

Digital Strategies and Operational Efficiency of Small Businesses in North Central Nigeria

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Abstract

In the dynamic landscape of business operations, Small and Medium-sized Enterprises (SMEs) in Nigeria are increasingly turning to digital strategies to enhance their operational efficiency. This study aims to comprehensively investigate the influence of two prominent digital platforms, Facebook and YouTube, on key aspects of SME performance in North Central Nigeria. The specific objectives of this research are twofold. Firstly, the study evaluates the impact of Facebook advertising on SMEs' customer patronage in Nigeria. As social media continues to dominate the digital sphere, understanding how Facebook advertising contributes to customer acquisition and retention is crucial for SMEs striving to stay competitive in the market. Secondly, the research seeks to ascertain the impact of YouTube on SMEs' customer satisfaction in Nigeria. With the rise of video content consumption, especially on platforms like YouTube, it is essential to investigate how SMEs leverage this medium to enhance customer satisfaction and loyalty. To achieve these objectives, a mixed-methods approach was employed, incorporating surveys and interviews to gather quantitative and qualitative data from a sample of SMEs in North Central Nigeria. Data analyses involved ANOVA statistical techniques to assess the relationships between digital strategies, customer patronage, and satisfaction. The findings of this study provided valuable insights into the effectiveness of Facebook advertising and YouTube as digital tools for SMEs in North Central Nigeria. Ultimately, the research contributes to the broader understanding of the role of digital strategies in shaping the operational efficiency of SMEs, offering practical recommendations for businesses, policymakers, and academics alike

Keywords: Digital Strategies, Operational efficiency & SMEs.

Introduction

The significance of small and medium enterprises (SMEs) in the economic growth and development of Nigeria is widely recognised and documented across management literature. This comes as no shock, considering that the operations of SMEs in both formal and informal sectors constitute a significant share of economic activities in Nigeria. In a nation marked by high levels of unemployment, poverty, and inequality, the vital importance of SMEs in tackling these socio-economic challenges is evident. Regrettably, it's estimated that 70% to 80% of SMEs in Nigeria either fail or struggle to progress within their initial two years of operation. This is partially attributed to various challenges that hinder the operations of SMEs (Achieng & Malatji, 2022). The situation worsens due to an increasingly dynamic market influenced by globalization, technological progress, and market demands. These difficulties have adverse effects on the capacity of SMEs to cultivate vital resilience capabilities necessary for their endurance. Consequently, the crucial

contribution of SMEs to the country's economic growth and development remains continuously at risk (Achieng & Malatji, 2022).

In recent times, SMEs in virtually all industrial sectors are constantly enriching their domain with digital tools. Digitalization is perceived to be a major topic in all aspects of the society, with a key note on the effects it poses on economic and social elements (Achieng & Malatji, 2022; Li, Su, Zhang, & Mao, 2017). The introduction of the internet since the 1960s has propelled many SMEs to network via multiple computers, reaching out to customers for sole purposes of patronage, expansion and growth. In this regard, virtually all management domains and employees in both large and medium firms, now access the computers via the internet to constantly create awareness for their products and services thus shaping their structure to align more digitally (Arobo, 2022).

Any SMEs brand without an effective digital marketing strategy is like a car without tires. Its efficiency and essence are bound to be limited. The digital advancement of the century experienced lots of business brands ditch the Analog medium of conducting business and embrace diverse digital tools, to solidify their presence in the business environment and project their brands with a view of increasing their customer base, making a significant impact on small and medium-sized companies and large companies Lee et al., (2011). The application of digital tools on business activities have been found to improve business competitiveness and opportunity base for SMEs to compete on closer terms with larger organisations (Chapman et al., 2000). Bearing special significance on the projection of business activities through effective digital strategies with the most prevalent method of marketing in the Modern technological era (Kamal, 2016). The purpose is not only to sell products and services, but also to build relationships with customers. A prerequisite for SMEs to explore the digital space via sustainable digital marketing practices which help access and communicate to a wider range of customers for a better productive output (Mazzarol., 2015)

