



EXPLORING THE BENEFITS OF AN EFFECTIVE SUPPLY CHAIN CHANNEL DESIGN ON MARKETING PERFORMANCE OF AGRICULTURAL PRODUCTS' FIRMS

Joseph Akam Mpuon^{1*}, Eko Hodo Anna², Dorothy Oyo-Ita³,

Onigah Peter Oko⁴, and Agu Benjamin Chukwuma⁵.

¹⁻³Department of Marketing, University of Calabar, Nigeria.

⁴Department of Banking and Finance, University of Abuja.

⁵Department of Business Management, University of Calabar, Nigeria.

Emails:

¹mpuonjoseph@gmail.com, ²blessedeko@unical.edu.ng, ³oyoitadorothy@gmail.com,
⁴peteronigha@gmail.com, ⁵chumaagu@yahoo.com

*Corresponding Author's Email: mpuonjoseph@gmail.com

Cite this article:

Joseph Akam Mpuon, Eko Hodo Anna, Dorothy Oyo-Ita, Onigah Peter Oko, Agu Benjamin Chukwuma (2025), Exploring the Benefits of an Effective Supply Chain Channel Design on Marketing Performance of Agricultural Products' Firms. British Journal of Management and Marketing Studies 8(3), 63-85. DOI: 10.52589/BJMMS-TGTJAZQZ

Manuscript History

Received: 26 Apr 2025

Accepted: 7 Jun 2025

Published: 2 Dec 2025

Copyright © 2025 The Author(s).

This is an Open Access article distributed under the terms of Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International (CC BY-NC-ND 4.0), which permits anyone to share, use, reproduce and redistribute in any medium, provided the original author and source are credited.

ABSTRACT: *Even with the expansion of the vendor network channel management research and the development of the nation's agricultural industry, there seem to be no empirical research on supply chain channel design as it relates to marketing performance of agricultural products' firms. Particularly, it appears that there have not been studies on the relationship between supply chain channel design, within the context of Nigeria agricultural industry. The lack of literature by scholars with respect to supply chain channel design in the agricultural industry to trigger innovations in channel techniques and strategies could properly be the root cause of ineffective marketing performance of agricultural products' firms in terms of customer's service, profitability and product availability. The researchers therefore, sought to discuss this limitation, thereby bridging acknowledge gap. Based on the objective of the study, a systematic survey was utilized to obtain information from 391 management staff of agricultural product enterprises, and on3 hypothesis was developed. The data were analyzed using descriptive and inferential statistical techniques. The results demonstrated a favourable and significant association between supply chain channel design and marketing performance of agricultural product companies. It was concluded that if supply chain channel design is well implemented, there would be an increase in marketing performance as measured by client fulfilment, profitability and product availability. Considering the results, it was recommended that sales, supply chain and marketing managers should effectively design their marketing channel to enhanced marketing performance in terms of customer services, profitability and product availability.*

KEYWORDS: Agribusiness, channel design, marketing performance, resource based – view, supply chain management.



INTRODUCTION

According to Mpuon and Oyong (2019a), Stevens (1989) and Srivastava (2022) a supply chain is a link of interconnected and dependent business that cooperate and collaborate to facilitate the movement of goods into markets. Mpuon (2018a, 2018b), Jeresa et al. (2022) and Sillanpaa (2010) Maintained that SC is a collection of techniques and strategies used to reduce system – wide costs, increase the availability of goods in the market, meet service level requirements, effectively integrated middlemen, producers, storages facilities, and shops to enhance production and accurate dissemination of the products, to the appropriate paces and at the right times. Mpuon et al. (2023a, 2023b), Bokrantz and Dul (2022) and Lee (2010) SC, according to their argument, consists of customers, suppliers, intermediaries, producers, manufacturing plants, vendors of material, and dissemination offerings, all of which are linked by a forward-looking movement of supplies and a reciprocal movement of intelligence. Supply chain management in the assertion of Mukhamedjanova (2020), Flynn et al. (2018) Stek and Schiele (2021) and Mpuon et al. (2021a, 2021b) is the process of planning, controlling and coordinating the various tasks required to deliver a finished good or service customers. Raimbekov et al. (2023), Panayides et al. (2018) and Angus (2015) affirmed that these processes begin with the raw materials and come to an end with the finished goods or service delivered to the final purchaser. Similarly, Mpuon (2018a, 2018b), Ketokivi and Mohoney (2020), Gu and Yu (2022), Ray (2020) and Amed et al. (2020) opined that SCM promotes the overall value chain, supply and demand channels, integration, coordination, collaboration across organizations, long-term benefits of cooperation, commitment, trust, honesty and integrity through process integration, knowledge integration and information sharing for all stakeholders in the SC and effectively and efficiently manage supply chain channels.

Supply chain channel management refers to the techniques and strategies used in transferring products (goods and services) from the production centers to the consumption center (end users) Spacey (2018) and Mpuon (2019). Supply chain channel management deals with the act of planning, analyzing, coordinating and managing a company's sales channels by integrating intermediaries, supplier manufacturers and end users in the value chain Mpuon (2018), Abolagba et al. (2016), Ufiobor (2017), Ogbemor (2013) and Msimangira and Venkatraman (2014). In the assertion of Garritet al. (2010), Mpuon (2021), Omorogbe et al. (2018) and Hu et al. (2020) Creating channel tactics, developing sales channels, choosing channel participants, inspiring channel participants, overseeing channel tactics with channel participants, assessing channel member success, and dealing with channel conflict are the seven decision-making areas that make up supply chain channel management. Mpuon et al. (2020) maintained that supply chain channel management like other business disciplines need meticulous administrative management techniques, strategies and policies to assist a firm achieve its organizational marketing goals and objectives with distinct benefits which are concomitantly very difficult to emulate by competitors. Stek & Schele (2021) argued that supply chain channel management of agricultural products' producing firms involves all activities concerned with the flow of agricultural products such as food crops, industrial crops, continental crops, livestock and forestry products. Omotayo (2011) argued that supply chain channel management of agricultural products' producing firms facilitate the selling of farm inputs such as seeds, and fertilizers and the disposal of agricultural produce to the final consumer. While, Xu and Sun. (2018) maintained that supply chain channel management of agricultural products' firms encourage effective market penetration and market spread by selecting suitable type of channel members and a reasonable number of intermediaries to help in enforcing control and



evaluating of channel members who are bound to contribute to marketing effort of agricultural products. Similarly, Mpuon et al. (2019, 2020, 2021) and Raimbekov et al. (2023) argued that supply chain channel management dynamics enhance marketing agricultural products' producing firms by helping marketing intermediaries to manage their supply chains in order to facilitate on – time delivery, flexibility and rapid response to customer requirements, increase client satisfaction, strike an equilibrium amid expenses and offerings, and provide the business a competitive edge.

Running a business requires the cooperation of others and it is beyond a single individual trying to perform all the functions alone Mpuon et al. (2023, 2021), Success in modern business requires interdependent relationships either as an investor, intermediaries, entrepreneurs, customers, employees, agents or managers for the purpose of achieving effective and efficient supply of products in a supply chain Etuk (2008), Kusuma et al. (2022), Lu et al. (2022) and Chadha et al. (2022). Serdaris et al. (2014), Chong et al. (2021) and lyus et al. (2011) argued that the concept of supply chain channel management has created a plethora of explanations in academic literatures. Brahmadev and Leepa (2017), Mutayoba and Deus (2010) and Yagana (2014) noted that literally, the main idea in the explanation of the concept emphasizes that supply chain channel management is the process in which the mutual goals and objectives of an organization is realized through cooperative efforts and actions of others (Inyang, 2004). Supply chain channels refers to outside firms that an enterprise deploys to accomplish its dissemination goals Jun aid (2012), Inyang (2004), Julia and Kim (2018) and Ntale (2016). A supply chain channel can further be defined as a pipeline in which a product moves on its path to the customer (Kalu, 1998). A firm's supply chain channels play a major role in its entire marketing strategy based on the fact that these channels provide the enabling environment by which the firm makes the products available to the end users Bonne and Kurtz (2008), Guang (2019) and Odunze (2019). According to Obaji (2011), Ogbebor (2013) and Srivastava et al. (2022) supply chain channels consist of middlemen who move goods from the place of production to consumption centers. Jeresa et al (2022), Omid et al. (2016) and Shehu (2017) argued that Supply chain channel consists of merchants who take title to the goods and resell them latter for a profit and functional middlemen (agents) who do not purchase products outright, they do not take title but negotiate and expedite exchange between buyers and sellers. Park (2010), Wei et al. (2014) and Ejionueme (2017) asserted that supply chain channels management should not be limited to the choice of a channel only, that supply chain channel actors should reflect on the necessity of channel management by maintaining and developing strong relationship between channel actors. Furthermore, Iwena (2015), Iwuchukwu and Igbokwe (2012), Bonne and Kurtz (2008) opined that supply chain channel actors need to put more of their effort by weighing the decisions concerning pricing, promotion, profit, and customer service and product availability in order to enhance their marketing performance. Ikporah (2012), Eze et al. (2010), and Mutayoba and Deus (2010) noted that supply chain and marketing managers are managing trade channels in collaboration and partnership with other channel partners by setting up channel strategies, design, evaluation, coordination, conflict management techniques and motivation programs to encourage their marketing performance in terms of product availability, customer service and profitability.

