Cooperative Farming for Agricultural Produce Export in the Southeast Region of Nigeria: Problems and Prospects

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ABSTRACT

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| This study explores the readiness and willingness of farmers’ cooperative societies to internationalize their offerings by engaging in agricultural produce export and to identify the factors driving these behavioural intents. Being a quantitative survey involving 425 members of vibrant farmers’ cooperative societies in the Southeast region of Nigeria, a structured questionnaire based on the theory of planned behaviour was deployed to generate relevant primary data. Data generation spanned through the period of February 2022 to January 2023.The data were analyzed using the SmartPLS structural equation modeling. Findings indicate that access to finance, facilities and insecurity stand as the major challenge faced by the respondents in internationalization of their offering, while subjective norms and government policies are the major drivers of intent to engage in internationalization. Government policies, access to information, management of cooperatives, and subjective norms are the key positive drivers of intention to export. The study provides, practical and theoretical insights |

*Keywords:* Cooperative farming; Cooperative society; Exporting, Agricultural produce marketing; Nigeria

1. INTRODUCTION

Farmers’ cooperatives are as old as farming itself in Nigeria and the South East region in particular. In the pre-colonial era, farmers and other petty traders had informal co-operations that are largely in resemblance with the modern cooperative arrangements. For instance, Adefila and Modaki (2014) and Ihemadu (1998) observed that before the 1935 enactment of the Nigerian cooperative society law by the British administration, there had been indigenous attempts to form associations such as Cocoa Farmers’ Society and Kola-nut Planters Union in major cocoa and kola-nut producing areas and they were independent of government support.

Researchers have agreed that modern cooperatives originated in Europe with the operating principles of the 1844 Rochdale Society of Equitable Pioneers Ltd serving as an early guide (Holt, 1989; Ortmann & King, 2007). However, this does not imply that other developed countries like the United States had not commenced some sort of modern human cooperation before 1884. In fact, as early as 1752, Benjamin Franklin helped organize the first formal cooperative in the United States – the “Philadelphia Contributionship for Insurance of Home Loss of Fire” (OSUES, 2004; USDA, 1993). The key point that made the 1844 Rochdale a historicalfirst example is the success attributed to the cooperative principles they observed (Agu, 2010; OSUES, 2004).

Ingalsbe and Groves (1989) identified key factors that have shaped the development of cooperatives over time to include:

* Economic conditions caused by war, depression, technology and government policy.
* Farmer organizations including quality of their leadership, their motivation and enthusiasm to promote cooperatives, power to influence public policy, etc.
* Public policy as determined by government interest**,** legislative initiatives and judicial interpretations.

Globally, farmers’ cooperatives have played significant role in food security, economic development and member welfare. Cropp (2002) asserts that cooperatives in the United States matured to become a significant force in agriculture, and play an increasingrole in influencing national agricultural policies. But the reverse is the case in developing countries such as Nigeria where attempts to organize farmers into cooperatives have often failed as a result of corruption, financial manipulations, poor management experience, disloyalty of members, etc (Agu, 2023; Hoyt, 1984; Van, 1988; Akwabi-Ameyaw, 1997). Also, Yebi (2014) corroborated this by noting that cooperatives in Nigeria turned out to be institutions for exporting agricultural raw materials to the home country of the British colonial government and this led to their abysmal failure. Today, most farmers’ cooperatives in Nigeria service more political purposes than economic purposes.

Farmers’ cooperatives are formed to perform any or all of marketing, supply and or essential services provision that promote the wellbeing of members (Baton, 1989; Gjselrkx & Bussels, 2014). It is on record that Nigeria has many agricultural/farmers’ cooperatives in all the States. In the South East, many small-holder farmers have formed cooperative organizations, but many are largely nonfunctional. This accounts for the reason why they hardly play any noticeable role in agricultural produce export. Indeed, agriculture had been the primary export basin and foreign exchange earner for Nigeria until attention drifted to oil and gas. The CBN report (2002) indicates that agricultural export in Nigeria accounted for 0.2% of total exports when over 60% are employed in the sector.

There has been renewed call by the government for the country to go back to the good days of produce export as major revenueearner. Eze (2017) noted that government agencies such as Federal Airport Authority of Nigeria (FAAN), export committees, etc have made clarion calls on farmers to queue into several government incentives to export their produce to Europe, Asia, Africa and other continents. The truth is that the Nigerian small-holder farmers cannot meet the export demands in their individual capacities without organizing themselves into some sorts of stronger cooperatives. This, the chairman of the Technical Committee on Nigerian Yam Export Promotion, Mr. Simeon Irtwaige observed and called on yam farmers to form cooperative societies in order to gain export supports from various groups and ease some problems facing yam export.

This paper seeks to explore the readiness and willingness of the numerous farmers’ cooperatives in the South East region to engage in agricultural produce exportation given existing supports and incentives in the country. Relatively, little studies have been done on agricultural cooperatives in African countries in the recent time (Ortmann& King, 2007). There is therefore the need to close the gap in literature and empirical studies in this area of national importance. This study is poised to actualize this task.

***The Problem***

Nigeria is ranked globally and in Africa as one of the largest producers of rice and cassava (Food and Agricultural Organization, 2018). The United Nations Report (2018) notes that Nigeria produces about 50 million metric tons of cassava and accounts for 20% of world cassava production. Again, the agricultural sector has witnessed noticeable improvement in terms of productivity and food security, the farmers-herders conflict notwithstanding.

However, the farmers in the sector are yet to tap from the numerous global market opportunities open for our agricultural produce. For instance, it was estimated that Nigeria lost USD 10 billion annual export opportunity from groundnut, palm oil, cocoa and cotton alone due to continuous decline in production (FAO, 2018). The United States of America has mere 2% of its population as farmers, yet its agricultural sector contributed 0.9% to the GDP of the nation and over 40% of its agricultural products exported in 2017 (Gray, 2017; USDA, 2017). In Nigeria, over 70% of the population is small-holder farmers and the sector contributed 24.4% to GDP in third quarters of 2017, accounting for 0.6% of total exports (NBS, 2017).

Given the plethora of farmers’ cooperatives in Nigeria which were formed to encourage easy access to federal government’s numerous agricultural promotion/development initiatives, it becomes worrisome that little or no efforts are being made by the cooperatives to tap from the lucrative global market opportunities for agricultural produce. What are the challenges that small holder cooperating farmers face which have limited them from engaging in meaningful exports? What could be done to improve the situation? What benefits do the nation and cooperatives stand to gain from enhanced agricultural produce exports? Proffering answers to these questions is the thrust of this study.

