



Agricultural Exports, Value Addition and Economic Development: The Nigerian Experience, 2015-2023

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Abstract

The Nigerian agricultural sector, which was the mainstay of economy before the commercialisation of oil, facilitated a look into how value-add in the context of agricultural exports can bring about economic development. The study did this by focusing on three main products (sesame seeds, cashew nuts, and high-quality raw cocoa beans), providing specificity in product coverage, which was lacking in extant literature. The study was specifically concerned with examining the extent to which value addition influenced the acceptability of Nigeria's agricultural exports in the international market, as well as its effect on GDP and employment creation. The study also examines challenges faced in the promotion of value addition in the context agricultural exports. To achieve the paper objectives, an explanatory sequential mixed methods design was adopted. Regression analysis was used based on quantitative data collected via a questionnaire survey. Data was collected, in primary form, from a cross section of 380 respondents, made up of members of top commodities associations and officials of selected ministries, as well as the Nigerian Export Promotion Council (NEPC). The study adopted absolute advantage theory to explained the work. Findings arrived at indicated that value addition had positive and significant positive effect on the acceptability of Nigeria's agricultural exports in the international market. Additionally, value addition on agricultural exports was found to be a positive predictor of Nigeria's GDP, as well as employment generation. Furthermore, several challenges were exposed that hampered the implementation of value addition activities on Nigeria's exports. It was therefore recommended that sustained partnership with international organisations and other stakeholders be sought for the purpose of simplifying the certification process to the benefit of encouraging more participation in the Nigerian agricultural value chain. There should also be improved access to affordable agriculture finance to address some of the challenges inherent in the sector. There is also the needed provision of necessary infrastructure development as well as intensification of innovations and vocational skills training. The operations of agencies saddled with the responsibility of implementing agricultural value addition related activities should also be streamlined in order to reduce bottlenecks in accessing access to such services by industry and stakeholders.

Keywords: Agriculture, Value, addition, Economic, development.

Introduction

At the turner of Nigeria's democracy in 1999 much emphasizes was place on agriculture which employed more than two third of Nigerian labour force. The sector contributes about 26.46% to the nation's Gross Domestic Product (GDP) in 2023 (National Bureau of Statistics, 2023).

In Africa, Nigeria is one of the largest producers of agricultural products (livestock, crop production and fishery) and the third largest exporter of raw materials amongst West African countries. It is globally noted that Nigeria played a significance role in the production of oil palm, ginger, cashew, sesame, cocoa, yam, cassava, groundnut, soya beans, among, others others. Fundamentally, the country is leading in the exportation of rubber, soya beans, cotton, beans, garlic

and melon seeds. In 2016, the total agriculture exports stood at ₦60.7 billion or 0.7% of the total exports for the period. In 2017 total agriculture export grew by 180.7% over the previous year to close at ₦170.4 billion and it accounted for 1.3% of total exports. By 2018, agriculture export increased 77% over 2017 to close at ₦302.3 billion and in 2019, the Nigeria's export value declared by 10.89% accounting for ₦269.83 billion. In the first half (H₁) of 2022, Nigeria exported agro-food items worth ₦343.4 billion, an increase of 17.3% from ₦292.8 billion recorded in the corresponding year period of 2021(Ochieng & Mwangi, 2024)

Nigeria's agricultural sector accounted for 4.96 percent of Nigeria's total foreign trade in H1 2022. Nigeria exported cocoa worth ₦114.1 billion in the first half of the year; accounting for 0.8% of the total exports recorded (Patil & Desai, 2024)

In 2021, agricultural exports from Nigeria stood at nearly 504.9 billion Nigerian naira (NGN) (1.2 billion U.S. dollars). This was the highest export value in the period reviewed. In 2020, the amount reached approximately 321.5 billion NGN (772.6 million U.S. dollars), up from a low of roughly 270 billion NGN (650 million U.S. dollars) in the preceding year. Nigeria's agricultural exports surged to a five-year high in 2022 amid local production push, National Bureau of Statistics (NBS)(2018). A total of ₦598.2 billion worth of agricultural produce were exported in 2022, accounting for 18.5 percent increase when compared to the figure recorded in 2021(Onyaniran, 2021).

The Asia region is the leading importer of Nigeria's agricultural commodities. The region accounted for 59% of total exports in 2018 (2017: 52.7%). Europe - 34.5% and America - 3.6% are the second and third biggest markets for Nigeria's agricultural goods in 2018. However, both regions' share of exports in 2018 dropped from 35.9% and 6.5% respectively recorded in 2017. In absolute term, export value of agricultural goods to Asia in 2018, grew by 167%, from ₦67.3 billion in 2017 to ₦179.6 billion. The growth was mainly driven by demands from Japan, India and China. Trade in agricultural goods between Nigeria and the rest of Africa is still relatively small compared to other regions of the world. Agricultural exports to other African countries declined by 6%, from ₦4.1 billion in 2017 to ₦3.9 billion in 2018 (Pricewaterhouse Coopers, 2019).

Despite the steady growth in the value of Nigeria's agriculture exports over the decade, the country's agriculture exports to total exports remained below 2%. Despite being the largest employer of labour, it is estimated that Nigeria has lost USD 10 billion in annual export opportunity from groundnut, palm oil, cocoa and cotton. This by implications means there exist a lot of untapped potentials in agricultural export from Nigeria. Consequently, Nigeria's agricultural sector has not been able to optimally tap into the export market due to several reasons such as fragmented smallholder farms, low adoption of modern farming practices, low adoption of mechanization, lack of investment in post-harvest handling infrastructure, weak market linkages and limited access to finance. As a result, Nigeria continues to remain a marginal player, accounting for only 2.7 percent of world trade in goods and 5 percent of world agricultural trade (Bouët & Odjo, 2019). The country currently depends to a significant degree on extra-African sources for imports of food and agricultural products.