Digital strategies of SMEs are at the forefront of every marketing campaign in every business. Organizations have continued to prioritize the need to boost their brand productivity, increase customer base and realise more turnover applying effective digital marketing strategies (Kamal, 2016). Research into SMEs and entrepreneurship has grown immensely at some point of the last decade and studies may have greatly increased focus in the various economy of the world. Digital platforms provide an excellent ability to grow a SMEs brand (Castells, 2010). A massive majority of corporations compete in various parts of the world as SMEs, even though the performance level of SMEs varies, they play a significant role in the overall performance of the whole economy, despite the challenge of sustained performance on the long term (Ates et al., 2013). Digital marketing for SMEs needs to align with the target audience marketing plans and strategies in adhering to evolving complexity customer behaviour. (Dwivedi et al., 2020).

Development of corporate identity in modern times is an important strategic requirement for SMEs to grow their own brand marketing methods and processes (Mingione & Abrarr, 2020). Small and Medium-Sized Enterprises in Nigeria operate in a complex and unpredictable business environment, faced with the constant challenge of competing and providing value to customers, against harsh macro and micro economic environment due to their size and economic capacity (Lee et al., 2011). SMEs Brand building and projection through digital channels involves the application of digital marketing strategies, ensuring a move from traditional marketing methods Eggers et al., (2020). There is a drastic need for SMEs to apply social networks, online advertising campaigns and different virtual approaches to boost their companies' developmental growth, which is in cognisance with adapting to new and innovative ways to improve and adapt to a rapid transformational growth Mohsen et al., (2020). Business has proven to be essential to economic

growth and in the last two decades SMEs are becoming more important around the world (Mingione & Abratt., 2020). It becomes pertinent for governments and industry players around the world to encourage the growth of SMEs for a sustainable impact in the economy, in doing so maintain a competitive advantage. Glaser et al., (2010).

1.2 Statement of the problem

The economic activities of the small and medium enterprises (SMEs) in Nigeria drive much of the country's economic growth and development. Despite their importance, SMEs tend to fail in their mandate of operation compared to macro enterprises. Digital strategies of SMEs foster resilience, efficiency, growth and sustainability; however, adoption of digital strategies by SMES in Nigeria has been slow due to several impediments. However, no meaningful attempt has been made by previous and the present government to support digitalization strategies of SMEs in Nigeria. It is against this backdrop that this study seeks to examine the challenges faced by SMEs in adopting digital marketing strategies and suggest better ways of managing the problem and if possible, eliminate the knowledge gap by carrying out this study.

Objective of the study

The overall objective of this study is to examine the impact of digital strategies on operational efficiency of SMEs in Nigeria, its specific objectives were to:

- (i) Access the impact of face-book advertising on SMEs customers patronage in Nigeria
- (ii) Ascertain the impact of Youtube on SMEs customers satisfaction in Nigeria.

Research questions

- (i) What is the impact of face-book advertising on customers patronage in Nigeria?
- (ii) Is there any impact of Youtube on SMEs customers satisfaction in Nigeria?

2.0 Review of related literature

Over the past few years, enhanced and rapid engagement of information and communication Technology (ICT) to facilitate business technique has come to stay. In view of this, businesses have increased strategies with a blend of ICT to trim down cost of operations and services to enhance profit. It is publicly observed from online messages and trending chats that customers of small and medium scale enterprises today seek more useful, dependable, and reliable mechanisms that will deliver products or services without delay at the right time in the right place, with maximum speed and reliability at the same time while ensuring that the quality of the product is not uttered. Many small and medium scale enterprises in Nigeria have exponentially embraced the use of Information Communication Technologies embedded in digital strategy in their distribution of goods and services just like such similar businesses in the West and other developed nations.