***Objectives***

This study aims at exploring the agricultural produce exportation consciousness and readiness of farmers cooperatives in South East Nigeria, with a view to identifying the challenges they face and disclosing the prospects. In clear terms, the following specific objectives are sought. To:

1. Assess the level of readiness and willingness of farmers’ cooperatives in the South East to engage in produce export.
2. Identify and rank the key challenges to produce export which are faced by farmers’ cooperatives in the region.
3. Expose the prospects for agricultural produce exportation in Nigeria.
4. Recommend modalities for enhanced agricultural produce export consciousness and engagement among farmers’ cooperatives.

2.1 CONCEPTUAL ReVIEW

***2.1. Meaning, Principles and History of Cooperative Societies***

Cooperative society is seen from different perspectives by various scholars, writers, policy makers and operators. Some of these writers are of the view that the cooperative is a strong organization where different entrepreneurs or cooperators pool their resources together with the view of making profit. Others see it as voluntary economic institution in which members share the earned dividends – the financial benefit that results from doing business with or without profit (Encyclopedia Britannica, 1970 in Effiom, 2014). According to International Cooperative Alliance (ICA) as cited in Okoli (2018), “A cooperative is 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”. According to UWCC (2002), it is a business that is voluntarily owned and managed by its member patrons, operating for and by them on a nonprofit or cost basis. Kattookaran (2002) further characterized a cooperative as a service-oriented institution founded on the principles of each for all and all for each. Standing (2008) claimed that a cooperative is an association that is open to everyone, providing equal rights and responsibilities (democracy and autonomy) to members who participate in all economic activities and share profits, which are allocated to members in proportion to their usage of the enterprise, irrespective of their societal share.

Conversely, Helms (2005) described a co-operative society as a collective of individuals who have voluntarily come together to achieve a common goal through the establishment of a democratically controlled enterprise, making equitable contribution to the capital required and accepting a fair share of the risk and benefit of the undertaking in which the member activity participate. Specifically, Agu (2011) defined cooperative marketing of agricultural produce as the performance of business related activities that direct the flow of agricultural produce from the point of initial production (farm) until they reach the ultimate users by farmers’ cooperatives. That is, the planning, purchase, pricing, promotion, distribution, and selling of agricultural input and output by cooperative organizations that have farmers as the members. Other explanations were given by Sinega et al. (2024).

Cooperatives are guided by principles which put their values into practice. These seven key principles, according to the International Co-operative Alliance, Agu (2011) and Samadder (1991) are:

1. Cooperatives are voluntary entities that welcome all individuals capable of utilizing their services and who are prepared to accept the responsibilities of membership, free from discrimination based on gender, social status, race, politics, or religion.

2. Cooperatives are democratic entities governed by their members, who engage actively in formulating policies and making decisions. Elected representatives, both men and women, are accountable to the membership. In primary cooperatives, all members possess equal voting rights (one member, one vote), and cooperatives at other levels are structured democratically.

3. Members contribute fairly to, and democratically oversee, the cooperative's capital. A portion of this capital typically constitutes the common property of the cooperative. Members generally receive limited compensation, if any, on the capital they subscribe as a prerequisite for membership. Surpluses are allocated by members for various purposes, including the development of the cooperative, potentially by establishing reserves, part of which would be indivisible, benefiting members in proportion to their transactions with the cooperative, and supporting other activities sanctioned by the membership.

4. Cooperatives are independent, self-sustaining organizations governed by their members. When they engage in agreements with other entities, including governmental bodies, or seek capital from external sources, they do so under conditions that guarantee democratic control by their members and preserve their cooperative independence.

5. Cooperatives offer education and training to their members, elected representatives, managers, and employees to enable them to contribute effectively to the growth of their cooperatives. They also educate the general public—especially youth and opinion leaders—about the essence and advantages of cooperation.

6. Cooperatives most effectively serve their members and bolster the cooperative movement by collaborating through local, national, regional, and international frameworks.

7. By prioritizing the needs of their members, cooperatives strive for the sustainable development of their communities through policies that are endorsed by their members.

The U.S department of agriculture summarized the principles of that characterize cooperatives (Agu, 2011) as follows: the user-owned; user-control principle; and user-benefits.

The history of cooperative societies in Nigeria in particular could not go without reference to the pioneering efforts of great men (Effiom 2014; Odey 2009) such as C. F. Strickland, Major F. G. Haig, Captain W. J. W. Chessman, Captain A. G. C. Stainforth, Chief Akinpelu Obiasesan, O. Bateye, J. U. Eka (MBE), Chief A. A. Laditan and R. M. Leslie – the first registrar of cooperative societies in the Eastern region of Nigeria. The first documented cooperative settlement in human history was that started by the Essence at Eiricydi on the coast of the Dead Sea (Odey, 2009).

In Britain and France, workers, as a result of the impact of the Industrial Revolution spontaneously organized cooperative societies of all sorts, while intellectuals and philanthropists such as Owen in 1858, and his contemporaries initiated carefully planned, ideologically motivated corporative communities.

In England, the idea of establishing cooperative organization was mooted and invigorated by Robert Owen in collaboration with his Rochdale pioneers (Obasse, 2012; Ebi, 2014; Agu, 2019). This organization began in Road Lane, Rochdale in 1844. This particular group of weavers led by Charles Howath met regularly throughout 1844 to discuss on what could be done to improve their working conditions, and of the less privileged workers, artisans, consumers, traders and farmers who were relegated to the background by the capitalist economic system prevalent during this period and arising from the aftermath of the Industrial Revolution.

The Rochdale principles which guided this early cooperative society stipulated the following as its modus operandi: open and voluntary membership; any consumer was free to join, and there were no restrictions to sex, race or social status; democratic control of one man, one vote; political and religious neutrality, limited interest on capital, cash trading at market price, all sales were made at prevailing prices for cash only, patronage dividends proportional to their purchases, and the regular education of their members. Later co-operators added eight more principles which included the first successfully organized cooperative society (Ebi, 2014).