The promotion of Nigeria's agricultural exports stands as a cornerstone in the nation's economic development strategy, encapsulating a spectrum of policies and initiatives aimed at bolstering productivity, enhancing market access, and fostering sustainability within the agricultural sector. Among these, the Growth Enhancement Support (GES) Scheme emerges as a pivotal mechanism, spearheaded by both Federal and State Governments under the Agricultural Transformation Agenda (ATA). Originating in 2012, GES operates as a catalyst for transitioning farmers from subsistence to commercial farming, leveraging subsidized inputs distribution via an innovative e-wallet voucher system. Concurrently, the Nigerian Export Promotion Council (NEPC) assumes a pivotal role in fortifying the export landscape, orchestrating a symphony of services ranging from market intelligence to export training, seamlessly connecting Nigerian exporters with global markets.

Statement of the Problem

Nigeria has continued to suffer limitations in agricultural export system amounting to what Austin (2021) described as over USD 10 billion loss in revenue that would have been accrued to the government. These limitations are as results of several factors, one of which is the presence of mycotoxins, especially aflatoxin in some agricultural products, as was the case with beans which was rejected by EU in 2013 and 2017 on the grounds of bad quality such as high than acceptable residue levels. Another reason for limitations of agricultural export is the sustainability of supplies after the initial market agreement has been achieved. Some suppliers are not able to meet up with demands thereby making potential buyers look elsewhere for suppliers of the same commodity - Produce quality control at the farm level and use of unacceptable general agricultural practices supply consistency based on traceability, quality of produce or yield is also a major limiting trade factor. There are also issues associated with port clearance, this situation often leads to delay in shipment which sometimes leads to contamination of product at the time of arrival. The poor road infrastructure and transport system often leads to congestions at the port making produce spend longer time than necessary on the way. These further

increases freight cost which the buyer is often times not willing to pay for, thus limiting agricultural export from Nigeria. The absence of transparency on the part of some agencies involved in export promotions is also another serious limitation of export trade in Nigeria.

Research Questions

The paper is guided by the following research questions:

- i) To what extent does value addition influence the acceptability of Nigeria's agricultural exports in the international market?
- ii) To what extent does value addition on agricultural exports contribute to Nigeria's economy?
- iii) To what extent does value addition on agricultural exports influence employment creation in Nigeria?
- iv) What are the challenges being faced in the promotion of value addition on Nigeria's agricultural exports?

Objectives of the Study

This paper is guided by the following research objectives:

- i) To examine the extent value addition influenced the acceptability of Nigeria's agricultural exports in the international market.
- ii) To analyse the extent of agricultural exports to the Nigeria's economy.
- iii) To analyse the perception of value addition on agricultural exports in Nigeria.
- iv) To assess the challenges being faced in adopting promotion of value addition on agriculture in Nigeria.

Research Hypotheses

This study is guided by the following hypotheses:

H₀₁: There is no significant effect of value addition on the acceptability of Nigeria's agricultural exports in the international market.

H₀₂: There is no significant effect of value addition on agricultural exports on Nigeria's gross domestic product.

H₀₃: There is no significant effect of value addition on agricultural exports on employment generation in Nigeria.

H₀₄: Challenges faced in enhancing value addition have no significant relationship with Nigeria's agricultural export.

Literature Review

Various studies have been done to identify the pathways for rural communities out of poverty. However, there is a synonymous agreement from various studies (Lundy et al., 2002) that opportunities exist for rural households to improve their incomes and diversify their livelihoods through value addition, diversification of income generating activities, vertical integration, and improved marketing arrangements through groups. In his study on the impact of value addition on household incomes, Ramirez (2001) found that value adding activities accounted for a 350 % increase in household incomes. In addition, value adding could prove useful as a poverty reduction tool if it leads to increase on and off farm rural employment and income.

The export potentials of the agricultural commodities produce a considerable revenue amount that the government uses to pay for importing final commodities and machineries relating to intermediate and capital products for services and industrial usage. In terms of employment opportunities, ECOWAS's agricultural sector is still the biggest labour supplier, which engages over 60% of her active populace, notwithstanding those sectoral earnings are below other economic sectors (Afolayan et al., 2019; FAO, 2015; Gichuhi & Nasiyo, 2016). Moreover, agriculture is an important contributor to the alleviation of poverty at every phase so as to attain food security by 2030 (FAO, 2017; Matthew et al., 2018; World Bank, 2017). Usually, West African families that practice farming utilise cutlasses and hoes, which is capable of only producing agricultural yield for personal consumption, whereas those living in urban areas (which account for over 50% of regional total populace) obtain nearly all their food from the rural markets (FAO, 2015; International Monetary Fund & World Bank, 2015; Matthew, 2018).

The poverty reduction potential of value addition in agricultural products is not only in generating rural income and employment but also by improvement in processing that reduce traditional food preparation times for the citizens developmental benefits (Obasi & Enyia, 2016). Furthermore, value addition also creates employment at low levels of investment that make effective use of local resources (Kindness & Gordon, 2001; John et al., 2014) and also creates vertical linkage with farmers that supply inputs (Ministry of Food and Agriculture MOFA, 2007; John et al., 2014). This draws the attention of various stakeholders in promoting agribusiness especially the Agro-processing sector (MOFA 2007; John et al., 2014) maintains that growth in income of households is achievable through Agro-processing activities.

In their work, Golleti and Samman (1999) highlight the poverty reduction potential of post-harvest and value-added activities noting that gains in rural income and employment are complemented by reductions in food prices for urban dwellers and improvements in processing and market chains. The improvement of processing and market chains reduce

traditional food preparation times, thus releasing time for more productive activities. The net result, therefore, may be positive for both the rural and urban poor.

Economic development has traditionally been seen as the first form of development. It has often been strictly associated with the concept of economic growth, commonly seen increase in the per capita income of the economic system. Indeed, growth defined in this way can be seen more as the result of an economic development process, i.e. the transformation of the structure of an economic system, rather than as a development process per se (Sen, 1999). The earliest concept of economic development was interpreted in terms of growth of output over time and later in terms of per capita output. The terms growth and development were used interchangeably (Bhagwati, 1995).