Modern distribution activity relies heavily on technology, in fact, on social media platforms which is essential for both customer relationship and business profitability. Therefore, ensuring access to a reliable, efficient and effective technology is crucial for business performance by small and medium enterprises (SMEs) worldwide. SMEs require a consistent patronage of their products so as to make more revenue, grow the business and be sustainable. Unfortunately, a good number of the people around the north central region of Nigeria lack basic access to internet facilities and gargets that will enable them to connect with businesses so as to view their products always. The availability and accessibility of information technology will significantly enhance the effective distribution, patronage and profitability of many SMEs in the country (Kwarteng, 2015).

The basic concept and rule-of-thumb of Digital strategies is to introduce and harness the use of technology to transform key parts of business operations irrespective of the business type. Microsoft (2017), A Digital strategy Platform strives to: Optimize Operations, Empower Employees, Engage Customers and Transform Products. Liferay, (2017) summarized Digital Experience Platform as the tool for businesses to Unify Customer Experience, Transform Business Operational efficiency and Evolve Digital Strategy. With the rapid paradigm shift in information technology, the businesses that shall survive the 21st century are those willing to embrace digital strategies.

Tech hubs and business incubators play an important role, not only in assisting entrepreneurs and other small business owners in Nigeria but also in the economic growth and development of the country. Tech hubs teach new skills that are critical for business owners' survival in the business ecosystem. Furthermore, a tech hub provides entrepreneurs and small business owners with access to funding opportunities and a global network of other business owners. In recent developments, the formulation and enactment of the AfCFTA memorandum of agreement may provide new hope for the African business environment. The African continental free trade area is expected to boost intra-African trade and Africa's trading position in the global market. Such a policy promises to provide an enabling business environment for SMEs in the country and beyond by expanding customer and supplier base (Achieng & Malatji, 2022).

Market access, which has been a key issue for Nigeria SMEs, is one of the most significant opportunities provided by the AfCFTA. As a result, SMEs are a key beneficiary of the AfCFTA, as the free-trade zone offers significant opportunities for growth. However, for such a policy to successfully work, SMEs must firstly be aware of it; secondly, they must understand its purpose in the business environment. In other words, its grassroots implementation would be critical to its success and for small businesses across the continent to realise its benefits. Furthermore, institutional challenges such as lack of financial support, political instability, corruption and inadequate infrastructure must be addressed. Globalisation of value chains is changing the traditional business strategies, and these are also being fundamentally reshaped by technological advancements, necessitating adaptation by SMEs to remain competitive in a global digital economy (Achieng & Malatji).

The adoption of digital strategy has facilitated business expansion, extending the reach of product and service distribution to numerous regions in Nigeria and globally. Despite the evident prominence of the digital strategy in Nigerian businesses, scholarly research specifically focusing on distribution of products and services in SMEs within Nigeria and other developing countries remains limited. Today, our daily reliance on the internet has simplified many complex activities, prompting companies to prioritize technological advancements that streamline and expedite the purchasing process for customers at a reduced cost (Hommerová, Kelešová, & Satýnek, 2022).

In the last two decades, businesses and the world in general have experienced huge progress in technological inventiveness that connects businesses and customers in ways never thought possible at the beginning of the century (Palladan, 2017; Tchamyoun, Erreygers & Cassimon, 2019; Asongu & Odhiambo, 2020; Tarkang, Yunji, Asongu, Alola, 2021). The 21st century experience has Technology making tremendous impact upon SMEs sector and in general supply industry is no exception (Nuseira and Aljumah, 2020). The internet has created a fascinating experience for customers and a mechanism for businesses to widen their market space beyond physical borders (Purwanto, Sulaiman and Fahmi, 2023; Aditi et al. (2022); Avogo et al. (2022).

