of microsavings interventions to evaluate their impact on the poor. One study the authors highlight is a field experiment in Kenya which showed that women market vendors were able to save significantly more when they were provided with a savings account, and as a result increased their expenditures by 38% when compared to a control group (Dupas & Robinson, 2013a). The study speculates that by keeping the money in an account that was not immediately accessible; people are able to better resist the temptation to spend the money. Dupas and Robinson (2013b) performed another empirical study where they show that using a commitments savings account, which require the saver to deposit a certain amount of money in a bank account for a specified period of time, can help the poor better cope with health emergencies. In particular, individuals increased their investments in preventive health by 138% when they were provided these savings accounts, as compared to a control group. Pande, Cole, Sivasankaran, Bastian, and Durlacher (2012) performed a systematic review of 12 micro-savings studies in emerging markets and they conclude that "innovative design of new savings products that increase the supply of savings and increase demand for savings by helping people address behavioral challenges were found to increase income at least in the short run". Overall, most empirical studies on micro-savings seem to have a more positive impact on improving the livelihoods of the poor than the studies on the impact of microcredit. For the savings products to be effective, they need to be customized and tailored to overcome the behavioral constraints of the poor and marginalized.

2.4 Farmers' Co-operative Societies

Cooperatives play a prominent role in the agricultural sector, both in developed and developing countries. Historically, cooperatives have been the main institutional and organizational tool through which independent farmers were able to withstand the market power held by local and transnational retailers. They also serve to shorten the supply chain by allowing producers to integrate most or all of the processing and marketing processes into one or few steps, thus allowing substantial savings on transaction and other intermediation costs. Okonkwo (2006) defines farmers' co-operative societies as the organization of individual farmers who have come together as producers to form an association so that they can help them- selves and enjoy economies of scales in production by pooling all the factors of production at their disposal together. However, the organization must follow co-operation principles to qualify as a genuine co-operative society. Farmers' cooperatives can be single or multipurpose in nature. However, many are registered as multipurpose so that business activities can be diversified at will by the society. Umebali (2004) defines farmers' co-operatives as an organization of farmers facing common problems who have accepted a joint action in solving the problems by contributing financially and otherwise, bearing all the risks inherent in the co-operative enterprise. According to Kivokapic-Skoko (2012). The

Australian Agricultural Council (2018) on their part, define farmers co-operatives as association of primary producers who have come together to achieve some common commercial objectives more successfully than they could as individuals. The commercial objectives which are economic in nature could be in the form of input supplies to members at reduced costs, and access to new and enhanced farming technologies etc.

Theoretical Review

Public good theory of financial inclusion

The public good theory of financial inclusion argues that the provision of formal financial services should be treated as a public good. The theory argues that formal financial services are a public good, and should be provided to everyone for the benefit of all. There should be unrestricted access to finance for everyone.

As a public good, access to formal financial services to one individual does not reduce its availability to others. This means that all members of the population can be brought into the formal financial sector and everyone will be better-off. Under this theory, all members of the population are beneficiaries of financial inclusion and nobody is left out.

Under the public good theory of financial inclusion, an individual or small business that opens a formal bank account can be offered free debit cards. They can use the Automated Teller Machines (ATMs) to perform transactions without being charged a transaction fee. Suppliers of formal financial services, such as financial institutions, will bear the cost of offering formal financial services as a sunk-cost of doing business. The government can grant subsidies to financial institutions to help them cope with any resulting cost problems that arise from offering free formal financial services to citizens.

The public good theory of financial inclusion has three merits. Firstly, the public good theory suggests that everyone will benefit from financial inclusion regardless of status, income level or demographic differences. Secondly, as a public good, the government will subsidize the cost of providing formal financial services to citizens. Thirdly, as a public good, it gives the government an opportunity to take responsibility for promoting financial inclusion.

Empirical Review

Okonkwo and Nwanna (2021) investigated the effects of financial inclusion on economic growth in Nigeria from 1992 – 2018. The study examined the relationship between the variables using regression and then examined the effects using the Grander Causality test. The results of the test revealed that currency in circulation has an insignificantly positive relationship as well as a causal effect on economic growth in Nigeria. Likewise, loans extended by rural branches of commercial banks also have a positive and significant relationship and causal effect on economic growth in Nigeria. The study recommends that the government and monetary authorities should ensure the promotion of banking services and the establishment of bank branches deeper in the rural areas and equally support these banks to meet the demands of these areas efficiently.