***2.1.2 Agricultural cooperative societies in Nigeria: Challenges and solutions***

The agricultural sector is the main sphere of production in Nigeria. It involves the overwhelming mass of the population (about 43% of the working population). However, the low level of development of productive forces and the predominance of traditional low-productivity types of farming make the industry the most deprived in the structure of the national economy. The ability of the agricultural sector to play its traditional role in the economy of Nigeria was limited by various socio-economic and structural factors, since independence in 1960. Some of which included the civil war in the late 60s, a severe drought in the early 70s and 80s, as well as the discovery of oil deposits. The oil boom in the 70s created a relative loss of interest in agriculture in comparison to other sectors of the economy (Obasanho, 2018). Some of the numerous problems which militate the development of agriculture include::

* **Problem of Land Tenure:** Land is one of the most important factors in agricultural production. The land tenure is the country often discourage agricultural system, the land tenure is the way land is owned in a society. The prevailing land tenure system in the country is often discourage agricultural land utilization. Land is owned by inheritance hence land is fragmented over generations.
* **Problems of Basic Amenities:** Basic amenities like electricity, cinema standard schools, good and functioning health centre, recreational parks for relocation, good roads, telephone, television etc are lacking in the rural area.
* **Problems of Finance or Poor Financing:** Most agricultural activities in the developing countries are subsistent in nature hence the farmers are poor and cannot secure the necessary collateral for loans, cannot have access to enough credit facilities and also cannot play high interest rates on loans either credit financial institutions or money lenders.
* **Poor Cooperative System:** The sole aim of commercial agriculture is profit making, but this cannot be achieved due to the activities of middlemen who try to remove all the gains, create artificial scarcity, poor pricing policies and non functional food commodity boards for farm produces and lack of good road.
* **Lack of Good Agricultural Education:** Most of the farmers in the developing countries are not educated enough in the technicalities relating to agricultural product. Therefore, they are dogmatic and adamant to changes unwilling to even learn how to use and apply fertilizer insecticides and new farm tools (Ojioko, 2002).

The challenges of agricultural cooperatives as identified by Ukeje (2008) and Onugu and Abdulahi (2012) are the inadequacies in the supply and delivery of farm inputs; shortages of working capital; low rate of technology adoption; diseases and pests infestations; poor post-harvest processing and storage technology; environmental hazards; and land constraint.

Agu (2011) and Asaolu (2004) as cited in Okoli (2018) asserted that the challenges encountered by co-operative societies in Nigeria are primarily attributed to political and socio-economic factors. The following are the main issues identified:

- Insufficient Working Capital: The capital that a co-operative society can generate from its members is significantly limited, as membership is typically restricted to a specific segment of society. Additionally, due to low returns, members are reluctant to invest further capital. Government support is frequently inadequate for most co-operative societies to implement their developmental initiatives.

- Poor Leadership and Succession Issues Marked by Mismanagement: Ineffective leadership has consistently hindered the success of co-operative societies in Nigeria. Furthermore, these societies often struggle to operate efficiently due to a lack of managerial expertise. The members or their elected representatives often lack the necessary experience to effectively manage the society. Moreover, due to limited capital, they are unable to benefit from professional management services.

- Absence of Cooperation: Co-operative societies are established with the principle of mutual cooperation in mind. However, it is frequently observed that significant friction exists among members due to personality conflicts, ego clashes, and other issues. The self-serving attitudes of members can sometimes lead to the dissolution of the society.

- Lack of Motivation: Each co-operative society is established to provide services to its members rather than to generate profit. This focus does not sufficiently motivate members to exert their best efforts and manage the society effectively.

- Reliance on Government: The lack of capital and various other constraints render co-operative societies dependent on government support and patronage in the form of grants, loans, and subsidies. Consequently, the government may sometimes intervene directly in the management of the society and audit their annual accounts.

**-** Widespread Operand Illiteracy and General Ignorance in Societies: The prevalent low literacy rates among farmers, fishermen, marketers, and producers often hinder the efforts of cooperative societies aimed at youth development. To address this issue, the initiatives for literacy improvement must persist.

- Outdated and Inconsistent Cooperative Laws along with a Weak Legal Framework Governing Cooperatives

- Poor Record Keeping and Insufficient Supervisory Staff: Cooperative societies frequently encounter challenges due to a lack of supervisory personnel, resulting in inadequate record maintenance within the society.

- Insufficient Capital Base to Meet the Needs of Small and Medium Enterprises.

- Absence of Training Facilities: Training is undeniably crucial for the ongoing and future advancement of both the cooperative and its members.

- Proliferation of Weak Cooperative Societies, stemming from a lack of coordinated activities.

- Government Interference and Manipulation of Cooperative Programs: Policies and laws can sometimes obstruct the efforts of cooperative societies in promoting youth development.

- Corruption and Misappropriation of Cooperative Funds by Leaders and Paid Workers: Onuoha (2000) highlighted leadership issues as a significant barrier to the effectiveness of cooperative societies, noting that coordinating group actions is more challenging than managing individual efforts. Akinwumi (2006) confirmed that poor leadership is a vital factor impacting the efficiency of the cooperative movement. Ayoola (2006) pointed out the ambiguous role of government in cooperative societies as another major obstacle to their progress in youth development.

On the solution, cooperatives will need an enabling environment that will comprise a conducive cooperative policy and law as well as a framework to regulate the open market. This would not only put cooperatives on an equal footing with other market agents, but it would also enable them to contribute more to sustainable agricultural production and food security. Furthermore, if governments and cooperatives are equally willing to enter into a partnership in which the cooperatives are given a true participatory role, the inherent qualities of cooperatives, member-owned and member-governed organizations can be brought into full play for the cause of food security (Onugu and Abdulahi, 2012).

Ayoola (2006) asserts that reengineering involves evaluating the existing operational environment to identify the most suitable strategies for the future. At the inception of modern cooperatives, the government aimed to promote and support these entities to develop and achieve self-sufficiency as it gradually steps back. Strengthening this approach will yield beneficial outcomes. Agu (2011) believes that the government, private organizations and the cooperatives to jointly tackle these problems. This will foster the vibrancy of farmers’ cooperatives and enhance their exportation ability and readiness.

* + 1. ***Export promotion incentives for agricultural produce in Nigeria***

To complement its export promotion drive, the Federal Government, has, over the years, set up various incentive schemes for companies whose business is export focused. The incentives range from tax exemption to duty drawbacks as well as other forms of grants. Some of the incentives were those set up in 1986, under the Export Incentives and Miscellaneous Provisions Act. These included: Export Development Fund; Export Expansion Grant; and Export Adjustment Scheme Fund.

Out of the above schemes, the only one in operation till 2013 is the Export Expansion Grant (EEG). It was re-designed in 2005 and now administered by the Nigerian Customs Service (NCS). Prior to the 1999 fiscal year, the EEG was paid to beneficiaries in cash. However, from 1999, the grant came in form of Negotiable Duty Credit Certificates (NDCCs) issued by the NCS. The NDCC is a negotiable instrument that can be used to settle or reduce import and Excise Duties. The post-COVID-19 era has witnessed increased support to agricultural farmers and exporters in Nigeria.