The application of information and communication technology thought, guiding principle and accomplishment strategies to distribution has become a subject of concerns to all small and medium scale enterprises for local and global competitiveness in supply industry. As a result of this technological enhancement, business location in distribution sector is enormously dynamic and swift change and they demand SMEs to serve their customer through the use of internet (Mchomba, 2018). Technology revolution has shaped by the age of globalization. The internet massively impacts all aspects of business. Electronic business is no longer an option for businesses; it is a necessity (George, 2011).

On the other hand, operational efficiency of SMEs in present day business is highly dependent on the digital strategies adopted by those businesses, that is to say, SMEs that adopt digital strategies in marketing and distribution of their products are more likely to have a larger market share vis-à-vis customers patronage and subsequent more return on investment than those that did not adopt digital strategies.

Operational efficiency in Small and Medium-sized Enterprises (SMEs) refers to the ability of a business to optimize its internal processes and resources to achieve maximum output with minimal input. The adoption of digital strategies plays a crucial role in enhancing operational efficiency for SMEs in several ways which include the following:

- i) **Automation of Processes:** Digital tools and technologies allow SMEs to automate repetitive and time-consuming tasks. This includes activities like data entry, inventory management, invoicing, and customer relationship management. Automation reduces the risk of errors, saves time, and allows employees to focus on more value-added tasks.
- ii) **Data Analytics and Decision-Making:** Digital strategies enable SMEs to collect and analyse data more effectively. By leveraging analytics tools, businesses can gain insights into customer behaviour, market trends, and internal operations. Informed decision-making based on data analysis helps in optimizing strategies, identifying areas for improvement, and enhancing overall efficiency.
- iii) **Collaboration and Communication:** Digital communication tools, such as project management platforms, collaboration software, and virtual communication tools, enhance collaboration among team members. This improves communication flow, reduces delays, and ensures that everyone is on the same page, regardless of physical location.
- iv) **Customer Relationship Management (CRM):** Digital strategies, like CRM systems, help SMEs manage and analyse customer interactions throughout the customer lifecycle. This not only improves customer satisfaction but also streamlines sales and marketing processes, making them more efficient and effective.
- v) **Supply Chain Management:** Digital technologies can be used to optimize supply chain processes. Real-time tracking, inventory management systems, and digital procurement tools help SMEs reduce lead times, minimize stockouts, and manage their supply chains more efficiently.
- vi) **E-commerce and Online Presence:** Establishing an online presence and engaging in e-commerce can significantly enhance the reach and efficiency of SMEs. Digital strategies such as online sales platforms, digital marketing, and e-commerce enable SMEs to reach a wider audience, reduce overhead costs, and streamline sales processes.
- vii) **Cost Reduction:** Digital strategies often lead to cost reductions by eliminating manual processes, reducing paperwork, and optimizing resource utilization. This is particularly

beneficial for SMEs with limited resources, allowing them to operate more efficiently and competitively.

- viii) **Agility and Flexibility:** Digitalization enables SMEs to adapt more quickly to changes in the market or business environment. Cloud-based solutions, for example, provide the flexibility to scale operations up or down based on demand, without significant investments in physical infrastructure.

In summary, the adoption of digital strategies empowers SMEs to streamline operations, make data-driven decisions, improve customer interactions, and ultimately enhance their overall operational efficiency. This, in turn, positions them for greater competitiveness in the market (Achieng & Malatji, 2022).