According to Zhang et al. (2022), Mpuon et al. (2022), and Jin et al. (2023) the management of supply chain channels dynamics such as channel strategy, design, selection, conflict management and motivation mainly concerned with effective and efficient market coverage and penetration by selecting suitable number of trade channel intermediaries and correctly



assessing the contribution of each partner to marketing performance. Al – Majali & Prigmore. (2010), Stek and Schiele (2021) stated that it is important for the organization to adopt channel dynamics to help in determining whether the firm need a single channel or multiple supply chain channels that facilitates the movement of products to consumers. In the view of Obaji (2011) and Raimbekov et al. (2023) supply chain channel management dynamics enhanced marketing performance of agricultural products' firms by profit maximization, product availability and customer service through intermediary's cooperation, collaboration and cordial relationship that strengthen useful provision of services to customers at the lowest cost. Cai (2012) and Hamdy et al (2022) submitted that the primary objective of supply chain channel management dynamics is to choose the correct, effective, efficient and profitable distribution channels that are flexible and responsive to customers need and requirements. In the assertion of Ufiobor (2017) and Grubor & Nikola (2016) supply chain channel management dynamics commences as a firm entered in production and exchange of goods and services. Gu and Yu (2020), Cai (2012) observed that in managing a supply chain channel, marketing intermediaries must be chosen, trained, motivated and examined to ascertain their reliability and commitment. They also noted that, the modification of channel structure is necessary for effective customer service, profitability and product availability. In the submission of Okpeke & Ellah (2017) and Glaudio et al. (2023) supply chain channel management dynamics improves on marketing performance of agricultural products firms by making it possible for producers to improve on customer service, increase return on investment, and sales, reduce cost of exchange and make sure the goals and objectives of customer satisfaction and product availability are achieved through well-organized channel governance mechanism. Supply chain channel management dynamics encourages the process in which marketers do ensures the efficiency and effectiveness of its middlemen with regards to product knowledge, product availability, sale volume and profitability achievement Omorogbe et al (2014). Raimbekov et al. (2023) declared that supply chain channel managers must create the needed tools for intermediaries to skillfully promote and sell their product in the market by providing them with enough incentives based on the fact that the middlemen are not employees of the marketer and definitely will not give in to the same objective with that of the market if not given some incentives.

In the assertion of Mpuon (2023a, 2023b) supply chain channel management dynamics involves the formulation of appropriate policies, decisions, strategy, design, structure, sales techniques, sales management, procedures to achieve effective and efficient marketing performance, and organization cooperation, collaboration and good will leading to the achievement of its objectives and retaining cooperative and collaborative relationship with other channel partners. Supply chain channel management is a concept in an organization that deals with channel strategy, channel design, channel architecture, sales and operations planning, promotion, channel conflict, partner relationship management, pricing policies, revenue management, sales management, brand experience and distribution Uche et al (2022). According to Achayo and Owino (2017) supply chain channels are of great significant to firms since they aid in the movement of goods from the producers to the consumers. Importantly, Aabolagba et al. (2016) and Uche et al. (2022) affirmed that partners in supply chain channels include suppliers, agents, wholesalers and retailers, manufacturers, and customers. Supply chain channel play a major role in company profitability, product availability and effective customers services Liu (2018). Like other business enterprises, supply chain channel need adequate management, as favourable channel management policies and strategies enable a company achieve superior advantage over competitors by Supply Chain Channel management



enabling them to analyzed, organized, planned and controlling a company's distribution channels Mpuon (2020, 2021). Considering a large number of publications by authors in view of explaining the theory of channel management, they seem to be a general consensus that channel management consist of seven key decision areas, these are: creating a channel plan and handling channel disputes, setting up a channel scheme, selecting channel members, evaluating the efficiency of the channel participants, motivating channel members, designing marketing channels Xu and Sun (2018) and Xu (2022). All the seven areas are effective for supply chain channel management and marketing performance in terms of improvement in customer service, increasing mutual understanding and maintaining long term productive relationship among channel actors. In the subsequent sections, these variables are going to be examine in details to enable us develop research hypotheses.

Farming is a naturally dispersed and disorganized industry that entails a wide variety of unique players, including input suppliers, farmers, traders, commission agents, processors, and vendors requiring effective and efficient supply chain channel management to enhanced marketing performance in terms of product availability, profitability and customer service Araujo et al. (2022), Amed et al. (2022) and Junaid (2012). In the assertions of Kushwaha (2012), Xu (2022), Rajiv et al. (2013), Lu and Reardon (2018) and Ray (2020) Every step of the agribusiness supply chain is unproductive, the inadequate channel strategy, poor channel design and selection of agricultural channel members, inadequate conflict techniques resolutions among channel actors, lack of motivational programs to induce intermediaries, poor substructure for acquiring farm products from the farms entrance to the end users has brought about inefficiency and ineffectiveness in marketing performance of agricultural products' producing firms. Similarly, Halife and Alshukur (2022), Mpuon et al. (2023a, 2021b), argued that despite the increase in channel management research and the agricultural industry development, there seem to be no empirical research on supply chain channel management dimensions adopted in this current study as they relate to marketing performance of agricultural products producing firms. According to Mpuon (2022, 2020), it appears that there has not been much studies on the impact of supply chain channel management dimensions such as formulating channel strategy, evaluating channel design, channel selection techniques, developing motivational programs for channel members and seeking for appropriate approaches to resolve conflict among channel participants within the agricultural industry. Gu and Yu (2022), Ray (2020) and Mpuon (2021) maintained that the lack of literature by schools with respect to supply chain channel management dimensions in the context of agricultural products producing firms to trigger innovations in channel techniques and strategies might probably be the root cause of poor marketing performance of agricultural products in terms of effective customers service, profitability, product availability, while multiple levels of middlemen secure enormous profits, businesses and farmers virtually every benefit from price increases. Therefore, the goal of this work was to discuss this drawback and close the knowledge deficit. This study contribute to knowledge by developing an expanded model on supply chain and channel management to facilitate cooperation, integration, collaboration and coordination of activities needed in maintaining harmony between supplier, producers, intermediaries, consumers and also to facilitate the interdependence of organizations to achieve predictability and trust ability.



LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

Supply chain channel design is the practice of building and modelling the Supply channels to understand how resources should be allocated and rationalized such that the business can meet target service levels at the lowest possible cost Obaji (2011) and Odunze (2019). Supply chain channel design is a strategic channel configuration planning where the design is carried out to build and model the Supply chain channels taking into consideration the cost and time in delivering goods or services to the market with the available resources Yuniarti and Arvitrida (2022) and Mpuon et al. (2024). Supply chain channel design determines the capacity of the business facilities, the movement of raw materials, intermediaries responsiveness and flexibility, and transfer of title to finished goods from the source to the point of consumption Grubor (2008) and Nagarajan et al. (2022). Sampson and Nagarajan (2022), and Mpuon et al. (2023) also mentioned the difficulties businesses face when implementing channel design for agricultural product-producing firms. These difficulties include the lack of adequate and reliable market information on taste, consumer demand patterns, quality improvement trends, and the company's operational performance in comparison to other competitors. According to Cohen and Lee (2020) and Hidajet & Halit (2015) Supply chain channel design is one of the most delicate fields of channel management because it help in putting in place effective strategies and modalities on ways to get products and services to consumers or the market. Munoz Restrepo et al. (2020) maintained that supply chain channel design enables firms to assess their current channels marketing performance in terms of customer service, profitability and product availability by identifying options built on innovative ways to combine value-adding channel functions, assessed in a broad framework that accentuates possible competitive advantage. In the assertion of Ikaba et al. (2016), Mpuon et al. (2022) and Amadi et al. (2023) Supply chain channel layout aims to provide value to the end user, and the starting point is from the suppliers, distributors and consumers this puts the business at the core of the value network and is extended throughout the whole supply and delivery chain. The design of the network of channel members control structure, efficiency in bridging the space and time gap between production and final consumption, selection of the most effective marketing channel, determination of the intensity of distribution, and degree of marketing channel integration are all factors that influence a distribution system's performance, according to Imouokhome et al. (2016) and Isik et al. (2016). Yuniarti and Arvitrida (2022), argued that supply chain channel design operations have become increasingly complex despite numerous athletes varying in stature and strength, therefore when selecting the most effective supply chain channel, a variety of factors ranging from market factors, producers factors, product factors, competitive factors, contracting out, short lifespans of products, quick technological advancement, cost structures, tax legislation, current currency rates, expertise supply, and material accessibility need to be factored in. Grubor (2008) and Cohen and Lee (2020) asserted that examining the effects of these variables will enable a business to supply necessary, or possibly the most appropriately desired, goods and services in a way that satisfies the demands of the more diverse modern market. Based on the above discussion, the following hypothesis is put forward for testing.

Ho₂: channel design has no significant impact on marketing performance of agricultural products' firms in Nigeria



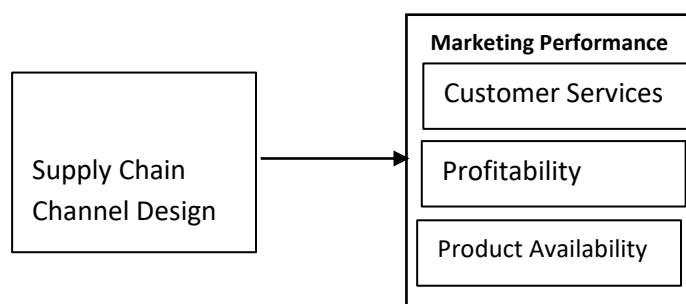
In conceptualizing Ho1 as an independent variable, it is believed that channel design will facilitate the creation of fresh marketing channels in areas where none previously was present or help in modifying existing channels. Mpuon (2021)) upheld that theorizing Ho1 as a dimension of supply chain channel management it will paved ways for the formulation and creating fresh routes or the alteration of the architecture of already-existing channels. In the view of Kusuma (2022, Lu et al. (2022) and Liu et al. (2022) conceptualizing channel design as a dimension of supply chain channel management would enhance marketing performance of agricultural products' firms in terms customer service, product availability and profitability enabling agricultural distribution channels to be in line with the general goals and aggressive tactics of the company in order to develop appropriate channel design management of Supply chain channels in terms of choosing the most effective design that encouraged proactive reactions aimed at achieving higher efficiency that focus on upholding authority equilibrium, handling disputes, and reducing transaction costs. Dasilva (2008) contended that the following three crucial channel design dimensions need to be taken into account while creating the architecture or structure of the channels of distribution system: A manufacturer to direct user is one of the two levels in the channel; there are five levels: manufacturer, agent, wholesaler, retailer, and consumer. (b) Intensity at the different levels: the assortment of middlemen deployed can be intense (many), selective (few), or exclusive (one). (C) Varieties of middlemen used: agents, brokers, distributors, vendor's merchants, and sellers are examples of intermediaries. While, Frank (1998) submitted that in designing trade channel what the marketing manager should consider most is how to gain different advantage in the market by strengthening the formation of cooperation and collaboration to help with supply generation and delivery in the current, highly saturated industry.

According to Mpuon et al. (2023) producers, manufacturer Store owners, corporate and household merchants, and channel designers all deal with whatever number of channel they need. Producers and consumers are classified in marketing channels according to the number of intermediaries between them (Ntale, 2016). In the process of designing a distribution channel, there is need for proper evaluation of customer needs, determining channel objectives and the recognition of the main channel alternative. When designing a trade channel, the marketing manager must take into consideration the levels of output need by the customers' segment Mpuon et al. (2022). Also in designing marketing channels, firms identified five sets of outputs which includes the benefit of having customers wait a longer period of time for the items to be delivered, the degree to which the distribution channel facilitates customers' ability to purchase the product, and the wide range of products available, service backup and lot size which refers to the unit bought in one time (Da Silva, 2008). Designing marketing channel requires taking into consideration avenue goals that should be broadly defined as objective service output levels that vary depending on product characteristics Srivastava et al. (2022). Gu and Yu (2020) affirmed that firms marketing channel objectives are designed based on the product of the firm, company characteristics, characteristics of intermediaries, environmental factors and competitor's channel. When the firm have succeeded in evaluating and set up its channels objectives, the company determines its main channel alternatives with respect to the type of middlemen, the number of middlemen needed and the responsibilities of each channel actor Agus et al. (2018) argued that after recognizing the number of middlemen required, there is need to define the term and responsibilities of each channel actor. While Helmold (2020) maintained that respect must be shown for channel partners, and they must be given the chance to succeed financially. The primary factors include mutual services and responsibilities, which are unique to franchised and exclusively agency channels; the manufacturer's decision to

legitimize other routes of distribution, as well as the suppliers' geographical rights and areas. Other important factors include terms of sale, arrangements of reimbursement, and manufacturer assurances; price policy; and a price list Ray (2020). Channel design in the agricultural sector involves detailed implementation and planning of new channel for example, developing a partnership program for value added resellers to enhance marketing performance Regarding client support, product accessibility, as well as profitability Kim (2021), and Hamidy et al. (2022).

Conceptual framework of the study's variables

Figure 1: Showing the study's conceptual frame work that establishes the interrelationship between these two group of variables.



The conceptual structure created to be assessed in this analysis is shown in Figure 1. Other supplemental theories are integrated to establish the conceptual framework, particularly managerial and business insight theories, while resource-based view theory serves as the anchored structure theory. This is because the best course of action for organizational performance depends on both internal and external organizational resources, and the dynamics within marketing channels are dependent on the power of each intermediary. Therefore, the researcher will use resource-based view and bargaining theory as the guiding theories for the study.

Resource-based view theory

Resource based view theory considered the organization as a collection of resources and how these resources, are integrated, distinguished organizations, allowing them to achieve a competitive advantage Mpuon (2022c, 2020) . The central tenet of resource-based perspective theory is that firms can create value-enhancing tactics that are challenging for rivals to imitate when they own essential, separate, distinct, and unalterable. Resources Freeman et al. (2021). According to Aldona and Szymaniec (2012) firm resources are important if they enable businesses to design and implement plans that reduce net costs and enhance net revenues beyond what would have been the case otherwise. Mpuon et al. (2023) and Wade and Hulland (2004) argued that the resource-based view is a multifaceted method that fundamentally alters how we perceive tangible and intangible resources. Asghar et al. (2011) stated that the theory of resource-based view is interdisciplinary since it was developed in the fields of wide-ranging business, supply chain management, marketing, ethics, and law in addition to economics. Barney et al. (2001), asserted although it has roots in Recardian and Penrosian economic theories, resource-based view theory represents a new paradigm. According to these theories, firms can achieve exceptional returns over the long term if they possess more advanced supplies and are protected from some of the industry's solitary mechanisms. Shymko and Diaz



(2010) and Lan (2001) maintained that the exact impact of resource based view is disputed, two strategic academics own Edith Penrose's 1959 publication "The company's modern resource-based approach was influenced by various concepts stated in "The Theory of the Company's Growth."

The resource-based approach principles defined the strategic supplies that an organization might utilize to gain a sustained competitive advantage in the claims made by Aldona et al. (2021). This theory provides Sales managers, transportation managers, marketing managers, purchasing managers, and other functional managers of companies that produce agricultural products the opportunity to use heterogeneous resources skills, capabilities, and organizational structure that set them apart from other industries to design strategies that improve their company's competitive advantage in the market. This will help other companies in the chain accurately forecast customer demand, achieve sales growth, and increase their market share. Companies that create agricultural goods will be able to preserve a competitive edge by putting into practice a value-creating strategy that is not being adopted concurrently by any rivals, either present or future Shymko and Diaz (2010) and Freeman et al. (2021).