**2.2 Theoretical Review**

This study anchors on the Theory of Planned Behaviour (TPB) and the Collective Action Theory (CAT).

**The Theory of Planned Behaviour & Theory of Reasoned Action**

The theory of planned behaviour (TPB) is among the most frequently referenced and utilized theories of behaviour. The TPB (Ajzen 1985) developed from the theory of reasoned action (Fishbein and Ajzen 1975), which asserted that intention to act serves as the most reliable predictor of behaviour. According to the theory of planned behaviour, behaviour is contingent upon an individual’s intention to execute the behaviour. Intention is influenced by a person's attitude (their beliefs and values regarding the outcome of the behaviour) and subjective norms (the beliefs about what others think the individual should do or the general social pressure) (Godin & Kok, 1995; Bandura, 1986; Perry, Barnowski & Parcel, 1990). Additionally, behaviour is shaped by an individual’s perceived behavioural control, which is defined as their perceptions of their capability or feelings of self-efficacy to carry out the behaviour. This relationship typically varies based on the type of relationship and the context of the situation.

Existing literature offers numerous reviews of the TPB (e.g. Agu et al., 2023; Armitage & Conner 2001; Godin & Kok, 1995). How can this theory enhance our understanding of intention to export?

• Intention has been identified as the most significant variable in forecasting consumer/human decisions, indicating that behaviours are frequently associated with one’s intrinsic motivation. This implies that it may be crucial to provide information that fosters positive attitudes towards the behaviour and emphasizes subjective norms or viewpoints that endorse the behaviour.

• For perceived behavioural control to effectively facilitate behaviour change, similar to self-efficacy, an individual must believe that they possess the capability to engage in the behaviour, in this instance, participating in agri-produce export. Consequently, as Grizzel (2007) indicates, the perceived control over opportunities, resources, and necessary skills is a vital component of the change process.

**The Theory of Collective Action**

Theories of collective action (CAT) is a fallout of the ‘Group Theorists’ led by Arthur Bentley, who dominated the field at the beginning of the 20th Century (Richardson 1993). Group Theory asserts that where individuals have a common purpose and will benefit from cooperation, a group will form to cooperate for the common good. Later, this was challenged to the Collective Action Theory (Olson 1965). This model of the ‘rational’ individual calls into question our willingness to cooperate. Olson suggests that where we believe we can receive the benefits of cooperation without contributing to the cost, we will free-ride and leave the cooperation to others. The willingness to cooperate according to Olson (1965) is necessary when any one or more of three conditions are in place:

•The group is small enough that free-riding would be noticed

•We are coerced into doing so

•‘Selective incentives’ induce us to cooperate

Indeed, these three conditions are present in the case of smallholder farmers in the South East region of Nigeria. The small financial strength of each farmer, government’s directives that make it compulsory for farmers to cooperate before they can access some incentives, as well as the lucrative nature of agri-exportation make the adoption of the CAT suitable for studying the cooperative essence of farmers for export business.

**2.3. Empirical Review**

Here, previous empirical studies on various aspects of the present study are reviewed.

First, Che, Strang and Vijjhala (2020) attempted to uncover the truth behind agricultural crisis from the perspectives of rural farmers in the North-East (Adamawa State) Nigeria. They argued that the individual needs of rural farmers are not reflected in national or regional economic development strategies. Basing on the grounded theory, and applying the mixed-method research design, a focus group qualitative study involving 16 extension workers (farmers)was carried out. The study revealed six core challenges with government support to agricultural development – farm input quality and dissemination, farm input subsidization, training, market facilitation, corruption, and insecurity.

Second, is the work of Oladokun, Larbani and Mohammed (2015) which aimed to develop a supply chain model based on Muzara’ah for the purpose of enhancing agricultural financing and productivity in Nigeria. Applying an expert survey approach, the study found that participants are impressed with the proposed model which is based on risk sharing, and preferred it to the extant model.

Third, Babatunde, Oyeranti, Bankole and Ogunkola (2012) examined the relationship between trade exports and employment, and how the relationship reduces poverty through the instrumentality of employment in Nigeria. They found that agricultural trade, mainly exports are capable of reducing poverty and inequality in Nigeria through the channel of employment and agricultural productivity growth more than oil exports.

Fourth, in an empirical analysis of the impact of agricultural exports on economic growth in Nigeria from 1970-2012, Ijirsher (2015) found that agricultural exports make meaningful contributions towards Nigeria’s economic growth and needs effective strategies to sustain it.

Fifth, is the work of Chirkhuri (2013) that explored the link between agricultural trade liberalization and food security in the Sub-Saharan Africa. Using the GTAP model (a global dynamic applied general equilibrium model), they examined the implications of the multifarious trade and support policies in agricultural, specifically those relating to negotiations in terms of market access and export competition. Results show that the policies affect the poor based on food security.

Sixth, Adewumi, Salan and Jimoh (200) analysed the impact of globalization on Nigeria’s agricultural output and the implications for rural development from 1981-2000. They found that 60 percent variance in the ratio of agriculture to gross demostic product was explained by the degree of openness or globalization, exchange rate and inflation. The study concluded that Nigeria cannot afford to fully liberalize trade in the face of poor export performance, and that government should take the lead in addressing challenges hindering agricultural exports.

Adewale and Shobayo (2015) investigated the link between exchange rate and agricultural export from 1986-2012. Using the parametric research design, the study shows that exchange rate influences agricultural export. They expect government’s interventions that will aid agricultural export.

Aiming to proffer solution to the food security crisis in Nigeria, Strange, Che and Vijjhala (2019) argued that there was no solution for the Nigerian food security crisis because researchers had not customized theoretical models with data-driven priorities grounded on local agriculture subject matter expert knowledge. They collected data from local agriculture extension workers who had specialized knowledge of the problems, and applied the consensual qualitative research method with embedded nominal brainstorming and multiple correspondence statistical techniques at the group level of analysis to develop a proposed solution. Their proposed model highlighted strategically urgent ideas to increase agriculture productivity and appease the most severe constraints in rural Nigeria. This supports the claims made by Ogundari and Awokuse (2016), who clearly advocated for the significance of enhanced agricultural productivity in alleviating food insecurity. They identified the primary challenge facing the agricultural sector in sub-Saharan Africa (SSA) as the need for sustained agricultural productivity. We contend that productivity can be improved through active collaboration among farmers who are focused on exporting their products.