2.1 Conceptual framework

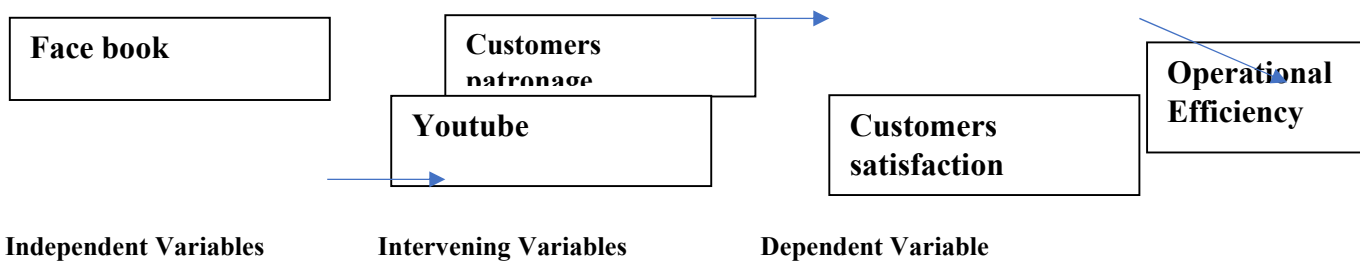


Figure 2.1 Conceptual model for Digital strategies and Operational efficiency of SMEs

2.1.1 Facebook and Customer patronage

The utilization of social media platforms has become a cornerstone for many Small and Medium Enterprises (SMEs) in marketing products and services to customers, with Facebook being a critical platform for enhancing customer repeat purchase and fostering social and marketing connections (Almotairi, 2021). SMEs universally aim to please customers for two primary reasons: ensuring customer re-patronage and surviving and succeeding in the dynamic market environment (Almotairi, 2021).

Chiguvi (2016) argues that customer satisfaction, coupled with the feeling that a product meets their needs, is often termed as customer pleasure. Moreover, customer patronage, as defined by Chiguvi (2016), reflects the commitment to consistently acquire a favored item or benefit regardless of situational variables or marketing endeavors that might influence changing behavior. Customer patronage entails a customer's commitment to support a company by regularly purchasing its goods or services and recommending them to others (Mellroy & Barnett, 2000). This mutual relationship fosters positive feelings and a perceived long-term value for customers.

Rai and Medha (2013) suggest that customer patronage is influenced by sustained customer pleasure and satisfaction, demonstrating a demonstrative commitment and consistency in the relationship between the customer, preferences, patronage, and premium. Almotairi (2021) observes that utilizing Facebook enables SMEs to address individual customer comments, provide personalized attention, and offer fresh, necessary information. Additionally, active engagement with customers on Facebook empowers SMEs to openly manage new situations and dispel

uncertainties, thereby positively influencing customers' decisions regarding purchasing enterprise products or services.

2.1.2 Youtube and satisfaction

YouTube holds the potential to bolster customer satisfaction by implementing various strategies and features that augment the overall user experience. Embracing YouTube as a viral distribution strategy can elevate content recommendation algorithms. This entails leveraging advanced machine learning procedures to deliver more precise and personalized video suggestions for customers and small business proprietors, thereby aiding in content discovery aligned with their preferences (Covington, Adams & Sargin, 2016).

Furthermore, utilizing YouTube as a social media distribution platform can amplify customer interaction with businesses by consistently updating the platform's user interface, making it more intuitive and responsive to both customers and businesses. This involves optimizing layout, navigation, and usability features (Ogunseye, Mok & Schramm, 2013).

Addressing ad interruptions is another avenue where YouTube can enhance user satisfaction. Offering users choices like ad-free subscriptions or increased control over ad frequency can reduce interruptions and elevate satisfaction levels (Akhshabi et al., 2013). Moreover, ensuring improved video quality and streaming, focusing on high-definition streaming and faster loading times, significantly impacts user satisfaction. To achieve this, small business owners utilizing YouTube can invest in improved infrastructure and cutting-edge technologies to enhance these aspects (Kim & Ko, 2012).

Implementing more interactive features within videos, such as polls, quizzes, and live Q&A sessions, can effectively engage users, contributing to increased satisfaction. Furthermore, actively seeking and incorporating user feedback demonstrates a commitment to enhancing user satisfaction. YouTube can utilize this feedback to make informed decisions for platform improvements, further contributing to customer satisfaction (Ogunseye, Mok & Schramm, 2013). Overall, YouTube as a social media platform holds the potential to enrich customer satisfaction, where contented customers are more inclined to engage in repeat purchases.