Marketing performance

Marketing performance help firms to ensure that managers carry out their duties and responsibility of facilitating the production and smooth flow of goods from production centers to consumption centers and make sure that employees know what has to be done, are skilled at it, and finish it to a high enough degree for the benefit of all parties involved and customers Mpuon (2024). Evaluation of performance is a strategic instrument that offers the means of accomplishing the goals necessary to complete a firm's purpose and strategy statement. It is essential to the evaluation of any system Xu (2022) and Obaji (201). According to Mpuon (2021) marketing performance is a metric for assessing the efficacy of marketing strategies and planning efforts aimed at promoting products and services in the marketplace which might be also referred as marketing activity appraisal system. Evaluating marketing performance is necessary in order to identify areas that need adjustments and changes for the improvement of organizational image and the leveraging of its sales performance which in turn has a positive impact on company's performance in terms of sale growth, profitability, product availability, customer service, loyalty, patronage and satisfaction (Morgan, 2012). According to Uche et al. (2022) and Okpeke & Ellah (2017) when marketing is effective, sales and market shares increase, organizational reputation is strengthened, and institutional brand name positioning in the market improves. To appreciate the necessity of marketing performance indicators in organization Mpuon et al. (2014) defined marketing as the actions taken by a corporation as a whole with the goal of increasing shareholders value. The authors argued that is not the division of a marketing campaign or a particular segment that determines the company's success in marketing, however, the business's overall effectiveness and marketing accomplishments. They argued that it is necessary to adhere to some criteria in line with the following classifications, competing market metrics including market share, share of voice, relative price, and proportion of promotion are used to assess the effectiveness of marketing. Monetary indicators, such as sales volume, turnover, profit and capital returns. Customer service and fulfilment, availability, and delivery are examples of trade-related direct customer metrics. Intermediate consumer (end user) measures include behaviour, dedication willingness to buy, and perception of quality.

However, whatsoever performance metric chosen by organization, it tries to minimize individual biases as argued by Hu et al. (2020) and Zhang et al. (2022) argued that three basic



principles should be considered when choosing marketing performance metrics – clear definition, accurate measurement standards and reward or punishments. In line with the above mentioned marketing performance metrics, in this study, customer services, product accessibility and profitability are used as measures of marketing performance. The act of anticipating and fulfilling the needs of clients by providing competent, supportive, and superior service and assistance before to, during, and following the resolution of those demands is known as customer service Joost (2001). Client service is about attending to each customer's requirements and wishes and it deals with the provision of service prior to, during and after purchase Mpuon et al. (2022). Product availability does not imply that products are always available hundred percent in the market, but rather they are available when the customer requires them Mpuon (2021, 2018). According to Yael et al. (2013) product availability is a matching game in which producers and suppliers try to time the preparation of an item to coincide with when the customer wants it. Hamidy et al. (2022) argued that product availability necessitates planning for the flow of goods and services, policy clarity and accuracy, constant control, continual improvement, and constant communication with business partners. Profitability is the state in which a company turns a profit and is reached when total revenue for an audit season is greater than total costs. According to Raimbekov et al. (2023) supply chain channel management dynamics enhanced agricultural firms' profitability by strengthening the company's ability to create income that exceeds its expenses through efficient utilization of resources and value creation in the chain of distribution. Xu and Sun (2018) argued that profitability is a company's return on investment that encourages intermediary ability to profit from its operations and value enhancements while satisfying the needs and wants of consumers.

METHOD

The study adopted cross – sectional field survey of the quasi experimental research design as a useful aid in examining the extent to which channel design explain or predict the variables in marketing performance. A quasi – experimental design is an empirical interventional study used to estimate the causal impact of an intervention on a target population without random assignment. The survey relies on a sample of elements from the population of interest which are measured at a single point in time. It is also a small sample approach that is particularly useful when examining the interrelationships among a number of variables. The research setting is a natural setting and the researcher cannot manipulate the research elements. Private agricultural enterprises in Nigeria that are listed on the Nigerian stock market or registered with the Nigerian Corporate Affairs Commission, both of which were formed in 1990 under the Companies and Allied Issues Act No. 1990 as amended, served as the empirical context for our study.

The population of the study comprised of registered agricultural products' enterprises in Nigeria.

Four hundred (400) questionnaire were given to the management staff of the companies survey, three hundred and ninety one (391) were retrieved, eight (8) of the questionnaire were not suitable for inclusion in the final analysis resulting to a modified Sample size of three hundred and ninety one (391). The investigator used the purposive sampling technique, believing that choosing the right sample units would be crucial to producing pertinent data for



the study based on the researcher's experience and understanding of the units. The employees of these enterprises are involved in agricultural products and marketing nationwide to final consumers and industrial users.

A structured questionnaire was administered face to face to sales, procurement, logistics, supply chain, marketing and general managers as source of data collection for the study by the authors and five additional person hired and trained mainly for this purpose. The respondents were chosen because of their expertise in supply chain channel management dynamics and marketing effectiveness and efficiency of agricultural products in the Nigerian agricultural industry based on their training, length of service and skills. The companies selected are focused on the production and distribution of agricultural products in Nigeria and have significantly contributed to the development of the industry. The questionnaire was split into two parts. The questionnaire initial section was designed to collect demographics data on the respondents' highest educational level, gender, age bracket and respondents' years of experience. The second part of the questionnaire includes measures that were adapted from the literature reviewed to assist in measuring the variables in the study. Supply chain channel design scale consists of 10 items that represent how the respondents believe that supply chain channel design enhances marketing performance of agricultural products' producing firms in terms of customer service, profitability and product availability. The scale used to measure marketing performance is made up of 15 items that score participants perception of how important product availability, profitability and customer service is to agricultural products' producing firms. Exception of the demographic and filter questions in the first part of the questionnaire, all other items were graded on a five (5) point Likert Scale of Agree = 1, Strongly Agree = 2, Neutral = 3, Disagree = 4 and strongly disagree = 5 was used to generate data. As stated earlier, these primary data were collected using structured questionnaire title supply chain channel design questionnaire (CMQ) adapted from Ntale (2016) and Rajiv et al., (2013) and were modified for the purpose of this research. Each questionnaire contains thirty-one (31) questions, shared in two parts. The first part consists of six questions in the demographic characteristics while the second part consist of thirty five (25) questions in the independent and dependent variables.

To assess the one –dimensional validity and reliability of the scale constructs, confirmatory factor analysis was utilized. The whole items that supported the various structures gave each construct a substantial amount of weigh. A strong and sufficient model data fit as recommended by Byrne (2016) was discovered after removing the cross – loading elements. Importantly, all the scales satisfied the criterion for discriminating and convergent validity since the average variance extracted (AVE) for each of the variables in table 1 is larger than 0.5, and these values are also greater than the squad correlation coefficient for any pair of constructs as suggested by Fornell and Larcker (1981). To determine the measurement scales, Cronbach's alpha coefficient (α) and composite reliability (CR) scores were determined. Both α and CR values are more than 0.7, demonstrating strong dependability. When taken together, The CFA values show that the multi – item scales utilized in this study are unidimensional, valid and reliable as shown in Table 1.



Reliability and Validity Results

Table 1: Summary results of reliability and validity

Construct	AVE	Max r^2	CR	Cronbach Alpha
Independent variables				
Supply chain design	.811	.571	.993	.77
Marketing performance	.932	.467	.996	.79
Customer services	.890	.632	.995	.92
Product availability	.739	.19	.949	.83
Profitability	.721	.544	.935	.75

AVE- Average Variance Extracted, CR- Composite reliability.