In his research, Osuagwu (2020) examines the long-term relationship between agricultural output and the manufacturing industry in Nigeria, utilizing annual time series data from 1982 to 2017. He applies the Granger causality test, vector error correction model, and co-integration methods to assess the interrelationship between agricultural productivity and manufacturing output. His findings reveal a bidirectional relationship between these two sectors; however, there is a long-term divergence, suggesting that fluctuations in agricultural productivity do not return to equilibrium due to the influence of macroeconomic factors that disrupt this connection. This calls for investigations on how to restore the positive impact of agriculture in the economy.

In their study, Nugasse, Huylenbroeck and Buysse (2013) investigated main factors that inspire rural farmers to join into cooperatives Northern Ethiopia. 400 household were involved by means of survey. Data analyzed with two samples t-test and probit model indicate a number of factors inspiring involvement in cooperatives: information access, special skill, membership in rural associations, frequency of attending a public meeting/workshop, household head education, credit access, training access, number of family members in school, availability of infrastructure, distance to market, farmland ownership, and farmland sizes.

Pool and Donovan (2014) explored the impact of external interventions aimed at rescuing a failed cooperative and improving performance and business linkages between grower-suppliers and international markets through enterprise development. Using both qualitative and quantitative approaches, the study found interventions to be useful in building organizational capacity to respond to the demands of buyers and market-related shocks.

Finally, Daramola, Ehui, Ukeje and Mclntire (2008) while lamenting on the decrease in agricultural sector contribution to Nigeria’s GDP between 1970 and 2004 from 41.3% to 16.6%, identifies critical constraints to export of agriculture to include policies, trade, inputs, finance, rural infrastructure and extension services.

**2.4. Literature Gap**

Although reasonable work has been done on the cooperative actions of smallholder farmers and agricultural productivity, yet there exist some gaps which this study stands to close. First, while extant studies focused reasonably on the challenges and benefits of farmers’ cooperatives, the present study goes beyond this to ascertain how the challenges affect readiness and willingness of the cooperatives to explore lucrative agri-produce export opportunities. Again, there is no known study that covers the cooperatives in the South East region. Besides, none is known that applies the TPB and CAT to farmers’ cooperatives. This study will extend the literature on these theories.

Basing on literature review and initial qualitative interrogations (see explanations in methodology), we isolated key factors that could affect wiliness (intention) to export by farmers’ cooperatives, and this represent perceived behavioural control in the TPB model. Attitudes and subjective norms are also captured. In all, a total of eight factors are explored based on the following hypotheses:

H1: Attitude towards cooperative agro-export will influence intention to participate.

H2: Subjective norms relate to intention to join in cooperative agro-export.

H3: Government policies relate to intention to join in cooperative agro-export.

H4: Finance relates to intention to join in cooperative agro-export.

H5: Access to information relates to intention to join in cooperative agro-export.

H6: Insecurity will affect intention to join in cooperative agro-export.

H7: Management of the cooperative will affect intention to join in cooperative

agro-export.

H8: Availability of facilities will affect intention to join in cooperative agro-export.

**3. METHODOLOGY**

***Research Design, Sampling, Population and Sample Size***

To test the proposed study model, we conducted an empirical study through a questionnaire survey on a sample of fifteen farmers’ cooperatives in the five States of the South East (three for each state). The multi-stage and convenience sampling were applied. A multi-stage sample is one in which sampling is done sequentially across two or more hierarchical levels, such as first at the county level, second at the census track level, third at the block level, fourth at the household level, and ultimately at the within-household level (Lavrakas, 2008). Also, convenience sampling (also known as availability sampling) is a method where the selection of participants (or other units of analysis) is based on their ready availability. This availability is usually in terms of geographical proximity but may involve other types of accessibility, such as known contacts (Frey, 2018).First, through the States Ministries of Commerce, functional farmers’ cooperatives were identified in each State. Next, the cooperatives were categorized by the researchers into urban and rural cooperatives. For each State, cooperatives operating in rural areas that are distant from the State capital or any major town were listed as rural cooperative, while others were listed as urban cooperatives.

Following this, fifteen cooperatives in fifteen rural local government areas were isolated for the Study based mainly on convenience - accessibility. The main reason for focusing on rural co-operators include: large farming of cassava (our focus product) in the rural areas more than the urban centres, greater access to farmland of rural cassava farmers than urban farmers, and greater number of active/real cassava farmers in the rural areas more than urban farmers who in some cases answer farmers for the purpose of accessing government funds for other projects not agriculture. Also, based on convenience reasons, only the cooperatives operating in the local government headquarters were qualified for selection. Participants in the survey were chosen at the discretion of the leaders of the cooperatives through whom the instrument was administered with the help of one trained research assistant for each Local Government Area covered. Based on the membership records of the cooperatives, 425 active and willing members of the various cooperatives were present during the different meetings in which the instrument was administered. To ensure greater participation the research team sponsored their light refreshment during the meetings through their various leaders. In all, 61.98% of total active members participated in the survey which lasted from February 2022 to January 2024..

The research assistants were graduate students and indigenes of the selected local government areas where the chosen cooperatives are situated. Call for research assistants who are indigenes of the LGAs was made and interested graduate students who indicated interest were interviewed and trained. The assignment also attracted monetary compensation. The instrument was administered during the meetings of the cooperatives in which the trained researcher assistants working with the cooperative leaders were invited. Interactions which were aimed at explaining the purpose of the study were held before administration. Interpretations in local languages were possible with the indigenous research assistants.

***Research Instrument***

The instrument is a structured questionnaire that has two parts – demographic section which has eight questions including age, gender, marital status, level of education, and ownership of farm land among others. In part two, we asked the participants by using a 5-point Likert scale (1 = strongly disagree, 5 = strongly agree), to assess their perception of six identified challenges to cooperative export, intention, attitude and subjective norms. A total of 34 items are contained in this section of the instrument. Attitude (ATT; consisting of 4 items including ‘I have favourable attitude towards cooperative export’), subjective norms (SNs; consisting of 3 items including ‘My immediate family values sustainable entrepreneurial activity’), and intention (IAE; consisting of 3 items including ‘I have strong intention to join in the cooperative export arrangement’) were adapted from established scales of the TPB model used by previous scholars (Agu et al., 2020; Alam *et al*., 2019; Ozaralli & Rivenburgh, 2016; Furrakh *et al*., 2018). The six assessed challenges, government policies (GP, comprising 5 items such as ‘Government policies on cooperative export are adequate’), Finance ((FIN, consisting of 3 items including ‘Our desire to cooperatively export is hampered by financial difficulty’), access to information (AINf, comprising 5 items such as ‘I have good knowledge of relevant government incentives to support cooperative export’), insecurity (INS, consisting of 3 item including ‘Insecurity is not a major challenge to us’), Management (MGT, consisting of 3 items such as ‘I am satisfied with the management of this cooperative’), and facilities (FAC, comprising 6 items including ‘Available facilities are adequate to encourage engagement into cooperative export’) were conceptualized following insight from extant studies since previous studies are largely secondary data and qualitative data based (See Agu & Nwachukwu, 2020).