During 1950 and 1960s many developing countries realized their economic growth targets but standard of living of the people did not change (Harris & Todaro, 1970). In fact, existence of mass poverty, illiteracy and ill health continued to plague the developing countries. This implied that there was something wrong with this definition of economic development. Most of the economists clamoured for dethronement of GNP and define development in terms of removal of poverty, illiteracy, disease and changes in the composition of input and output, increase in per capita output of material goods (Fanon, 1980). Increase in output of goods and services and in income does not imply an improvement in the standard of living of the people because GDP is a narrow indicator of economic development that does not include non-economic indicators such as leisure time, access to health, education, environment, freedom or social justice (Bhagwati, 1995).

Empirical Review

Amoro and Shen (2013) examined the factors that influence agricultural exports with specific reference to Cocoa and rubber. Secondary data was used for this study. Ordinary Least Squares regression (OLS) was used in analysing the relevant data. The OLS findings revealed that rubber export is influenced significantly ($p < 0.05$) by domestic rubber production ($\beta = 68124.857$), producer price ($\beta = 10741.503$), exchange rate ($\beta = -17078.957$), domestic consumption ($\beta = -27094.147$) and interest rate ($\beta = 14991.565$). For hours that cocoa output ($\beta = 0.847$), domestic consumption ($\beta = -0.850$) and rainfall ($\beta = 44.074$) significantly ($p > 0.05$) influence cocoa export.

From the study, it can be deduced that the positive sign for the cocoa and rubber production implies that an increase in production will lead to an increase in export. It can be seen that although the use of equation has made the explanation in the findings has made the findings complex and what the authors missed out is that there should be value addition in respect of the cocoa and rubber being exported.

Onwusiribe et al. (2018), conducted a study to consider the trends, competitiveness and constraints of Nigeria ginger export from 1961-2016. This study adopted principally secondary data obtained from the Central Bank of Nigeria statistical bulletin, National Bureau of Statistics (NBS), Food and Agriculture Organization database, World Bank Statistical Bulletin, statistical reports and other sources for a period of 1961-2016. Quadratic trend model generalized method of moments and revealed comparative advantage were used to analyse the data. The findings revealed that ginger exports had a positive forecast and trend while United Kingdom and United States of America are the major importers of Nigerian ginger. Cost of exporting and time required for exports were statistically significant at 10% and 1% respectively and constrained the ginger exporters. Nigerian ginger exports became competitive within the era of the structural adjustment program with a mean of 0.084.

Alalade et al. (2019) conducted a study on Effect of Value Addition on Farm Income of Sweet Potato Farmers in Kwara State, Nigeria. A three-stage sampling procedure was employed to select 145 respondents. Structured questionnaire coupled with interview schedule were used to collect primary data. Multiple regression was used to analyse the effect of different value addition activities on income received from sweet potatoes. Also, marginal effects were obtained to analyse the effect of each independent variable separately on income. Findings revealed that farmers who engaged in value adding activities had higher income than those that sell at farm gate. In addition, farmer marketing groups had a stronger bargaining power in the market compared to farmers selling individually.

Adeyemo and Okoruwa (2018) examined the effect of value addition on productivity of farmers in the cassava system in Nigeria. The study analysed a non-parametric data development analysis to examine productivity across cassava production systems over the three-year period. The study also examined the impact of value addition on productivity using an endogenous switching regression to account for unobservable that determine the decision to add value and productivity of the farmers. The study conditional and unconditional outcome estimates revealed positive gains in productivity with value addition, confirming the hypothesis that value addition increases farming households' productivity. The study revealed that cost and revenue outlays increased with value addition. Cassava farmers in general operated below the efficiency frontier, with total productivity declining over the 2015–2017 period. However, higher value addition farmers had better efficiency and non-reducing productivity in the periods studied. The study found evidence of selection bias in the decision to add value and productivity of the farmers. The study recommended that

essential services such as extension services, agricultural training, and ease of enterprise registration that drive agricultural value addition be made available to farmers.

Omekwe et al. (2018) carried out a study examining the determinants of agricultural output in Nigeria covering the period between 1985-2016 making use of data obtained from the CBN statistical bulletin. The findings of the study showed that agricultural funding; agricultural credits as well as climate change are key determinants of agricultural output in Nigeria. Other determinants of agricultural output that the authors did not mention include enabling government policies, injection of mechanised farming, incentivization of the agricultural sector to encourage private sector participation and agriculture should be treated as a business not the other way round.

Obasi (2013) examined and identified factors that affect agricultural productivity in Imo state, Nigeria. The results revealed that age, level of education, years of farming experience, farm size, extension contract, fertilizer use, planting materials and labour use are the main determinants of agricultural productivity in the state. Other determinants the author did not mention as stated above include formulation of enabling government policies, injection of mechanised farming, incentivization of the agricultural sector to encourage private sector participation and agriculture should be treated as a business not the other way round.

Maritz (2023) cited Mc Kinsey Global Institute Report which noted that as countries develop, both the share and number of jobs in Agriculture generally decline but Africa with its vast tracts of arable land and conducive climate can defy the trend. The Report projected that the Continent would create eight million wage -paying jobs in Agriculture by 2020. However, this could be increased by a further six million if Africa were to accelerate development of the sector; this would be equivalent to an additional 3.1% growth in value added per annum.

Asogwa & Treasure (2021) examined the extent to which agricultural value-added output translates to employment creation and regional integration in sub-Saharan Africa. Observations were drawn from 22 countries in the region and a Dynamic panel data Econometric model of the Generalized Method of Moment (GMM) was applied from 2000 to 2017. Evidence from the study revealed that increased agricultural value-added output reduced unemployment by 0.102%, while regional integration increased by 0.441%. The long-run elasticity of Agro-allied industrialization output to regional trade was 0.56%. Hence, the study supports agricultural policies that promote agricultural value-added output to improve regional integration and a reversed unemployment trend in the region.