Result of confirmatory factor analysis shows that the Average Variance Extracted obtained for all constructs were greater than 0.70 and also greater the squared correlation coefficient for any pairs of constructs indicating that the constructs met the requirement for discriminate and convergent validity. The Cronbach Alpha reliability coefficients of .77, .79, .92, .83 and .75 were obtained for supply chain channel design , marketing performance, customer services , product availability and profitability respectively. These reliability coefficients were all above the threshold of .70 which implies that the instrument is reliable. Result shows that both the CR and Cronbach Alpha coefficients for each of the constructs were above 0.70 indicating that the instrument is reliable. Considering the analysis, the constructs were considered acceptable

RESULTS

Table 2 Demographics of the Respondents

Demographics Variables	No. of Respondents	Percentage (%)
Gender		
Male	270	69.1
Female	121	30.9
Total	391	100.0
Age (years)		
20-25 years	130	33.2
26-30 years	64	16.4
31-35 years	58	14.8
36-40 years	27	6.9
41-45 years	51	13.0
46-50	27	6.9
51 and above	34	8.7



Total	391	100.0
Educational Qualification		
None	9	2.3
Primary	78	19.9
Secondary	126	32.2
Tertiary	178	45.5
Total	391	100.0
Marital status		
Married	115	29.4
Single	197	50.4
Widow	40	10.2
Divorced	14	3.6
Separated	25	6.4
Total	391	100.0
Experience		
1- 5 years	95	24.3
6-10 years	154	39.4
11-15 years	83	21.2
Above 15 years	59	15.1
Total	391	100.0

Source: *Field survey (2024)*

Of the 400 copies of the questionnaire administered, 391 copies representing 97.75% of the total number of the questionnaire were retrieved and found useable. Results presented in Table 4.1 shows the distribution of the demographics of the respondents. Result reveals that 270 respondents representing 69.1% of the respondents were male and 121 respondents representing 30.9% were female. The distribution of their age shows that 33.2% were between 20-25 years, 16.4% were between 26-30 years, 14.8% were between 31-35 years while 6.9%, 13.0%, 6.9% and 8.7% of the respondents were between 31-35 years, 36-40 years, 41-45 years and 51 and above years respectively. Nine respondents representing 2.3% had no formal education, 19.9% had primary education, 32.2% had secondary education while the majority of the respondents (45.5%) had tertiary education. One hundred and fifteen respondents representing 29.4% were married, 50.4% were single, 10.2% were widow, 3.6% were divorced while 6.4% of the respondents were separated. Result of the years of experience shows that 24.3% of the respondents had 1-5 years, 39.4% had 6-10 years, 21.2% had 11-15 years while 15.1% of the respondents had above 15 years of experience.

**Table 3 Descriptive statistics for the research variables**

	n	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Supply chain Channel design	391	10.00	40.00	28.48	11.60	-0.56	0.12	-1.42	0.25
Marketing performance	391	9.00	36.00	25.73	10.79	-0.65	0.12	-1.47	0.25
Customer service	391	8.00	58.00	21.71	9.27	1.64	0.123	5.02	0.25
Profitability	391	7.00	28.00	18.93	6.54	-0.22	0.12	-1.05	0.25
Product availability	391	4.00	16.00	11.48	5.28	-0.51	0.12	-1.61	0.25
Valid N (listwise)	391								

Source: Researchers Computation with SPSS 20

Table 3 presents the summary results of the descriptive statistics for the research variables. Table 4.2 presents the minimum score, maximum score, mean and standard deviation, skewness and kurtosis of the scores obtained on each of the research variable. Result shows that the mean score of 28.48, 25.73, 21.71, 18.93 and 11.48 for channel design, marketing performance, customer service, profitability and product availability with standard deviations of 11.60, 10.79, 9.27, 6.54 and 5.28 respectively. In terms of skewness, result shows that the scores obtained for supply chain channel design (-0.56), marketing performance (-0.56), profitability (-0.22) and profit availability (-0.51) were less than 1 meaning that they are skewed to the left while that obtained for customer service was greater than 1 (1.64) meaning that the scores on customer service was skewed to the right. Result also shows that the kurtosis for supply chain channel design (-1.42), marketing performance (-1.47), profitability (-1.05) and product availability (-1.61) were less than 3.00 while that of customer service (5.02) was greater than 3.00 which is the kurtosis of the normal distribution. This result indicates that among the research variables, only customer service has higher kurtosis than normal distribution suggesting that the scores obtained on customer service is leptokurtic (excess kurtosis). The normality of the scores obtained on each of the variables using Shapiro-Wilks test are presented in Table 4.3.

Table 4 Summary of Normality Test using Shapiro-Wilk test for the Research Variables

	Shapiro-Wilk		
	Statistic	df	P-value
Supply chain channel design	0.801	391	0.000
Marketing performance	0.732	391	0.000
Customer service	0.857	391	0.000
Profitability	0.927	391	0.000
Product availability	0.718	391	0.000

Source: Author's computation (2024) using SPSS version 20.0



Result displayed in Table 4 reveals that channel design (P-value = 0.000), marketing performance (P-value = 0.000), customer service (P-value = 0.000), profitability (P-value = 0.000) and product availability (P-value = 0.000) have their P-values less than 0.05 ($P < 0.05$). This indicates that among the research variables, all the research variables were not normally distributed.

Table 5 Correlation between the research variables

Variables	1	2	3	4	5
1. Channel design	1				
2. Marketing performance	0.807** (0.000)	1			
3. Customer service	0.548** (0.000)	0.699** (0.000)	1		
4. Profitability	0.543** (0.000)	0.589** (0.000)	0.813** (0.000)	1	
5. Product availability	0.650** (0.000)	0.611** (0.000)	0.602** (0.000)	0.705** (0.000)	1

**significant at 5% ($p < 0.05$), **significant at 1% ($p < 0.01$), Source: Author's computation (2019) using SPSS version 20.0. Values in the parentheses are the p-values.*

Result in Table 5 presents the correlation between the research variables. Result reveals that supply chain channel design has significant positive relationship with marketing performance ($r = 0.807$, $p = 0.000$, $p < 0.01$), customer service ($r = 0.548$, $p = 0.000$, $p < 0.01$), profitability ($r = 0.543$, $p = 0.000$, $p < 0.01$) and product availability ($r = 0.650$, $p = 0.000$, $p < 0.01$). Supply chain channel design was found to have significant positive relationship with customer service ($r = 0.699$, $p = 0.000$, $p < 0.01$), profitability ($r = 0.589$, $p = 0.000$, $p < 0.01$) and product availability ($r = 0.611$, $p = 0.000$, $p < 0.01$). Customer service shows significant positive relationship with profitability ($r = 0.813$, $p = 0.000$, $p < 0.01$) and product availability ($r = 0.602$, $p = 0.000$, $p < 0.01$). There was also a significant positive relationship between profitability and product availability ($r = 0.705$, $p = 0.000$, $p < 0.01$).

Hypothesis 1

H₀₁: There is no positive significant relationship between supply chain channel design and marketing performance.

Table 6 Model summary for the regression relationship between supply chain channel design and marketing performance

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
	.582	.338	.337	7.54869	2.835

Source: Researchers Computation with SPSS 20.

Result in Table 6 shows r-square of 0.338 which means that 33.8 percent of the variation in marketing performance was accounted for by supply chain channel design. This result also signifies that if there is any improvement in supply chain channel design, there will be a corresponding improvement in marketing performance. The Durbin Watson value of 2.835 was



obtained which implies that there is no evidence of autocorrelation. This is because The Durbin Watson value of 2.835 is greater than 1 but less than 3.00 which indicate that the error terms are not correlated as suggested by Field (Field, 2009). The result of the Analysis of Variance for the regression is shown in Table 4.6.

Table 7 ANOVA Result for the relationship between supply chain channel design and marketing performance

Source of variation	Sum of Squares	Df	Mean Square	F-calc.	F-crit.	p-value
Regression	11339.645	1	11339.645	199.002	3.87	0.000
Residual	22166.273	389	56.983			
Total	33505.918	390				

***significant at $p < 0.05$. Source: Researchers Computation with SPSS 20.**

From Table 7 the F-critical of 199.002 was obtained with p-value of 0.000 while the F- critical of 3.87 at the 0.05 level of significance. The result reveals that the F-calculated (199.002) is greater than the F-critical (3.87) at the 0.05 level of significances which means that there is a significant linear relationship between supply chain channel design and marketing performance. This result also implies that the supply chain channel design accounted for significant variation in customer service. The estimate of the parameters of the regression model is shown in Table 8.