***Statistical Methods***

We applied a number of statistical methods to analyse the collected data, and used the partial least square method to test the proposed study model. The Ringle *et al*.’s (2015) Smart PLS 3.2.6 is used to assess the developed model, and this has been applied in similar study (Agu, 2020). The task of the study aligns with the conditions for application of PLS-SEM (see Hair *et al.,* 2019). As usual, the Bootstrapping function (5000 resample) was applied to assess the significance level of path. The average variance extracted (AVE) method was adopted to evaluate convergent validity with Fornell–Larcker criterion for assessment of discriminant validity. We adopted the Cronbach’s alpha was adopted as measure of reliability. The set minimum threshold for establishing reliability with Cronbach’s alpha is ≥0.60 (Hair et al., 2017, Agu, 2020; Agu, 2019). To establish discriminant validity following Fornell and Larcker’s (1981) criterion we compared the correlations among the latent constructs with square roots of AVEs (Agu et al., 2020; Farukkh *et al.,* 2018). Discriminant validity is established if the square root of the AVEs is higher than every correlation pair amongst the latent variables (Hair et al., 2019). Multicollinearity was assessed by means of variance inflation factor (VIF). According to Hair et al. (2014), multicollinearity is not present if the variance inflation factor (VIF) is below 5.

4. results and discussion

Of the 425 copies of the questionnaire issued, 397 were completed and found useful for the study. This represents 93.4 percent success rate. The demographic analysis (see Table 1), indicates that there are more males 235(59.19%) in the study sample than women 162 (40.81%). There were more farmers aging above 45 years and above in the sample, and this represents 212 (53.40%). This is followed by those in the age brackets of 30-45 with 142 (35.77%), and co-operators below 30 years with 43 (10.83%). This aligns with the general reports that the farming population in Nigeria is largely aged. Majority, 276 (69.52%) had primary and secondary education, followed by 98 (24.69%) without formal education, and 23 (5.79%) that had higher education. There were more married people – 262 (65.99%) – followed by others (mainly widowed farmers) with 72 (18.14%), and singles 63 (15.87%). On the years of membership to the cooperative, greater number, 267 (67.25%) have cooperated for 5-10 years, 104 (26.20%) below 5 years and 26 (6.55%) above 10 years. All the participants, 397 (100%) own their farm land, and are aware of government programmes encouraging farmers to cooperate for larger production, government incentives, and export.

**Table 1: Demographics of Respondents**

|  |  |  |
| --- | --- | --- |
| **Variable** | **Frequency** | **Percentage** |
| ***Gender***:  Male  Female | 235  162 | 59.19  40.81 |
| ***Age:***  Below 30  30-45  Above 45 | 43  141  212 | 10.83  35.77  53.40 |
| ***Education:***  None  Primary & Secondary  Higher education | 98  276  23 | 24.69  69.52  5.79 |
| ***Marital Status***  Single  Married  Others | 63  262  72 | 15.87  65.99  18.14 |
| ***Years of Membership:***  Below 5 years  5-10 years  Above 10 years | 104  267  26 | 26.20  67.25  6.55 |
| ***Farm Land Ownership:***  Yes  No | 397  0 | 100.00 |
| ***Knowledge of Cooperative Export:***  Yes  No | 397  0 | 100.00 |

**Source**: Compiled by the Researchers, 2020.

The descriptive analysis reveals that the mean values of scale items ranged between 1.45 (GPOL3) and 4.82 (INT3). Responses staggered around “agree or 4” and “strongly disagree or 1”. This also reflects in their skewness values which are negative for most questionnaire items. According to Hair et al. (2014) and Agu et al. (2020), a negatively skewed distribution has relatively few small values and tails off to the left. The skweness values fall largely within the range of -1 to +1, indicating normal distribution (Hair et al., 2014; Agu et al., 2020). Besides, with all standard deviation values falling within the plus or minus 2 threshold of acceptance, the responses are largely concentrated around their mean values.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Table 2: Construct Reliability and Validity | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  |  |  |  | | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |
| **Variables** | **Cronbach's Alpha** | **rho\_A** | | **Composite Reliability** | **Average Variance Extracted (AVE)** | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |
| **ATT** | **0.909** | **0.909** | | **0.937** | **0.787** | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |
| **FACI** | **0.604** | **0.465** | | **0.621** | **0.504** | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |
| **FIN** | **0.665** | **0.745** | | **0.757** | **0.501** | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |
| **GPOL** | **0.561** | **0.821** | | **0.722** | **0.500** | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |
| **INFO** | **0.816** | **0.739** | | **0.858** | **0.552** | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |
| **INSE** | **0.844** | **0.882** | | **0.897** | **0.743** | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |
| **INT** | **0.825** | **0.835** | | **0.896** | **0.743** | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |
| **MGT** | **0.864** | **0.895** | | **0.915** | **0.781** | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |
| **SNs** | **0.869** | **0.870** | | **0.920** | **0.792** | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |

**Source**: Smart PLS SEM, 12/12/2020.

Table 3 indicates that based on the cronbach’s alpha criterion, items reliability are established since they are all above the minimum threshold of .50 for SEM analysis. Reliability ranged from 0.561 to 0.909. AVEs are largely above .5.