Patil and Desai (2024) investigated the potential of enhancing employment opportunities through value addition in agricultural exports in India. Using a qualitative research design, the study focused on key agricultural sectors such as spices, tea, and fruits. Through purposive sampling, 170 participants were selected from different states of India. Data were collected through interviews, focus group discussions, and document analysis to explore the linkages between value addition activities and employment creation in the agricultural sector. Thematic analysis was employed to analyze qualitative data. The study revealed that value addition processes such as food processing and packaging have the potential to generate significant employment opportunities, particularly in rural areas, thus contributing to inclusive growth and rural development.

Ochieng and Mwangi (2024) conducted a study to evaluate the effectiveness of government interventions in enhancing value addition in tea exports in Kenya. Using a qualitative research design, the study focused on stakeholders involved in the tea industry, including farmers, processors, and policymakers. Through purposive sampling, 120 participants were selected from various regions of Kenya. Data were collected through interviews, focus group discussions, and document analysis to assess the impact of government policies and programs on value addition activities such as processing and packaging. Thematic analysis was employed to analyze qualitative data. The study found that government initiatives such as investment in processing infrastructure and quality standards had positive effects on promoting value addition in Kenya's tea exports. However, challenges such as inconsistent policies and limited access to markets hindered the full realization of potential benefits.

Theoretical underpinning

The theory of absolute advantage is an international trade theory that justifies trade among different economies. It was propounded by Adam Smith in his 1776 publication, an inquiry into the nature and causes of the wealth of nations. The theory says that a country should export products on which it is more productive than other countries; that is good for which it can produce more output per unit of input than other can. In other words, these are the goods it has absolute advantage on. The theory as it suggests that, a country should import those goods on which it is less productive than other; that is goods it has an absolute disadvantage (Dunn & Mutti, 2004).

According to Smith (1776), each nation benefits by specializing in the production of the good that produces at lower cost than the other nation, while importing the good that it produces at a higher cost. This will increase specialization,

world output and the gains from trade (Carbaugh, 2004). According to this theory foreign trade is a positive- sum game because both countries involve will benefit from the trade thus, a nation as well all nations could gain simultaneously (Afaha & Oluwatobi, 2012).

However, these raise the question of whether trade when one of the two countries trading has an absolute advantage in the production of the two commodities. Should trade still take place when one partner can produce both the other partner. The theory failed to answer this satisfactorily and that gave rise to Ricardo’s theory of comparative Advantage. This above theory is not the best suitable to explain the impact of value addition on agricultural export production in Nigeria’s economy. As such, the theoretical framework that will be adopted for this research is the neo-liberal theory.

Knowledge Gap

This study seeks to fill a knowledge gap by previous researchers on the basis of which contributions to knowledge can be made. The work of scholars like Fakoya (2014), Dirshar (2015), Fela and Okwori (2014) were interested interest in agricultural export in Nigeria’s economic development without looking at the impact of value addition on agricultural production in Nigeria’s economy. This paper therefore critically analyzes the place of value addition on agricultural export production and how it has positively affected the economic lives of the Nigerian people. The period of this paper from 2015-2022 also bridge the gap that most scholars could not covered.

Methodology

Population

The population of the study was all 5,529 producers, growers, processors and exporters, who were members of top commodities associations, as presented in table 1.

Table 1: Population Profile of the Study

Area of Targeted Population	Number
Cocoa Processors Association of Nigeria (CPAN)	622
International Tobacco Growers Association (ITGA)	484
Skin & Leather Processors marketers Association	553
National Rubber & Marketers Association	580
Association of Furniture Manufacturers & Traders	415
Ginger Growers, Processors and Marketers Association of Nigeria (GGPMAN)	622
National Sesame Seed Association	622
Cashew Farmers’ Association of Nigeria	622
The Fish Farmers Association of Nigeria (TFFA)	484
The National Cotton Association of Nigeria (NACOTAN)	525
Total	5529

Source: Authors' Field Survey, 2024

Additionally, the study adopts Taro Tamane (1976) method of determining sample size, viz:

$$n = \frac{N}{1 + N(e)^2}$$

- Where: n - Necessary sample size.
- N - Population size.
- e - Margin of error (0.05).

inputting pertinent values in the formula gives,

$$n = \frac{5527}{1 + 5527(0.05)^2}$$

$$n = \frac{5527}{1 + 5527(0.0025)}$$

$$n = \frac{5527}{1+13.8175}$$

$$n = \frac{5527}{14.8175}$$

$$n = 373$$

The necessary sample size computed for the study was 373. However, to address the problem of non-response, which is common with empirical studies of this nature, this number was increased by 30% to 485. In this study, a stratified random sampling method was employed to ensure a representative and comprehensive approach to data collection. The target population, comprising various associations related to cocoa processing, tobacco growing, skin and leather processing, rubber marketing, furniture manufacturing, ginger processing, sesame seed production, cashew farming, fish farming, and cotton production, was categorized into distinct strata based on the specific industry or association. The sample size for each stratum was determined proportionally to the population size, ensuring that a fair representation was achieved across all sectors. The sample size for each stratum was determined with the formula,

$$nb = \frac{\text{Population of Stratum}}{\text{Total Population}} \times \text{Total Sample Size}$$

Where: nb - Sample proportion

Table_2: Determination of Sample Proportion

Population Stratum	Sample Proportion
Cocoa Processors Association of Nigeria (CPAN)	$\frac{622}{5529} \times 485 = 55$
International Tobacco Growers Association (ITGA)	$\frac{484}{5529} \times 485 = 42$
Skin & Leather Processors marketers Association	$\frac{553}{5529} \times 485 = 49$
National Rubber & Marketers Association	$\frac{580}{5529} \times 485 = 51$
Association of Furniture Manufacturers & Traders	$\frac{415}{5529} \times 485 = 36$
Ginger Growers, Processors and Marketers Association of Nigeria (GGPMAN)	$\frac{622}{5529} \times 485 = 55$
National Sesame Seed Association	$\frac{622}{5529} \times 485 = 55$
Cashew Farmers' Association of Nigeria	$\frac{622}{5529} \times 485 = 55$
The Fish Farmers Association of Nigeria (TFFA)	$\frac{484}{5529} \times 485 = 42$
The National Cotton Association of Nigeria (NACOTAN)	$\frac{525}{5529} \times 485 = 46$
Total	485

Source: Researchers' Compilation.