Table 8 Parameters estimates of the regression of marketing performance on supply chain channel design

	Unstandardized Coefficients		Standardize d Coefficients		
	B	Std. Error	Beta	t-calc.	P-value
Constant	8.480	1.013		8.373	0.000**
Supply chain channel design	0.465	0.033	0.582	14.107	0.000**

****significant at 1 % ($p < 0.01$), t-critical = 1.97. Source: Researchers Computation with SPSS 20.**

Table 8 presents the regression coefficient for the model parameters. Result shows that supply chain channel design ($\beta = 0.582$, S.E= 0.033, t-calc. = 14.107, t-crit. = 1.97, $p = 0.000$, $p < 0.05$) has significant positive relationship with marketing performance. Result also yielded standardized beta coefficient of 0.582 was obtained which indicates that if other variables are held constant, for every 1unit improvement in supply chain channel design, marketing performance will improve by 0.582. Result also shows that t-calculated (14.107) is greater than the t-critical (1.97) at the 0.05 level of significance. Hence, the null hypothesis stated above is rejected. Therefore, there is a significant positive relationship between supply chain channel design and Marketing performance. This result indicates that effective supply chain channel design enhances better marketing performance.



DISCUSSION OF THE FINDINGS

The test result of hypothesis 2 showed that the t – calculated of (3.013) is greater than the t – critical of (1. 97) demonstrating that supply chain channel design has a significant and positive relationship with marketing performance of agricultural products' firms in Nigeria. The result is in agreement with the study of (Rajiv *et al.*, 2013, Mpuon *et al.*, 2024, 2023 and 2022) which confirmed that supply chain channel design has a significant and positive relationship with marketing performance. They proposed in their empirical study that firm's variables such as size, financial capacity, managerial expertise, objectives and strategies affect supply chain channel design.

Theoretical and managerial implications

In light of the inferences and results drawn from the discussions; the following theoretical and practical implications are deduced; Sales managers must exercise caution when managing distribution networks, giving special attention to designing marketing channel, inspiring members of the channel, and resolving channel disputes. Multiple regression analysis was used in the study to show statistical correlations between supply chain channel design and marketing performance of agricultural products' firms in Nigeria. The results of previous scholars like (Mpuon *et al.*, 2024, 2023, 2022; Ikaba *et al.*, 2016, Schoviah, 2012, and Isik *et al.*, 2016,) was verified that the supply chain channel design has a significant and positive effect on marketing performance of agricultural products' firms. As a result, this research complements the notion of resource-based view will enable agricultural products' firms to develop superior tangible and intangible organizational resources and capabilities that are not easily imitated by competitors to enhanced their marketing performance. This study provided the platform for sales managers of agricultural products' firms to take advantage of supply chain channel design model that will enhance marketing performance of agricultural products. The study also contributed to existing supply chain channel design literature and linking it to marketing performance contrary to others studies that failed to emphasize the relevant of Supply chain channel design on marketing performance of agricultural products' firms. A model on how supply chain channel design influences marketing performance of agricultural products firms was established. This research was conducted in Nigeria and other geographical factors were not considered which should be handled by future researchers by replicating this study in other countries.

CONCLUSION AND RECOMMENDATIONS

The research examined the relationship between supply chain channel design and marketing outcome of agricultural products' businesses. One hundred and forty-seven registered agricultural products' firms' employees in Nigeria were chosen judgmentally because of the spread of their activities with intermediaries. Four hundred (400) questionnaires were given to management staff of this firms and a total of three hundred and ninety-one (391) was used for final analysis after checking for completeness resulting to a sample size of three hundred and ninety-one (391). In keeping with the goal of the study, one research questions and one hypotheses was developed. The research determined the impact of supply chain channel design on marketing performance. Multiple regression analysis was used to examined the hypothesis, while descriptive statistics was achieved using frequency, mean, weighed mean, percentage,



standard deviation, kurtosis and skewness with the help of (SPSS version 21). Based on the null hypothesis proposed, a significant and positive relationship exist.

Based on the results, the following suggestions are offered: Firms should put in place effective and efficient supply chain channel design that will produce a supportive atmosphere for the actualization of the overarching business goals and plans of the company. The sales managers of the company ought to concentrate on creating new channels and adjusting the ones that already exist in order to enhance marketing effectiveness. Before selecting channel members, credit history, their reputation and Market coverage should be taken in to consideration for effective marketing outcome. For proper customer service delivery, profitability and product availability firms should adopt various motivational programmes needed induced middlemen to put in more work when marketing the company's goods. For efficient and successful marketing performance, businesses must actively seek out and use conflict management approaches to address conflicts as they negatively impact the performance of channel members.

REFERENCES

- Achayo, A. A. and Owino, P. O. (2012) 'The Impact of distribution channel differentiation on organizational performance: The Case Study of Sameer Africa Limited in Nairobi, Kenya', *International Journal of Business and Management Review*, 5(2), 1-11.
- Aldona, F. and Szymaniec, K. (2021) 'Resource-based view and resource dependence theory in decision making process of public organization-research finding', *Journal of Management*, 16(2), 16-29.
- Al-Majali, F. and Prigmore, M. (2010) 'Consumers channel choice behavior in multi-channel environments: what are the influences on consumers to choose the online distribution channels over other alternative offline channels', *Engineering Researchers' Conference* University of Huddesfield, 1(1), 1-10.
- Amadi, C., Mpuon, J. A. & Akanineyene, S. E. (2024). Social media marketing and consumer patronage of fast foods business in Calabar metropolis. *British Journal of Management and Marketing*, 7 (2), 1 – 25.
- Amadi, C., Mpuon, J. A., Arikpo, N. N. & Owoade, R. (2024). Effect of warehousing in logistics performance of shipping firms in Nigeria. *Int. J. Of Entrepreneurship and Business Innovation*, 7 (1), 90 – 105.
- Anders, G, Michael, D. and Inger, R (2005) 'The effects of customer satisfaction, relationship commitment dimensions and triggers on customer retention', *Journal of Marketing*, Vol. 69, No.5, pp. 210 - 218.
- Asghar, A. J., Ali, M. H., Abbas, S. M., Khaled, N. and Mohammed, S. (2011) 'The effects of customer service and product quality on customer service and product quality on customer satisfaction and loyalty', *International Journal of Humanities and Social Science*, 1(7), 49 - 57
- Barney, J. (2001) 'Resource-based theories of competitive advantage. A ten-year retrospective on the resource-based view', *Journal of Management*, 27(6), 643 - 650.
- Barney, J. B. (1991) 'Firm resources and sustained competitive advantage', *Journal of management*, 17(1), 99-120.
- Cai, G.G. (2012) 'Channel selection and coordination in dual-channel supply chains', *Journal of Retailing*; Vol. 1, No. 2012, pp. 1-23.