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Table 3: Discriminant Validity | | | | | | | | | | |
|  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |
| Fornel and Larcker |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |
|  | **ATT** | **FACI** | **FIN** | **GPOL** | **INFO** | **INSE** | **INT** | **MGT** | **SNs** |  |
| **ATT** | **0.887** |  |  |  |  |  |  |  |  |  |
| **FACI** | 0.315 | **0.551** |  |  |  |  |  |  |  |  |
| **FIN** | -0.211 | -0.060 | **0.518** |  |  |  |  |  |  |  |
| **GPOL** | 0.526 | 0.217 | -0.119 | **0.654** |  |  |  |  |  |  |
| **INFO** | -0.093 | -0.167 | 0.004 | -0.101 | **0.743** |  |  |  |  |  |
| **INSE** | -0.024 | 0.029 | 0.004 | 0.025 | -0.036 | **0.862** |  |  |  |  |
| **INT** | 0.629 | 0.299 | -0.208 | 0.469 | -0.191 | 0.055 | **0.862** |  |  |  |
| **MGT** | 0.097 | 0.162 | 0.065 | 0.181 | 0.083 | -0.080 | 0.163 | **0.884** |  |  |
| **SNs** | 0.872 | 0.250 | -0.220 | 0.498 | -0.068 | -0.010 | 0.715 | 0.126 | 0.890 |  |

**Source**: Smart PLS SEM, 12/12/2020.

The square root of the AVEs is higher than every correlation pair amongst the latent variable

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Table 4: Collinearity Statistics (VIF) | | | | | | | | | | | | | | | | | | | |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | **VIF** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **ATT1** | 3.559 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **ATT2** | 4.789 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **ATT3** | **2.679** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **ATT4** | 4.967 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **FAC1** | **1.123** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **FAC2** | **1.253** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **FAC3** | **1.360** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **FAC4** | **1.155** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **FAC5** | **1.566** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **FAC6** | **1.447** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **FIN1** | **1.759** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **FIN2** | **1.478** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **FIN3** | **1.242** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **GPOL1** | **1.172** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **GPOL2** | **2.196** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **GPOL3** | 4.512 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **GPOL4** | **1.100** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **GPOL5** | 3.043 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **INFO1** | **2.140** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **INFO2** | **2.353** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **INFO3** | **1.914** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **INFO4** | **2.098** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **INFO5** | **1.525** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **INSE1** | **2.180** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **INSE2** | **2.819** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **INSE3** | **1.813** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **INT1** | **2.419** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **INT2** | **2.607** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **INT3** | **1.501** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **MGT1** | **1.614** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **MGT2** | 3.910 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **MGT3** | 3.739 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **SNS1** | 3.552 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **SNS2** | **2.584** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **SNS3** | **2.031** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

VIFs are within the 1-5 acceptance thresholds, indicating the absence of multicollinearity**.**

**Table 5: Validity Test**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Outer Loadings | | | | | | | | | | | | | | | | | | | |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | **ATT** | **FACI** | **FIN** | **GPOL** | **INFO** | **INSE** | **INT** | **MGT** | **SNs** |  |  |  |  |  |  |  |  |  |  |
| **ATT1** | **0.900** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **ATT2** | **0.881** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **ATT3** | **0.845** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **ATT4** | **0.921** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **FAC1** |  | **0.434** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **FAC2** |  | **0.297** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **FAC3** |  | **0.725** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **FAC4** |  | **-0.232** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **FAC5** |  | **0.684** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **FAC6** |  | **0.707** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **FIN1** |  |  | **0.423** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **FIN2** |  |  | **0.529** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **FIN3** |  |  | **-0.588** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **GPOL1** |  |  |  | **0.342** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **GPOL2** |  |  |  | **0.846** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **GPOL3** |  |  |  | **0.904** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **GPOL4** |  |  |  | **-0.060** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **GPOL5** |  |  |  | **0.697** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **INFO1** |  |  |  |  | **0.626** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **INFO2** |  |  |  |  | **0.797** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **INFO3** |  |  |  |  | **0.890** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **INFO4** |  |  |  |  | **0.765** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **INFO5** |  |  |  |  | **0.595** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **INSE1** |  |  |  |  |  | **0.896** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **INSE2** |  |  |  |  |  | **0.842** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **INSE3** |  |  |  |  |  | **0.847** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **INT1** |  |  |  |  |  |  | **0.892** |  |  |  |  |  |  |  |  |  |  |  |  |
| **INT2** |  |  |  |  |  |  | **0.905** |  |  |  |  |  |  |  |  |  |  |  |  |
| **INT3** |  |  |  |  |  |  | **0.783** |  |  |  |  |  |  |  |  |  |  |  |  |
| **MGT1** |  |  |  |  |  |  |  | **0.861** |  |  |  |  |  |  |  |  |  |  |  |
| **MGT2** |  |  |  |  |  |  |  | **0.893** |  |  |  |  |  |  |  |  |  |  |  |
| **MGT3** |  |  |  |  |  |  |  | **0.896** |  |  |  |  |  |  |  |  |  |  |  |
| **SNS1** |  |  |  |  |  |  |  |  | **0.931** |  |  |  |  |  |  |  |  |  |  |
| **SNS2** |  |  |  |  |  |  |  |  | **0.873** |  |  |  |  |  |  |  |  |  |  |
| **SNS3** |  |  |  |  |  |  |  |  | **0.865** |  |  |  |  |  |  |  |  |  |  |

Source: Smart PLS 3.2.6, 12/12/2020.

Using the 0.5 benchmark and recognizing the 0.702 recommendation, four items (FAC2, FAC4, GPOL1, and GPOL4) were excluded and dropped. Thus, only 30 items were found fit for further analysis.

**Table 6: Results of test of Hypotheses**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Hypo.** | **Original Sample (O)** | **Sample Mean (M)** | **Standard Deviation (STDEV)** | **T Statistics (|O/STDEV|)** | **P Values** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **ATT -> INT** | -0.077 | -0.068 | 0.176 | 0.438 | **0.661** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **FACI -> INT** | -0.092 | -0.098 | 0.046 | 2.008 | **0.045\*\*** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **FIN -> INT** | -0.061 | -0.001 | 0.063 | 0.974 | **0.330** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **GPOL -> INT** | 0.123 | 0.123 | 0.032 | 3.842 | **0.000\*\*** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **INFO -> INT** | 0.128 | 0.129 | 0.046 | 2.768 | **0.006\*\*** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **INSE -> INT** | 0.055 | 0.054 | 0.040 | 1.390 | **0.165** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **MGT -> INT** | 0.068 | 0.066 | 0.024 | 2.841 | **0.005\*\*** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **SNs -> INT** | 0.668 | 0.663 | 0.138 | 4.849 | **0.000\*\*** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

Generally, the proposed model explains 56.6% variance in agricultural export intention of the sample group. Results indicate that attitude (*H1*; β = -0.077, t = 0.438, p> 0.05), finance (*H4*; β = 0.061, t = 0.974, p> 0.05), and insecurity (*H6*; β = 0.055, t = 1.390, p> 0.05) are non-significant predictors of intention to engage in agricultural export. However, facilities (*H8*; β = -0.092, t = 2.008, p < .05), government policies (*H3*; β = 0.123, t = 3.842, p < .05), access to information (*H5*; β = 0.128, t = 2.768, p < .05), management of cooperatives (*H7*; β = 0.068, t = 2.841, p < .05), and subjective norms (*H2*; β = 0.668, t = 4.849, p < .05) are significantly related to agriculture export intention. However, facilities, attitude and finance had negative influence, with facility only having significant negative influence. Thus, *H2, H3, H4* and *H7* are supported while H1, H5, H6, and H8 are not validated. These results lend partial support to the findings of Che at al. (2020), Adewale and Shobay (2015), Nugasse et al. (2013), and Daramola et al. (2008). More specifically, Olomu et al. (2020) noted that the numerous policies by the federal government of Nigeria have not yielded the required goals, while Ikuemonisan (2024) disclosed that poor infrastructure remains a challenge. Above, the research of Oluseyi (2020) supports these findings on the challenges and drivers.