Method of Data Analysis

Both quantitative and qualitative analysis were employed in processing the collected primary data with their respective techniques for establishing variable relationships and testing formulated hypotheses. In the former, the use of regression analysis was applied in estimating the causal relationship between Value Addition and Acceptability of Nigeria's Agricultural Exports in the International Market, the effect of Value Addition on Agricultural Exports on GDP, the effect of Value Addition on agricultural Exports on employment Creation, the effect of Government Promoted Value Addition on Nigeria's Agricultural Exports, and the effect of Challenges Faced in Enhancing Value Addition on Nigeria's Agricultural Export. (1) to (5) show the specified regression equations of the study.

$$ANA = \beta_0 + \beta_1VA \quad (1)$$

$$AXP = \beta_0 + \beta_1VA \quad (2)$$

$$AXG = \beta_0 + \beta_1VA \quad (3)$$

$$NAX = \beta_0 + \beta_1MVA \quad (4)$$

$$NAX = \beta_0 + \beta_1CFV \quad (5)$$

Where:	ANA	-	Acceptability of Nigeria's agricultural exports in the international market
	AXP	-	Agricultural exports and Nigeria's gross domestic product
	AXG	-	Agricultural exports and employment generation
	VA	-	Value addition
	MVA	-	Measures implemented to enhance value addition
	NAX	-	Nigeria's agricultural exports
	CFV	-	Challenges faced in enhancing value addition
	β_i	-	Regression parameters.

Qualitative data are often collected to gain a better understanding of underlying reasons and motivations and to provide deeper insights into the research scope. Data collected through interview was analysed based on the narrative of the interviewees using Braun and Clarke (2006) step by step process of thematic analysis. The transcribed data was read and reviewed. The procedural aspects of data analysis comprise of coding, cross checking, manual tabulation and transferring of data. The combination of manual and NVivo coding was adopted in the process of reducing, organizing as well as analysing the statement of respondents. Coding is one of the important processes of qualitative data analysis as it allows the researcher to understand and make meaningful interpretations of experiences and opinions of the interviewees in the captured interviews.

Coding of interviews also benefit from the advantage of moving from categorical or particular statements to that of abstraction as well as interpretation of interview information (Charmaz, 2006). First, the manuscript was read line by line to generate codes, new ideas and identified recurrent themes, at this stage the main research questions or expectation in relation to theory and concepts will be disregarded to allow open or ending coding of the manuscripts. Second, with the progress made in the first order coding and analysis, the transcribed data was incrementally refined and further categorized in themes using direct quotation of interviewees at this stage a thematic analysis was adopted.

Table_3: Influence of Value-Added Interventions on the Acceptability of Nigeria's Agricultural Exports in the International Market.

S/No.	Questions	SA	A	U	D	SD	Mean	Std. D.
		5	4	3	2	1		
1.	Nigeria's export products are acceptable in the international market after undergoing value addition process	160 42.1%	220 57.9%	-	-	-	4.40	0.025
2	There is high customer satisfaction and patronage of Nigeria's export after undergoing value addition process	300 78.9%	80 21.1%				4.81	0.018
3	Value addition process enables Nigeria's export products meet international standards and specifications	200 52.6%	180 47.4%				4.54	0.030
4	Value addition process enables Nigeria's export products compete in the international market	250 65.8%	130 34.2%				4.67	0.027
5	Value addition process simplifies the marketing of Nigeria's export products in the global market are satisfying	220 57.9%	160 42.1%				4.59	0.029
6	Value addition process enhances the branding and packaging of Nigeria's export products in the global market	300 78.9%	80 21.1%				4.81	0.018

Source: Authors' Field Survey, 2024.

The result in table 8 provides the summary of survey responses related to the influence of value addition on the acceptability of Nigeria's agricultural exports in the international market. The majority of respondents (57.9%) agreed that value addition improves the acceptability of these products in the international market; 78.9% strongly agree that value addition leads to high customer satisfaction and patronage for Nigeria's exports. Respondents generally agreed that value addition helps Nigeria's export products meet international standards and specifications, with a slight majority (52.6%) strongly agreeing.

A significant majority (65.8%) strongly agreed that value addition enables Nigeria's export products to compete effectively in the international market. around 57.9% respondents strongly agreed that value addition simplifies marketing and is satisfying for Nigeria's export products in the global market. The majority (78.9%) of respondents strongly agreed that value addition enhances the branding and packaging of Nigeria's export products in the global market. In summary, based on the survey responses, it appears that value addition is widely perceived as having a positive impact on the acceptability, competitiveness, customer satisfaction, and overall quality of Nigeria's agricultural exports in the international market. The majority of respondents expressed strong agreement with these statements, indicating that value addition is an important factor in the success of Nigeria's agricultural exports on the global stage.

Table_4: The Contribution of Nigeria's Agricultural Exports to Nigeria's Economy

S/N	Questions	SA	A	U	D	SD	Mean	Std. D.
		5	4	3	2	1		
1.	Agricultural increases the country's GDP	200 52.6%	150 39.5%	30 7.9%			4.26	0.72
2.	Agricultural exports provide employment opportunities to Nigerians.	300 78.9%	80 21.1%				3.15	1.73
3.	Agricultural exports allow farmers access to new markets and penetration of new products.	280 73.7%	100 26.3%				4.61	1.61
4.	Value addition of agricultural exports creates brand identity and loyalty.	100 26.3%	260 68.4%	20 5.3%			3.00	0.13
5.	Value addition of agricultural exports reduces imports and increases export.	200 52.6%	180 47.4%				4.77	1.75
6.	Value-addition increases the quality and standards of agricultural export products	150 39.5%	230 60.5%				4.61	1.61
7.	Value addition increases revenue generated from agricultural exports.	160% 42.1%	220% 57.9%				3.00	0.13
8	Value addition reduces post-harvest losses as a result of increased sales	250 65.8%	130 34.2%				4.77	1.21
9	Value addition encourages growth of subsidiary industries as a result of increased production	280 73.7%	100 26.3%				4.26	0.72
10	Value-addition increases food safety, nutritional benefits and greater consumer benefits	140 36.8%	230 63.2%				3.15	1.73

Source: Authors' Field Survey, 2024

The result in table 4 provided responses related to the extent to which Nigeria's agricultural exports have contributed to Nigeria's economy. The majority of respondents (52.6%) strongly agreed that agricultural exports contribute to generating foreign exchange for Nigeria, which is crucial for the country's economy. A significant majority (78.9%) strongly agreed that agricultural exports offer employment opportunities to Nigerians, indicating its role in job creation. Respondents largely agreed (73.7%) that agricultural exports open up new markets and opportunities for farmers. A majority (52.6%) strongly agreed that value addition reduces imports and boosts exports, which is beneficial for the economy.