- Cohen, M.A. and Lee, H.L. (2020) 'Designing the right global, supply chain network', *Manufacturing and Service Operations Management*, 22(1), 15-24.
- Das, T. K. and Teng, B.S. (2000) 'A resource-based theory of strategic alliances', *Journal of Management* 26(1), 31-61.
- Edoge, E. D. (2014) 'Determinants of choice of distribution channels by fish farmers in Ughelli North Local Government Area of Delta', *Asian Journal of Agriculture and Food Science*, 2(5), 322 – 329,
- Effiong, C., Mpuon, J. A. & Akam, H. S. (2025) 'Supply chain integration and performance of agricultural firms in Cross River State, Nigeria'. *African Journal of Management and Business Research*, 20(1), 596-613.
- Etim, G. S., Mpuon, J. A. & Durojaiye, M. (2021). Unethical promotional practices in the sales of pharmaceutical products in Nigeria. *Nigeria Journal of Business Administration*, 19 (2), 111 – 121.
- Etim, G. S., Mpuon, J. A., Arikpo, N.N. & Mbu – Ogar, G. B. (2023) 'Effect of advertising on customers' patronage of peace mass transit Limited in Calabar-Nigeria. *Journal of Advanced Research & Multidisciplinary Studies*, 3 (2), 1 – 13.
- Freeman, R. W., Dmytriye, S. D. and Phillips, R. A. (2021) 'Stakeholder theory and the resource-based view of the firm', *Journal of Management studies*. 47(7), 1757-1769.
- Glaudio, M., Valeria, L. and Nutti, M. (2023) 'Channel selection model based on trust metrics for wireless communications', *IEEE Transaction on Network and Service Management*, 1(1), 1-2
- Grubor, A. and Nikola, M, (2016) 'Product availability from delivering aspect evidence from retailers in selected western Balkan Countries', *Industry Journal*, 44(2), 441 – 445.
- Gu, F. and Yu, X. (2022) 'Profit distribution mechanism of agricultural supply chain based on fair entropy', *ples ONE*, 17(7), 1-7
- Guang, S., Shaohu, S. and Luoyi, S. (2019) 'Supply chain integration in Omni - channel retailing: a logistics Perspective. *International Journal of Logistics Management*, 2(1), 9 – 12.
- Hamdy, H., Walker, D. and Claver, J. H. (2022) 'Determinants of customer satisfaction in Kabul: evidence from the restaurant industry', *International Journal of Electronic Customer Relationship Management*, 13(3), 203-247.
- Haward and Upto. (1961) 'Introduction to Business Finance', McGraw Hill New York, 19 – 28.
- Helmold, M. (2020) 'Supply chain and distribution channels', *Total Revenue Management*, pp. 61-69.
- Hidajet, K. and Halit, K. (2015) 'The Strategies of distribution channels: Kosovo's Case. *Academic Journal of Interdisciplinary Studies*, 4(2), 96 – 102.
- Hu, Y-S; Lin, J. and Xiao, L.S. (2020) 'Channel selection decision in dual-channel supply chain: a consumer driven perspective', *IEEE*, 1(1), 1-16. p. 6 - 12
- Hu, Y-S; Lin, J. and Xiao, L.S. (2020) 'Channel selection decision in dual-channel supply chain: a consumer driven perspective', *IEEE*, 1(1), 1-16.
- Ikaba, Y. V., Okocha, R.E. and Kpune, H. N. (2016) 'Distribution channel management as an engineering drive to SMEs in Southern Nigeria', *Advance Research Journal of multi – Disciplinary Discoveries*, 1(1), 48 – 60.
- Imouokhome, E. O., Abdulraheem, M and Bello, A. K. (2016) 'Effect of strategic marketing planning implementation on performance of Nigerian Hotel Industry. *Journal of Business and Value Creation* 5(1), 87 – 92.



- Isik, O., Ersoy, P. and Gümüş, B. (2016) 'Marketing channel strategy and the effect of cannibalization on retailing: a conceptual overview from marketing and supply chain perspective', *Consumer Logistics View Project: Article*. April 2016, 112 - 119
- Jeresa, S., Orji, M.G. and Enose, A. M. (2022) 'Effect of supply chain management on organizational productivity – A study of Nigeria bottling company Abuja', *Amity Journal Management Research*, 5(1), 722-731.
- Jide, I. (2011) 'Public policy making process: agricultural and rural development policies in Nigeria (1960 to Date)', *International Journal of Studies in the Humanities*, 8(9), 235 – 249.
- Jin, L. Qu, H., Pang, L. and Zhang, Z. (2022) 'Sensitive channel selection for mental workload classification', *MDPI Journal*, 10(13),. 22 - 66.
- Joost, W. (2001) 'Customer Service as a competitive marketing instrument an investigation into the Construction and measurement equipment Supply Chains', *Paper for the 17th Annual Imp International Conference*.
- Junaid, M. (2012) 'Assessing the impact of marketing channels on the sales of auto mobile parts: a study of Recco Auto Parts', *Arabia Journal of Business and Management Review*, 19(12), 9 – 19.
- Kim, J.S. (2021) 'To what extent do a knowledge-intensive business service from need customer knowledge integrative activities? The case of Digit CAP' *International Journal of Services Technology and Management*, 27(112), 1-22
- Kusuma, A. C., Najib, M. and Hermadi, I. (2022) 'Antecedent and consequences of consumers' satisfaction in online grocery shopping', *International Journal. Electronic Business*, 17(1), 7 – 60.
- Lan, N. X. (2001) 'Resource – based theories of competitive advantage: a ten – year retrospective on the resource – based view', *Journal of Management*, 27(5), 643 – 650.
- Lee, B., Liu, J-Y and Chang, H-H. (2020) 'The choice of marketing channel and farm profitability empirical evidence from small farmers', *Agribusiness*, 36(3), 402-421-
- Liu, Y. (2018) 'Determinants and impacts of marketing channel choice among cooperatives members Evidence from Agricultural Cooperative in China', 30th international Conference of Agricultural Economists, July 8, 2018, pp.20 – 35.
- Lu, L., and Reardon, T. (2018) 'An economic model of the evolution of food retail and supply chains from traditional shops to supermarkets to E-commerce', *American Journal of Agricultural Economics*, 100(5), 1320-1335
- Lu, Y., Sheng.Z. Zhang, K. and Duan, Q. (2022) 'Predicting P2P lenders' decision: the prospect theory approach', *International Journal. Electronic Business*, 17(1), 1-12.
- Luuk, P. A. and Bouwman, H. (2006) 'Designing a marketing channel mix', *International Journal of Information Technology and Management*, 5(1), 1 -14.
- Megan, L. B. and Ernest, M. D. (2010) 'Choosing direct marketing channels for agricultural Products. Center for profitable agriculture, December 2010 Tennessee department of agriculture and USDA Rural Development.www.picktnproducts.org (Retrieved on the 10th may, 2023).
- Megha, S. (2014) 'Customer service makes the difference', *Journal of Internet Banking and Commerce*, 1(2), 1- 8
- Mpuon, J. A, Sunday, E. G., Etuk, I. U., Ejikem, O.B. and Arikpo, N.N. (2023b) 'The role of integrated coordination in supply chain performance of firms in the manufacturing industry', *International Journal Integrated supply Management*, Vol. 16, No. 1, pp. 26-51.



- Mpuon, J. A. (2018b) 'Supply chain information integration and marketing performance of telecommunication operator in South-South Nigeria', *Journal of African Contemporary Research* Vol. 9 No. 2, pp. 220-234.
- Mpuon, J. A., Eyo, M. E., Akaninyene, S. E., Edet, N. O. & Akam, H. S. (2024) 'Supply chain channel strategy and marketing performance of agricultural products firms in Nigeria', *Research Journal of Agricultural Economics and Development*, 3(2), 1-22).
- Mpuon, J. A. & Oyo-Ita, D. (2024) 'Supply chain service quality and customers' satisfaction in Nigeria Airports', *African Journal of Accounting and Financial Research*, 7(2), 223-245).
- Mpuon, J. A. (2018b) 'Supply chain information integration and marketing performance of telecommunication operator in South-South Nigeria', *Journal of African Contemporary Research*, 9(2), 220-234.
- Mpuon, J.A., Edama, A.J.M., Effiong, C., Obo, E.B., Ndem, S.E., Anna, E.H., Lebo, M.P., and Akam, H.S. (2024) 'Impact of agile business transformation dynamics on the supply chain performance of manufacturing firms', *Int. J. Agile Systems and Management*, 17(2), 153–192.
- Mpuon, J. A. (2019b) 'Empirical investigation of the determinants of economic growth in Nigeria', *Business and Marketing Chronicle*, 5(1), 184-194.
- Mpuon, J. A. and Oyo-Ita, D. (2024). Marketing strategies and supply chain performance of fast food outlets in Cross River State. *Journal of Economic and Sustainable Development*, 7(2), 209 – 235.
- Mpuon, J. A. and Oyo-Ita, D. (2024). Supply chain service quality and supply chain services quality and customers' satisfaction in Nigerian airports. *African Journal of Accounting and Financial Research*, 7(2), 232-245.
- Mpuon, J. A. Etim, G. S., Arikpo, N. N. and Etuk, I. U. (2022) 'Role of warehousing in logistics performance of shipping firms in Nigeria', *International Academic Conference*, University of Calabar, Calabar, 24th-25th January, 2022.
- Mpuon, J. A., Edema, A. J. M., Effiong, C., Obo, E. B., Ndem, S.E., Anna, E. H., Lebo, M. P. & Akam, H. S. (2024). Impact of agile business transformation dynamics on the supply chain performance of manufacturing firms. *Int. J. Agile System & Management*, 17 (2), 153 – 192.
- Mpuon, J. A., Essien, E. E., Effiom, M.E. and Ita, O. I. (2022a) 'Supply chain management strategy and marketing performance of petroleum products companies, *Nigeria Journal of Business Administration*, 20(1), 48-62.
- Mpuon, J. A., Etim, G. S., Offiong, A. I. and Oliver, E. R. Czoia 'The role of event marketing in entrepreneurship development of firms in hospitality industry', *International Journal of Hospitality and Tourism Systems*, 14(2), 29-35.
- Mpuon, J. A., Eyo, M. E., Anna, E. H. Akaninyene, S.E. and Eke, S. G. (2023). Effect of advertising on sales performance of fast-moving consumers' goods in Akwa Ibom State. *International Journal of Development and Management Review*, 18 (1), 116 – 122.
- Mpuon, J.A. (2018b) 'Supply chain knowledge integration and marketing performance of telecommunications operators in South-South Nigeria', *Journal of Business, Accounting and Finance Management*, 9(1), 239-248.
- Mpuon, J.A., Ejem, E.A., Eyo, M. E., Mbu – Ogar, G. B., Anna, E. H. & Akam, H. S. (2023). Effect of logistics management practices on marketing performance of small and medium scale enterprises in Calabar. *African Journal of Social Issue*, 6 (1), 167 – 189.
- Mpuon, J.A., Essien, E. E. and Kajang, J. L. (2020) 'Supply chain planning and business performance of Nigeria oil and Gas industry, 15(1), 297 – 313.