Noor, Samina and Asghar (2020), carried out a study which analyzes the relationship among financial inclusion, entrepreneurship, institutions and economic growth for 33 developing countries over time 2004-2016 using generalized method of moments (GMM). The variables of financial inclusion, entrepreneurship and institutions are incorporated in solow growth model through total factor productivity. Empirical results show that financial inclusion have positive effect on economic growth while entrepreneurship has negative but significant effect on economic growth. Whereas some institutional variables like rule of law and political stability have negative and other institutional variables like control of corruption and government effectiveness have effect on economic growth.

Okeke (2017) conducted a study which accessed the role of cooperative thrift and credit societies on financial inclusion of members in Orlu local government area of Imo state. The objectives of the study are to ascertain the activities of CTCS that promote financial inclusion in the study area, determine the benefits of financial inclusion on members and find out the challenges of members in financial inclusion programmes of the CTCS. The researcher adopted descriptive design method. Findings from the study show that CTCS has made significant effort in mobilizing savings and providing credit to its members. It further revealed that problem of loan recovery was the major problem faced by the CTCS in financial Inclusion activities.

Nwankwo et al (2014) carried out a study which critically examined the sustainability of financial inclusion to rural dwellers in Nigeria using descriptive study and content analysis. The study observed that the sustainability of financial inclusion to rural dwellers in Nigeria remains the mainstream for economic growth in any country. The implication of this study is that economy cannot grow fast without proper implementation of financial inclusion to rural areas in Nigeria

Anigbogu, Agbasi and Okoli (2014) investigated the influence of socio economic characteristics of cooperative farmers on agricultural production in Anambra state using a regression model of the ordinary least square. Findings revealed that age, educational qualification, farming experience, farm size, income, seed and fertilizer obtained and fertility of the land have significant influence on agricultural production. The study therefore recommended that the government should provide agricultural credit to farmers, initiate and support mechanized farming. This will help improve the productivity and output of the farmers in Anambra state.

METHODOLOGY

Financial Inclusion Index

It is already acknowledged that financial inclusion provides access to formal financial services at reasonable cost to the financially excluded people. For our purpose measurement of financial inclusion among cooperative members is measured through 5-Likert Scale evaluation of five indicators, including Access to a formal financial institution services; Access to Transactions/Payments services; Access to Savings/Investment Services; Access to Loan/Credit Services and Quality of Financial Services. The operational definitions of these variables are as presented in the table below:

Table 3.4: Operational definitions of financial inclusion construct

S/n	Financial inclusion dimension	Operational definition
i.	**Composite Indicator: Access to a formal financial institution' services**	Whether the respondent has a bank account; Has an account with any other formal financial institution, such as cooperative; Has access to the use of a bank/formal or any financial service provider through other household members
ii.	**Access to Transactions/Payments services**	Whether the respondent receives income/public transfers through direct deposit into an account in a bank/formal financial institution; Pays utility bills through a bank/formal financial institution; Has made or received an international remittance in the past 12 months through an account
iii	**Access to Savings/Investment Services**	Whether the respondent has any cash savings, instead of e.g., gold or livestock; Earns money on bank deposits/deposits at other registered financial institution; Invests money in instruments such as time deposits/CDs, bonds, stocks, funds, voluntary pension plans, etc.
iv	**Access to Loan/Credit Services**	Whether the respondent has now or in the past 12 months had a loan; access to credit through an overdraft facility or line of credit; Has now or in the past 12 months had a loan for the purpose of emergency/unusual needs (vehicle finance/mortgage finance)
v	**Quality of Financial Services**	Whether the respondent has received services whose cost is affordable; Has not complained in the last 12 months of receiving shoddy services from bank/any other formal financial institution; Interest rates on savings investments are promptly and correctly appropriately calculated

Model Specification

The necessary models for the simple regression analysis are implicitly specified as follows:

$$FinIncl = f(X_1, X_2, X_3, X_4\ X_5) \quad (1)$$

$$FinIncl = f(X_6, X_7, X_8, X_9, X_{10}) \quad (2)$$

Where:

X_1 to X_5 = Vectors of items depicting cooperative savings procedure.
X_6 to X_{10} = Vectors of items depicting cooperative loan/credit extension procedure.