Most respondents, making up 60.5% of the total sample, agreed that value addition enhances the quality and standards of agricultural export products. Most respondents (65.8%) strongly agreed that value addition reduces post-harvest losses, which is economically beneficial. A majority (73.7%) strongly agreed that value addition promotes the growth of subsidiary industries through increased production.

Respondents mostly agreed (63.2%) that value addition enhances food safety, nutritional benefits, and consumer benefits.

In summary, the survey responses suggests that agricultural exports play a significant role in Nigeria's economy, contributing to GDP, foreign exchange, employment creation, market access, and other positive economic impacts. However, there are variations in responses regarding the extent of certain contributions, such as revenue generation and food safety, indicating some diversity of opinions among respondents.

Table_5: Perception of Value-Added Interventions to Enhance Nigeria's Agricultural Exports.

S/No.	Questions	Very Effective	Effective	Not sure	Not Effective	Very Ineffective	Mean	Std. D.
		5	4	3	2	1		
1.	Establishment of agencies and departments to facilitate the processes of value addition of agricultural exports.	200 52.6%	180 47.4%				4.54	0.36
2.	Introduction of modernized packaging facilities of agricultural exports	280 73.7%	100 26.3%				4.73	0.57
3.	Funding for research and development in agricultural exports	60 15.8%	50 13.2%		200 52.6%	70 18.4%	3.08	1.23
4.	International collaboration and partnerships to enhance knowledge transfer and technology acquisition in value-addition processes	20 5.3%	40 10.5%		150 39.5%	170 44.7%	2.16	1.17
5.	Provision of financial incentives and support programs to farmers	70 18.4%	70 18.4%		200 52.6%	40 10.5%	3.81	0.85
6.	Provision of infrastructure, such as transportation and storage facilities.				280 73.7%	100 26.3%	4.59	0.49
7.	Establishment of quality control and certification systems to ensure the standardization of value-added agricultural products	30 7.9%	50 13.2%		150 39.5%	150 39.5%	3.61	1.20
8.	Provision of training and capacity-building programs for farmers	60 15.8%	80 21.1%		100 26.3%	150 39.5%	3.54	1.15

Source: Authors' Field Survey, 2024

The result in table 5 summarizes responses related to the effectiveness of measures implemented to enhance Nigeria's agricultural exports. The majority of respondents (52.6%) believed that the establishment of agencies and departments to facilitate value addition processes for agricultural exports is very effective. Most respondents (73.7%) considered the introduction of modernized packaging facilities to be very effective in enhancing agricultural exports.

Responses to this question indicate uncertainty among a majority of respondents (44.7%) regarding the effectiveness of international collaboration in knowledge transfer and technology acquisition for value addition. Similar to the previous question, there is uncertainty among a majority of respondents (52.6%) regarding the effectiveness of financial incentives and support programs for farmers.

Respondents unanimously considered the provision of infrastructure, including transportation and storage facilities, to be very effective. Establishment of quality control and certification systems to ensure the standardization of value-added agricultural products, this question also received mixed responses, with a significant number of respondents, making up 39.5% of the total respondents, being unsure about the effectiveness of quality control and certification systems. Similar to previous questions, there is uncertainty among a majority of respondents (39.5%) regarding the effectiveness of training and capacity-building programs for farmer.

In summary, the survey responses indicate that respondents generally view measures such as the establishment of modern packaging facilities, provision of infrastructure, and quality control systems as effective in enhancing Nigeria's agricultural exports. However, there is notable uncertainty regarding the effectiveness of financial incentives, research

funding, international collaboration, and training programs. This suggests that there may be room for improvement and further evaluation of these measures to enhance their effectiveness in supporting agricultural exports in Nigeria.

Table 6: Challenges being Faced in Adopting Value Added Agricultural Intervention

S/No.	Questions	SA	A	U	D	SD	Mean	Std. D.
		5	4	3	2	1		
1.	Logistic challenges at the ports	180 47.4%	200 52.6%				4.46	0.11
2.	Inadequate storage facilities and poor distribution network	200 52.6%	150 39.5	30 7.9%			4.16	1.05
3.	Poor farming conditions	100 26.3%	100 26.3	20 5.3%	80 21.1%	80 21.1%	2.54	1.20
4.	Lack of technical know how	250 65.8%	130 34.2%				4.12	0.98
5.	Insecurity	220 57.9%	160 42.1%				4.01	1.07
6.	Exchange rates fluctuations	180 47.4%	200 52.6%				4.46	0.57
7.	Trade Restrictions and protectionist policies	300 78.9%	80 21.1%				4.35	0.63
8	Insufficient and poor transportation networks	200 52.6%	180 47.4%				4.27	0.85
9	Foreign exchange regulations	170 44.7%	170 44.7%	40 10.5%			4.35	0.63
10	Unstable power supply	200 52.6%	180 47.4%				4.12	
11	Poor quality of seeds and crops.	250 65.8%	130 34.2%				4.12	1.01

Source: Authors' Field Survey, 2024

The result in table 6 provided summarizes survey responses regarding the challenges faced in promoting Nigeria's agricultural exports. The majority of respondents (52.6%) identified logistic challenges at the ports as a significant challenge in promoting Nigeria's agricultural exports. Respondents largely agreed (52.6%) that inadequate storage facilities and a poor distribution network pose significant challenges.