- Mpuon, J.A., Etim, G.S., Effa, G.A., Anna, E. H. (2021b) 'The role of supply chain control in organizational performance of commercial banks', *African Journal of Management Research*, 17(2), 76-89.
- Mpuon, J.A., Odigbo, B.E., Etim, G. S., Etuk, I. U and Usoro, A.A. (2023a)'Impact system integration of automating and automation supply chain strategies in operational performance of manufacturing firms', *International Journal Value Chain Management*, 14(2), 195-219.
- Mukhamedjanova, K.A. (2020) 'Concept of supply chain management', *Journal of critical reviews*, 7(2), 1-10.
- Munoz-Restrepo, A., Ranirez, M. and Gaviria, S. (2020) 'Strategies to enhance or maintain motivation in learning a foreign language; profile: Issues in teachers' professional development, 22(1), 175 -188.
- Mutayoba, V. and Deus, N. (2015) 'Market performance and farmers choice of marketing channels of High Value Crops in Tanzania', *International Journal of Economics, Commerce and Management*, 3(8), 1 – 12.
- Nagarajan, G., Sushmitha, G.Y and Susmitha, R. (2022) 'Design of an enterprise cloud-based intrusion detection system model, using lack propagation network based on particle swam optimization algorithm', *International Journal Enterprise Network Management*. 13(1) 44-56
- Nebo, G. N. and Ejionueme, N. (2017) 'Adopting agricultural marketing approach for improving agricultural sector performance in Nigeria', *Journal of Business and Management*, 19(4)4 - 17.
- Nikoleta, M. Eva, T., David, H., Prusa, P. and Kamp of, R. (2018) 'Selection of an appropriate distribution channel for high-value stone', *Adv. Sci. Technol. Res. J.*, 12(2), 298-306.
- Obaji, R. N. (2011) 'The effect of channels distribution on Nigerian product sales. *International Business and Economics Research Journal*, 10(2), 18 – 26.
- Odunze, D. I. (2019). ' A review of the Nigerian Agricultural Promotion Policy (2016 - 2020): implications for *entrepreneurship in agribusiness sector*', *Centre for Sustainable Agriculture and Rural Development*, University of Free State South Africa, pp. 85 – 92, Available Online at [https:// www.jjournalissues.org/ijapr](https://www.jjournalissues.org/ijapr), retrieved on March, 2023.
- Ogbebor, W. O. (2013) 'The sustainability of agriculture in Nigeria using rubber as a case study', Electronic Thesis Paper, pp. 234 – 239.
- Okpeke, M. Y. and Ellah, G. O. (2017) 'Analysis of poultry eggs marketing in South-South part of Nigeria. A Case Study of Ika South Local Government Area, Delta State, Nigeria', *Global Journal of Agricultural Research*, 6(3), 1-15.
- Omorogbe, O, Jelena, Z. and Fatima, A., (2014) 'The role of agriculture in the economic development of Nigeria', *European Scientific Journal*, 19(4), 342 – 365.
- Omotayo, A. A. (2011). *Contemporary Marketing Strategies and Performance of Agricultural marketing Firms in South-West Nigeria*. M. Sc. (MKT) Thesis, Covenant University Ota, Ogun State, Nigeria, 40 – 50.
- Raimbekov, Z., Bakut, S. Aigerim, R., Zhibek, R., Tana, A., Mainur, O. and Lyubov D. (2023) 'The impact of agric-food supply channels on the efficiency and links in supply chains, economics I. 206. <https://doi.org/10.3390/economics11080206>.
- Ray, T. (2020) 'Logistics and supply chain system of agricultural output – the scenario of Assam', *IJCRT. ORG*, 8(6), 1-11.
- Shynko, Y. and Diaz, A. (2010) 'A resource dependence, social network and contingency model of sustainability in supply chain alliance', *Toyota Sees Growing Anger from Suppliers in Japan*, *The New York Times*, February 24, 2010.



- Simpson, S.Y. and Nagarajan, G. (2022) 'An environment-adaptive distributed node joining approach and a secure cluster-based architecture for MANEP, *International Journal Enterprise Network Management*, 13(1), 3-18.
- Srivastava, A.K., Kumar, S., Chauhan, A. and Trothi, P.M. (2022) 'A technology enabled framework for mitigating risk during supply chain disruptions in a pandemic scenario, *International Journal of supply and operations management*, 9(2)162-174.
- Staal, S. J. (2015) 'Livestock marketing and supply chain management of livestock products', *Indian Journal of Agricultural Economics*, 70(1), 32-54
- Stek, K. and Schele, H. (2021) 'How to train supply managers necessary and sufficient purchasing skills leading of success', *Journal of purchasing and supply management*, 27(4), 1-10.
- Uche, D.B., Anne, J. N. and Nnabugwu, E.L. (2022) 'Effect of distribution channel strategies on the performance of banks', *Journal of humanities and science innovation*, 2(2), 104-116.
- Udo, E. I., Onodugo, V. A. & Mpuon, J. A. (2025) 'Supply chain integration and operational performance of oil service firms, south-south, Nigeria', *British Journal of Management and Marketing*, 8(2), 49-62.
- Ufiobor, K. A. (2017) 'Nigeria agricultural and sustainability: problem and solution', *Thesis, Bachelor for Sustainable Management, Novia*, pp.1 – 7.
- Vuniarti, R. and Arvitrida, S. N. (2022) 'Sustainable and resilient supply chain network design: a systematic and bibliometric review', *preceding of the first Australian International Conference on Industrial Engineering and Operations – Management, Sydney, Australia*, December 20-21, 2022.
- Wade, M. and Hulland, J. (2004) 'Review: resource – based view and information system research, review extension and suggestions for future research. *Mis Quarterly*, 18(1), 107 – 142.
- Xu, C.H. and Sun, G. H (2018) 'Research on pricing and Fresh-keeping strategy in the fresh agricultural product supply chain with dual channels', *Advance is Economic, Business and Management Innovation*, 50(1), 1-6
- Xu, Z. (2022) 'Analysis of the management mode of agricultural products E-commerce distribution channels based on the intenret's', *Annals of Forest Research*, 65(1), 9433 - 9444.
- Yadav, V.S and Singh, A.R (2018) 'Optimization of supply chain network design for multiple - channel distribution', *Proceeding of the International Conference on Industrial Engineering and Operation Management, Banding, Indonesia*, March 6-8, 2018.
- Yael, S., Mazursky, D. and Kamins, M. A. (2013) 'The process by which product availability triggers purchase', *Sprinyer Science Business Media, New York*, 12 - 19
- Yagana, B., Bintu, M. and Gamama, Y. (2014) 'Channels of distribution of agricultural Produce in Nigeria', *Journal of Biology, Agricultural and Healthcare*. 4(22), 1- 6.
- Yong, S. and Qian, J. (2015) 'Fast channel selection strategy in cognitive wireless sensor networks', *International Journal of Distribution Sensor Networks*, 1(1), 1-6.
- Young, J. A and Nancy J. M. (2013). *Marketing Channels: A Content Analysis of Recent Research. Journal of Marketing Channels*, 2 (1): 7 - 18
- Zhang, Xi, Xu, H, Zhang, C., Xiao, S. and Zhang, Y. (2022) 'Princing decision models of the dual channel supply chain with service level and return, 15(1), 1-10.