The explicit specifications of the models are as follows:

$$FinIncl = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + e \quad (3)$$

$$FinIncl= \alpha + \beta_6 X_6 + \beta_7 X_7 + \beta_8 X_8 + \beta_9 X_9 + \beta_{10} + e \quad (4)$$

where X_1 to X_5; and X_6 to $X_{10;}$ are as earlier defined. All calculations and estimates were obtained through the use of version 21 of the SPSS package. The R^2 Adjusted R^2 and the t- test were performed in each of the models to test the significance of the aggregate of explanatory variable at the alpha levels of 5%.

DATA PRESENTATION AND ANALYSIS

Investigations into Savings, loan/credit Operations and Loan/Credit Recovery of the Cooperative

Table 4.2.1: Responses to Items on Saving Operations Procedure (N=383)

S/n	**Item**	**Sum**	**Mean**	**Standard Deviation**	**Decision**
1	Several savings products are offered such as voluntary savings, thrift savings, and target/festival savings.	1268.00	3.3107	.53178	Agree
2	Affordable minimum savings amount are allowed	1239.00	3.2350	.46571	Agree
3	High interests are paid on savings	1261.00	3.2924	.52490	Agree
4	Savings in kind are sometimes allowed	1220.00	3.2190	.49554	Agree
5	There is close proximity of the cooperative office to members' house	1290.00	3.3681	.77779	Agree
6	Money could be borrowed against savings deposits in the cooperative	1252.00	3.2689	.58627	Agree
7	There are no charges on savings deposits	1035.00	2.7023	1.10694	Disagree
8	Savings procedure are simple and easily understandable	1209.00	3.1567	.78367	Agree
	Grand mean	1222.75	3.1920	.29423	Agree

Source: Field Survey, 2021

The respondents, as could be seen in table 4.2.1 agreed to 7 out of 8 items suggesting enhanced savings operations procedure by the respondents. According to the responses in the table, the respondents assert: Several savings products are offered such as voluntary savings, thrift savings, and target/festival savings; Affordable minimum savings amount are allowed; High interests are paid on savings; Savings in kind are sometimes allowed; There is close proximity of the cooperative office to members' house; Money could be borrowed against savings deposits in the cooperative; Savings procedure are simple and easily understandable among others.

Table 4.2.2: Responses to Items on Loan/Credit Operations Procedure (N=383)

S/n	Item	Sum	Mean	Standard Deviation	Decision
1	Flexible loan/credit conditions	1139.00	2.9739	.84031	Disagree
2	Loan/credit procedures are simple and devoid of complex paper works	941.00	2.4569	1.07206	Disagree
3	Interest rates on loans are often subsidized	997.00	2.6031	.92617	Disagree
4	Money could be borrowed against savings deposits in the cooperative	1063.25	2.7761	1.10704	Disagree
5	Operational offices are located within the community and at the convenience of patrons	1305.00	3.4073	1.23693	Agree
6	Appraisal of loan/credit applications are handled speedily	1521.00	3.9713	1.03180	Agree
7	Collateral securities are not demanded before loans/credits are disbursed	1510.00	3.9426	1.09346	Agree
8	Contingency loans are provided during emergencies	1504.00	3.9269	1.07074	Agree
	Grand mean	1265.00	3.3029	.28400	Agree

Source: Field Survey, 2021

From the Table 4.2 above which explains the responses to items on Loan/Credit Operations procedure, the respondents agreed that Operational offices are located within the community and at the convenience of patrons, appraisal of loan/credit applications are handled speedily, collateral securities are not demanded before loans/credits are disbursed and that contingency loans are provided during emergencies. They however disagreed to flexible loan conditions, Loan procedures being simple and devoid of complex paper works, subsidized interest rates on loans and that money could be borrowed against savings. The grand mean is 3.3029 and standard deviation 0.28400 which suggests respondents agree with the loan/credit operation procedure of their cooperative.

Table 4.2.4: Responses to Items on Financial Inclusion Dimensions (N=383)