Poor farming conditions: this question received mixed responses, with some respondents (26.3%) identifying poor farming conditions as a challenge, while others were unsure or did not find it to be a significant issue. A significant majority (65.8%) believed that the lack of technical know-how is a substantial challenge in promoting agricultural exports. Respondents generally perceived insecurity as a challenge, with a majority (57.9%) considering it a significant issue. A significant majority (52.6%) identified exchange rate fluctuations as a challenge in promoting agricultural exports.

The majority of respondents, making up 78.9% of the total sample, considered trade restrictions and protectionist policies to be a significant challenge. Respondents saw insufficient and poor transportation networks as a challenge, with a majority of 52.6% considering it significant. Respondents perceived foreign exchange regulations as a challenge, with many (44.7%A, 44.7%SA) considering it significant. A significant majority of 52.6% identified unstable power supply as a challenge in promoting agricultural exports. A significant majority of 65.8% of the sample, believed that poor quality of seeds and crops is a substantial challenge.

In summary, the survey responses suggest that there are several challenges in promoting Nigeria's agricultural exports. These challenges include logistic issues at ports, inadequate storage facilities, lack of technical know-how, insecurity, exchange rate fluctuations, trade restrictions, transportation network issues, foreign exchange regulations, unstable power supply, and poor quality of seeds and crops. These findings highlight a range of obstacles that need to be addressed to facilitate the growth of Nigeria's agricultural exports.

Test of Hypothesis I

H₀₁: There is no significant effect of value addition on the acceptability of Nigeria's agricultural exports in the international market.

The result of regression analysis presented in table 12 shows that there is a statistically significant positive effect of Nigeria's Agricultural Exports and Value Addition, as evidenced by the significant p-value and the positive beta value (0.188, $p < 0.05$). This suggests that changes in value addition process have a positive influence on Nigeria's agricultural exports. The null hypothesis in this case was therefore rejected.

Table 7: Regression Analysis on Value Addition Influence on the Acceptability of Nigeria's Agricultural Exports in the International Market

Model	Standardized Coefficients		R	R ²	Adj. R ²	P-value
	Beta	t				
1	(Constant)					
	Nigeria's agricultural exports	0.188	13.031	.16 ^a	.68	.318
			1.13			.014

Source: SPSS Output.

Furthermore, table 7 shows the R square of 0.68 which explained a significant portion (68%) of its variance. The *p-value* of 0.014 obtained suggested that Value addition has significant influence on acceptability of Nigeria's agricultural exports in the international market.

H₀₂: There is no significant effect of value addition on agricultural exports on Nigeria's gross domestic product.

The result of regression analysis presented in table 13 shows that the p-value is associated with each predictor variable. In this case, the p-value for Nigeria's Agricultural Exports is 0.018, which is less than the conventional significance level of 0.05. This indicates that Nigeria's Agricultural Exports is statistically significant in predicting the dependent variable. The result therefore indicates that there is a statistically significant positive relationship between Value Addition on Nigeria's Agricultural Exports and Nigeria's GDP. This is indicated by the significant p-value (0.018) and the positive beta value (0.198). The estimated positive and significant causal relationship provided sufficient empirical evidence for the rejection of the null hypothesis.

Table 8: Regression Analysis on the Relationship between Value Added Agricultural Exports and GDP in Nigeria.

Model	Standardized Coefficients		T	R	R ²	Adj. R ²	P-value
	Beta						
1	(Constant)						
	Nigeria's agricultural exports	.198	11.011	.163 ^a	.75	.318	
			1.12				.018

Source: SPSS Output.

Table 8, also indicated that the estimated R square value was 0.75 suggesting that Nigeria's Agricultural Exports explains a significant proportion (75%) of the variation value addition to gross domestic product. This suggests that changes in the level of Nigeria's agricultural exports contribute positively to Nigerian economy, explaining a significant amount of variance in the model.

H₀₃: There is no significant effect of value addition on agricultural exports on employment generation in Nigeria.

The result of regression analysis presented in table 14 shows that the p-value for Nigeria's Agricultural Exports is 0.010, which is less than the conventional significance level of 0.05. This indicates that Nigeria's Agricultural Exports is statistically significant in predicting the dependent variable (Employment Creation). This is indicated by the significant p-value (0.010) and the positive beta value (0.171). On this basis, the null hypothesis was rejected.

Table 9: Regression analysis on the relationship between value added agricultural exports and employment generation in Nigeria.s

	Model	Standardized Coefficients	T	R	R ²	Adj. R ²	P-value
		Beta					
1	(Constant)		15.031	.16 ^a	.61	.311	
	Nigeria's agricultural exports	.171	1.13				.010

Source: SPSS Output.

Similarly, table 9 indicates that the R-squared value of 0.61 suggests that Nigeria's Agricultural Exports explains a significant proportion (61%) of the variation employment creation. This indicates that value addition of Nigeria's agricultural exports can promote employment creation. The hypothesis was therefore rejected.

Test of Hypothesis V

H₀: Challenges faced in adopting value added interventions and decreasing Nigeria's agricultural export.

The regression analysis presented in table 16 disclosed the p-value associated with each predictor variable. The p-value for "Nigeria's agricultural exports" is 0.017, which is less than the conventional significance level of 0.05. This indicates that "Nigeria's agricultural exports" is statistically significant in predicting the dependent variable (Challenges faced in adopting value added interventions). The null hypothesis, in light of the estimated result is therefore, rejected.

Table10: Regression analysis on the Relationship Between Challenges Faced and Decreasing Nigeria's Agricultural Export.

	Model	Standardized Coefficients	T	R	R ²	Adj. R ²	P-value
		Beta					
1	(Constant)		16.163				
	Nigeria's agricultural exports	.199	0.915	.154 ^a	.091	.033	.017

Source: SPSS Output.