2.2 Theoretical Review

2.2.1 Technology Acceptance Model (TAM) by Davis (1986) This theory was selected for this study following a systematic assessment of relevant theories. Consumers' acceptance and usage of a technology via social media or online transactions are examples of how the information system theory describes how people deal with information. Davis established the TAM in 1986; it was the most influential theoretical model for comprehending user adoption of technology since it was footed on the thought of lucid action (Fishbein & Ajzen, 1975). For that reason, one might say that the purpose of this representation is to anticipate whether or not a fee would be time-honoured and to make out the changes that must be made to the system so that it is appropriate to consumer (consumers' buying behaviour). The Technology Adoption Model (TAM) is by far the most popular framework for doing so. According to this theory, two things ease of use and perceived utility decide whether or not an information system will be widely adopted. The arrangement of the data is satisfactory. How much a user enjoys working with a system and how certain they are that it

will improve their productivity are both factors in user satisfaction. TAM reveals two convictions perceived ease of use and perceived practicality to evaluate the desire to utilise a technology. One's level of activity determines the intensity of their dedication to a certain course of action.

This demonstrates why it was considered that the TAM was suitable. This is because the model places an emphasis on the fundamental requirements for providing excellent service. When a consumer makes an online purchase from a business, they have certain expectations about the service they will get. If the service this consumer receives falls short of their expectations, a void will exist.

2.2.2 Network perspective theory (NPT) promoted by Granovetter (1973) gives insight to the identification and understanding of the most important players in various segments so that efforts would be best channelled appropriately to get the best possible. This implies that NPT tries to give vivid exposure and explanation on how to utilize information systems that makes movement of product from point of production to the market and to the final consumer. This is the inherent and external interaction focused toward value generation (Gautam and Prabhakar, 2019). The idea as articulated by MvNichols and Brennan (2006) is directed on the value development in respect to inter-firm interactions. The level of cohesion defines the idea whether hard or soft. The nomenclature in itself portrays the level of cohesion which depends on firms' close links and level of freedom consisted in the firm within a variety of small continuous links (Granovetter, 1973).

The links give a certain level of strategic edge to the total interconnectivity such that a particular pattern is often created pivot on the linked structures and can be predicted due to the operational links (Thorelli, 1986; Gautam and Prabhakar, 2019). This therefore gives insight to structure issues pertaining important aspects and what is most important to operate on. In the context of supply chain, it explains, defines and forecast links within related segments (Thorelli, 1986) which supply chain is subtly a network and the application of network perspective theory to the structural linkage is strongly perceived more appropriate because as network expands, the firms are more likely to learn from the external sources of knowledge and meticulously develop them into operation optimization with their supply chain efforts (Kumar et al, 2020).

To react appropriately in operational activities a firm has a mandate to create a mechanism to get information feed in and feed out with partners geared in an optimal integration appropriately (Qi, Huo, Wang and Yeung, 2017). The supply chain management practices should give the direction in operation optimization- based capacity. This is because supply chains are in reality a type of network such that network theory is capable of exposing very curious realistic issues in term of chains (Gautam and Prabhakar, 2019). This involves insight into value, information and cost of information that is to be created in a linked up to give united business advantage which Miles and Snow (2007) described as mechanism for supply chain creativity by showing network enlarged knowledge distribution systems and management.

In a more elaborate perspective, Gadde and Hakansson (2001) observed that the theory is meaningful for understanding trust and sustainability in the mutual relationships and as such help management in operational practices to develop operational based optimization capacity of maintaining chain flow in supply line against all manner of interruptions (Scholten, Sharkey-Scott, and Fynes, 2014; Gautam and Prabhakar, 2019). The theory links the idea that to achieve speed of delivery, strategic supplier partners must faithfully perform their duties as part of the network

component otherwise failure will occur. Strategic supplier partners supply the resources that make expected speed of delivery to be achieved.