S/n	Item	Sum	Mean	Standard Deviation	Decision
A	**Composite Indicator: Access to a formal financial institution' services**				
1	Has a bank/cooperative account	1244.00	3.2480	.48925	Agree
2	Has any other account with other formal financial institution	1054.00	2.7520	.45601	Disagree
3	Has access to the use of a bank/formal or any financial service provider through other household members	1254.00	3.2742	.48055	Agree
B	**Access to Transactions/Payments services**				
4	Receives income/public transfers through direct deposit into an account in a bank/formal financial institution	1124.00	2.9347	.25770	Disagree
5	Pays utility bills through a bank/formal financial institution	1247.00	3.2559	.47702	Agree
6	Has made or received an international remittance in the past 12 months through an account	1124.00	2.9347	.29555	Disagree
C	**Access to Savings/Investment Services**				
7	Has any cash savings, instead of, e.g., gold or livestock	1297.00	3.3864	.56700	Agree
8	Earns money on bank deposits/deposits at other registered financial institution	1286.00	3.3577	.60537	Agree
9	Invests money in instruments such as time deposits/CDs, bonds, stocks, funds, voluntary pension plans, etc.	1005.00	2.6240	.48501	Disagree
D	**Access to Loan/Credit Services**				
10	Has now or in the past 12 months has had a loan	1258.00	3.2846	.47991	Agree
11	Has, currently, access to credit through an overdraft facility or line of credit	1254.00	3.2742	.48055	Agree

12	Has now or in the past 12 months had a loan for the purpose of [emergency/unusual needs; vehicle finance/mortgage finance]	1258.00	3.2846	.47991	Agree
E.	**Quality of Financial Services**				
13	Has received services whose cost is affordable	1124.00	2.9347	.29555	Disagree
14	Has not complained in the last 12 months of receiving shoddy services from bank/any other formal financial institution	1124.00	2.9347	.29555	Disagree
15	Interest rates on savings investments are promptly and correctly appropriately calculated	1285.00	3.3551	.60907	Agree
	Grand mean	1195.87	3.1224	.20609	Agree

Source: Field Survey, 2021

Table 4.2.4 above indicated that the respondents gave an overwhelming affirmation on composit indicators of financial inclusion dimensions which include: access to formal financial institutions service, Access to Transactions/Payments services, Access to Savings/Investment Services, Access to Loan/Credit Services and Quality of Financial Services. Members agreed to own a bank account and have access to the use of bank/formal financial service provider through other household members. They however disagreed to owning an account with any other financial institution such as cooperative. Similarly, the members agreed to have cash savings instead of gold or livestock, they also earn money on bank deposits/deposits at other registered financial institutions. With regards to member's access to loan/credit services, the respondents agreed to have had a loan facility in the past 12months, they agreed to have access to credit through an overdraft facility or line of credit and have also had a loan for the purpose of emergency/unusual needs; vehicle finance/mortgage finance currently or in the past 12months. With regards to quality of financial service, members agreed that interest rates on savings investments are promptly and correctly appropriately calculated. They disagreed however to the affordable cost of the services received and have also complained at some point within the last 12months about receiving shoddy services from bank/any other formal financial institution.

In summary, the grand mean of 3.1224 of the responses financial inclusion dimensions which include; access to formal financial institutions service, access to Transactions/Payments services, access to savings/investment services, access to loan/credit services and quality of financial services, presented a positive opinion of financial inclusion of members of Agricultural cooperatives in Anambra and Awka Agricultural zones, in Anambra State.

Test of hypothesis One: Effect of Saving Operations Procedure on Financial Inclusion

Ho_1: Savings operations procedure of cooperative does not have significant effect on financial inclusion.

Ha_1: Savings operations procedure of cooperative has significant effect on financial inclusion.

Table 4.2.6: Regression Estimates (Effect of savings operations procedure on financial inclusion)

Model	Unstandardized Coefficients		T	Sig.
	B	Std. Error		
(Constant)	41.140	2.024	20.321	.000
Several savings products are offered such as voluntary savings, thrift savings, and target/festival savings (X_1)	1.135	.324	3.506	.001
Affordable minimum savings amount are allowed (X_2)	.358	.355	1.009	.313
High interests are paid on savings (X_3)	1.414	.285	4.965	.000
Savings in kind are sometimes allowed (X_4)	.189	.307	.615	.539
There is close proximity of the cooperative office o members' house (X_5)	.311	.223	1.397	.163
Money could be borrowed against savings deposits in the cooperative (X_6)	.999	.261	3.833	.000
There are no charges on savings deposits (X_7)	-.300	.174	-1.725	.085
Savings procedure are simple and easily understandable (X_8)	.349	.232	1.508	.133

Residual Standard Error: 2.78859
R: .423; R^2: .179; Adj. R^2: .161
F Statistic: 10.058; the p-value is 0.000

Dependent Variable: financial inclusion index

It is seen from table 4.2.5 that the R^2 was estimated at 0.179 which means that about 18% of the variations in the effects of savings operations procedure on financial inclusion explained by the explanatory variables included in the model. The F ratio of 10.058 was significant at 1% level. Indeed, each of the items in the model had positive relationship with financial inclusion of the respondents apart from X_7 which states that there are no charges on savings deposits. Similarly, of the eight proxy variables depicting effect of savings operations procedure on financial inclusion, only X_1, X_3, and X_6 had significant relationship with financial inclusion index at the 1% levels.