More to that, table 10 shows that there is a statistically significant positive relationship between "Nigeria's agricultural exports" and the challenges faced in adopting value added interventions. This is indicated by the significant p-value (0.017) and the positive beta value (0.199). The hypothesis was therefore rejected. Similarly, the R-squared value is relatively low (0.091), suggesting that "Nigeria's agricultural exports" explains only a small proportion of the variation in the challenges faced in adopting value added interventions. This means that while there is a statistically significant relationship, there are likely other factors that also influence the challenges faced in adopting value added interventions.

Result of Findings

Findings on research question one show that value addition has a significant relationship with the acceptability on Nigeria's agricultural exports in the international market. This is evident from the result of regression analysis presented in table 7 which shows that there is a statistically significant positive relationship between "Nigeria's agricultural exports" and "Value addition," as indicated by the significant p-value (0.014) and the positive beta value (0.188). This suggested that changes in value addition process have a positive influence on Nigeria's agricultural exports, explaining a significant portion (68%) of its variance. The p-value of 0.014 obtained suggested that Value addition has significant influence on acceptability of Nigeria's agricultural exports in the international market. This finding is consistent with that of Abdullahi, Aluko et al. (2021), Alalade et al. (2019) Adeyemo and Okoruwa (2018) Otegunrin and Sawicka (2019) who held popular view that value addition on agricultural products is of immense benefit to agricultural stakeholders.

Findings of the second research question revealed that value addition on agricultural exports have a significant relationship with Nigeria's GDP. From the regression analysis in table 8, the p-value for Nigeria's Agricultural Exports is 0.018, which is less than the conventional significance level of 0.05. This indicates that Nigeria's Agricultural Exports is statistically significant in predicting the dependent variable. The result therefore indicates that there is a statistically significant positive relationship between "Value addition on Nigeria's Agricultural Exports and Nigeria's GDP. This is

indicated by the significant p-value (0.018) and the positive beta value (0.198). This suggests that changes in the level of Nigeria's agricultural exports contribute positively to Nigerian economy, explaining a significant portion (75%) of its variance. The hypothesis was therefore rejected.

This finding is corroborated by Oji-Okoro (2011) who in his study of the contribution of agricultural sector on the Nigerian economic development found a positive relationship between Gross Domestic Product (GDP) vis-à-vis domestic savings, government expenditure on agriculture and foreign direct investment between the periods of 1986 to 2007. It is also consistent with the works of Olajide, et al. (2012) who analysed relationship of agricultural exports and economic development in Nigeria and revealed that a positive cause and effect relationship between Gross Domestic Product (GDP) and agricultural exports in Nigeria.

Findings indicated a positive and significant effect of agricultural exports on employment creation as indicated in the regression analysis. The result of regression analysis presented in table 9 shows that the p-value for Nigeria's Agricultural Exports is 0.010, which is less than the conventional significance level of 0.05. This indicates that "Nigeria's agricultural exports" is statistically significant in predicting the dependent variable (employment creation). This is indicated by the significant p-value (0.010) and the positive beta value (0.171). The R-squared value of 0.61 suggests that Nigeria's Agricultural Exports explains a significant proportion (61%) of the variation employment creation. This indicates that value addition of Nigeria's agricultural exports can promote employment creation.

Findings on research question four which to know the challenges being faced by farmers in adopting value addition on agricultural exports indicated that several challenges have hampered the application of value addition activities on Nigeria's agricultural exports. The regression analysis presented in table 10 disclosed the p-value associated with each predictor variable. The p-value for Nigeria's Agricultural Exports is 0.017, which is less than the conventional significance level of 0.05. This indicates that "Nigeria's agricultural exports" is statistically significant in predicting the dependent variable (Challenges facing the promotion of value addition). Overall, based on this table, it appears that there is a statistically significant positive relationship between Nigeria's Agricultural Exports and the perception of challenges facing the promotion of value addition. This is indicated by the significant p-value (0.017) and the positive beta value (0.199). The hypothesis was therefore rejected indicating that there are challenges facing the promotion of value addition of Nigeria's agricultural export.

The finding is supported by Aniedu et al. (2012) who highlighted lack of market, inadequate knowledge of innovation, lack of funds, no-retraining facilities lack of equipment/facilities, etc. as some challenges being faced by farmers in adoption of Value Added Innovations in Root and Tuber Crops Among Farmers in Imo State, Nigeria.

Conclusion

From the analysis of findings, this study concludes that value addition has a significant positive relationship with the acceptability on Nigeria's agricultural exports in the international market. It also argued that value addition on agricultural exports has a significant relationship with Nigeria's GDP and employment generation. It concluded that measures implemented in promoting value addition have a significant relationship agricultural export. It also argued that several challenges have hampered the implementation of value addition activities on Nigeria's Agro-allied products exports.

Recommendations

Based on the findings of the study, the following recommendations are made to enhance value addition on agricultural exports:

- a. It is the recommendation of this study for partnership between leading global (especially EU) certification bodies with relevant stakeholders (certification) in Nigeria for the purpose of simplifying the certification process to benefit more actors active in agriculture value chains.
- b. Improved access to agriculture finance to address the challenge of the high cost of and limited access to agriculture finance that has continued to deter development of value chains in all the sub-sectors of fisheries, livestock and crops. Sources of funds that will maximise value addition must be long term with minimal interest rates and adequate moratorium period for repayment.
- c. Provision of adequate infrastructure is essential for the promotion of value addition in the agriculture sector. Public investment is needed to expand access to roads, laboratories, physical markets, storage facilities, telecommunication, and electricity.
- d. The existing policy frameworks for value addition should be backed upon by strong foundation based on an education system that develops skills for value addition. The curriculum should therefore focus more on vocational training and government should set up apprenticeship centres like those found in India to stimulate innovation and creativity including value addition. Vocational training institutes should be equipped and linkages between research institutions of learning and enterprises enhanced through memorandum that provide for internship programmes.

- e. Government should streamline and coordinate the operations of agencies saddled with the responsibility of implementing agricultural value addition related activities in order to reduce bottlenecks in accessing such services by industry stakeholders.

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