Figure 1 is the theoretical and structural model.

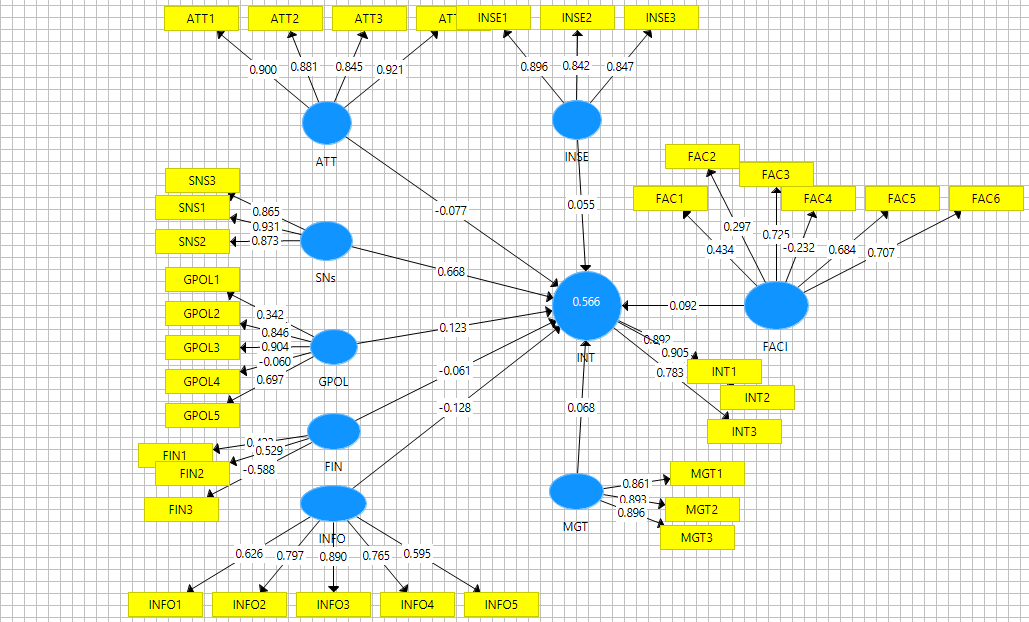
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Figure 1: Theoretical and structural model.

5. Conclusion

Following the three key objectives set for this study, we summarize the findings thus:

1. In order to assess the level of readiness and willingness of farmers’ cooperatives in the South East to engage in produce export, we examined farmers’ responses to the questionnaire items on intention to engage in produce export. With an average mean response of 4.64 on a five point scale, it seems that the farmers are very highly ready/willing to explore cooperative export.
2. Guided by an in-depth literature review, six key challenges to produce export by farmers’ cooperatives were identified and ranked. Following the wordings of this set of questions, the construct with the least mean (rating) is seen as the highest challenge and vice versa. Therefore, findings indicate that the averages are access to finance (-1.33), availability of facilities (-1.724), insecurity (2.00), access to information (2.124), management of the cooperatives (2.376), government policies (3.201). This implies that financial challenge is the highest problem affecting willingness/readiness of cooperative farmers to export. This is followed by facilities, insecurity, information, management, and government policies.
3. To expose the prospects for agricultural produce exportation, we examined the attitude, subjective norms, and intention of the farmers. Results indicate a cumulative average of 4.46, implying very high attitude, subjective norms, and intention towards cooperative export. This means very high prospect. Further, while an increase in subjective norms will lead to an increase in intention, an increase in attitude will lead to non-significant decrease in intention.

**Implications**

This study aimed at exploring the agricultural produce exportation consciousness and readiness of farmers’ cooperatives in South East Nigeria, with a view to identifying the challenges they face and disclosing the prospects. The findings of the study have both theoretical and practical implications. First, from the theoretical perspective, this study contributes to the TPB model in the area of agricultural export. It demonstrates that within the context of farmers’ cooperatives intention to export, subjective norms had the widest and significant influence, while attitude is negative and non-significant. This implies that families, friends, and associates of members of the various cooperatives explored expect them to fully engage in produce export. However, the farmers’ attitude towards export is negative but non-significant, their high intention to engage in export notwithstanding. This makes room for further study to expose reasons behind the negative attitude, even when subjective norm is significant, and intention is high.

Again, the study contributes to empirical literature on the challenges of farmers’ cooperatives which limit their export ability. The study shows that finance, facilities, and insecurity emerged as the first three key challenges, and this has implications. Yet, farmers’ readiness/willingness to engage in export activities (intention) remains very high.

Practically, the results call for review of government efforts to know why governments’ financial support programmes, investments to fight insecurity, and huge amount spent on infrastructural facilities have not been able to stimulate farmers towards higher productivity and export?

Given the findings of the study, further attention on real farmers’ cooperatives is required with the aim of providing finance, facilities, and security for better performance. Besides, information dissemination channels to farmers’ cooperatives could be reviewed. Since the real farmers have little or no access to modern communication media, more local options could be explored to ensure that relevant information get to the real target audience timely. Besides, periodic training, seminar, and workshops could be organized for the management teams of the cooperatives. Apart from the government, non-governmental organizations can take part in this area to instill the required managerial skills needed for internationalizations of the various produce of the cooperatives. Also, government policies on exports and farmers cooperatives should be periodically reviewed for improvement.

**Limitations and Directions for Further Research**

The present study is limited to select farmers’ cooperatives in rural communities in the South East Nigeria. Future and on-going studies can explore other states. To encourage replication of findings, the research instrument and data sample used for this study are available for future researches.

Ethical approval

The research was approved by the Research and Ethics unit of Abia State University, Nigeria.

Disclaimer (Artificial intelligence)

Author(s) hereby declare that NO generative AI technologies such as Large Language Models (ChatGPT, COPILOT, etc.) and text-to-image generators have been used during the writing or editing of this manuscript.

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