DECISION: The regression result shows that the F ratio of 10.058 is significant at 0.00 levels. We therefore reject the null hypothesis two and conclude that savings operations procedure of cooperative has significant effect on financial inclusion.

Test of hypothesis Two: Effect of Loan/Credit Operations Procedure on Financial Inclusion

Ho_2: Loan/credit operations procedure adopted in cooperative does not have significant effect on financial inclusion.

Ha_2: Loan/credit operations procedure adopted in cooperative has significant effect on financial inclusion

Table 4.2.7: Regression Estimates (Effect of loan/credit operations procedure on financial inclusion).

Model	Unstandardized Coefficients		T	Sig.
	B	Std. Error		
(Constant)	34.548	.994	34.749	.000
Flexible loan/credit conditions X_9	-.502	.167	-3.013	.003
Loan/credit procedures are simple and devoid of complex paper works X_{10}	-.541	.170	-3.179	.002
Interest rates on loans are often subsidized X_{11}	-.104	.193	-.536	.592
Money could be borrowed against savings deposits in the cooperative X_{12}	-.877	.131	-6.695	.000
Operational offices are located within the community and at the convenience of patrons X_{13}	.287	.123	2.333	.020
Appraisal of loan/credit applications are handled speedily X_{14}	-.192	.227	-.848	.397
Collateral securities are not demanded before loans/credits are disbursed X_{15}	1.014	.146	6.953	.000
Contingency loans are provided during emergencies X_{16}	-.165	.201	-.822	.412

Residual Standard Error: 2.78859
R: .490; R^2: .241; Adj. R^2: .224
F Statistic: 14.805; the p-value is 0.000

Dependent Variable: financial inclusion index

As indicated on table 4.2.7 the R^2 was estimated at 0.241 which means that about 24% of the variations in the effects of loan/credit operations procedure on financial inclusion explained by the explanatory variables included in the model. The F ratio of 14.805 was significant at 1% level. Furthermore, out of the eight proxy variables depicting effect of effects of loan/credit operations procedure on financial inclusion, only five (X_9, X_{10}, and X_{12}, X_{13} and X_{15} had significant relationship with financial inclusion index at the 1% levels.)

DECISION: The regression result shows that the F ratio of 14.805 is significant at 0.00 levels. We therefore reject the null hypothesis three and conclude that Loan/credit operations procedure adopted in cooperative has significant effect on financial inclusion.

5.0 CONCLUSION & RECOMMENDATION

The study assessed the effect of agricultural cooperatives on the financial inclusion of members in Anambra State. The dependent variable (financial inclusion) was proxied by the financial inclusion index which includes Access to formal financial institution services; Access to Transactions/Payments services; Access to Savings/Investment Services; Access to Loan/Credit Services and Quality of Financial Services. While the independent variable (agricultural cooperative) was measured with farmers' socioeconomic characteristics, cooperative savings procedure, cooperative credit extension procedure, and cooperative loan recovery procedures. This study utilized primary data basically, which were extracted from the questionnaire distributed to the respondents. With the aid of Statistical Package for Social Sciences (SPSS) version 23, descriptive statistics was carried out. In the study, the estimation technique used in the ensuing regression analysis involves the classical linear regression technique using the ordinary least square (OLS) approach: This study reveals that savings procedure and credit operations procedure of the cooperative have significant positive effect on financial inclusion of members of Agricultural Cooperatives in Anambra State at 5% level of significance. Based on the findings of this study, the following recommendations are made:

1. Based on the significant positive effect of the savings and credit operations of cooperatives on the financial inclusion of rural farmers, it is obvious that more would be achieved if cooperative societies are given a pivotal role in rural financial inclusion. Therefore, governments at all levels are urged to improve their cooperative promotion efforts, to attract more people into cooperative membership to enhance financial inclusion in rural areas.
2. Cooperative societies should be encouraged to sustain their present level of quality services in savings and credit operations. Clearly, more farmers will be attracted to making increased commitment and patronage to the cooperative when they are convinced that cooperative financial services are not only favorable to their farming businesses but are also sustainable.

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