Furthermore, the network perspective as engaged in this thesis strives to elaborate the likely relationship between supply chain management practices defined as strategic supplier partnership and operation optimization- based capacity expressed as speed of delivery. This perspective is an effort to give logic to the structural formation that defines the level of impact of strategic supplier partnership as reflected in the operation optimization which is speed of delivery. This conceptual insight will help to respond to the curious search posed in research objective one crafted as assessment of the extent to which strategic supplier partnership affect speed of delivery.

2.3 Empirical review

Ozioma, C. D. (2023) in his study investigated the effect of social media marketing on consumer patronage decision making with specific focus on small businesses in Port Harcourt, Rivers State Nigeria. To achieve this, three specific objectives were created, such as to ascertain the effect of social media marketing on consumer patronage intention, examine the effect of social media marketing on consumer patronage and determine the effect of social media marketing on repeat purchase. To accomplish the set objectives, data were obtained via the use of structured questionnaire, which were distributed and majority retrieved, sorted then the correctly filled copies typed into the SPSS software for analysis. The collected data were tabulated and represented in charts; this was followed with detailed explanations. Through the regression analysis, the study findings showed that social media marketing significantly impact consumer patronage intention, consumer patronage and repeat purchase. Based on the findings the study recommended that small business owners should extensively leverage on the social media campaign for effective communication of their product service offering to social media users. Small business owners should be consistent in engaging social media users as a means of marketing the benefits of their product because it helps to instil confidence in consumer who is showing interest in their product service offering. Small business proprietors should strive to provide a high-quality experience to customers, as they will likely choose to purchase their products for the first time. Additionally, small business owners should remain receptive to feedback after a customer has patronized their products (Ozioma, 2023).

Igashi, et al., (2023) conducted research on effects of distribution channels management practices on SMEs performance in Kaduna State, and the moderating influence of IT capability. The broad objective of the study was to determine whether supply chain management practices influence performance considering the integration and management of the capabilities inherent in ICT. The study adopted a survey research design and took a quantitative approach. The data was collected using structured questionnaire. The study sample size was 223 from a population of 539 SMEs in Kaduna State. Data was analysed using PLS-SEM version 3. The study found that both customer relationship management and strategic supplier partnership (dimensions of SCMP) have significant positive effects on SMEs Performance. The moderating relationship on the interaction between customer relationship management and SMEs performance showed a stronger influence in the existence of IT capability. The study recommends that for the moderating relationship on the interaction between customer relationship management and SMEs performance showed a stronger influence in the existence of IT capability. The research is related to the ongoing study because it relates distribution practices and performance; customer retention is an aspect of performance. However, the research is in Kaduna and it is about SMEs unlike the present study which focuses on

performance that empirical review was carried out from previous studies that were considered relevant to this study first on each of the sub-independent and sub-dependent variables contained in the conceptual framework and secondly on the combined sub-independent and sub-dependent variables used to craft the objectives of the study. This was to enable the researcher gather empirical results that will be useful to discuss the findings of this study.

3 Methodology

3.1 Area of the Study

The area of study is the geographical location where the study was carried out. It is the location within which the activities of the SMES studied are carried out, in this case, the North central region of Nigeria covering six (6) states (Benue, Nassarawa, Plateau, Kogi, Niger and Kwara) and the Federal Capital Territory (FCT), Abuja.

3.2 Study population

The population of this study will be 13, 378 registered SMEs in the North-central geopolitical regions of the country, comprising of Small (12, 980) (SMEDAN, 2021) and Medium Enterprises (398) (Federal Ministry of Industry, 2022; Trading view, 2022). Thus, the study in a bid to cover the two major groups of enterprises under SMEDAN focused on the small and medium enterprises in the region. Below is the table of the population distribution.

Table 3.1: The Study population

S/N	State	Number of registered SMEs
1	Benue	1,811
2	FCT, Abuja	2,825
3	Kogi	1,027
4	Kwara	1,416
5	Plateau	1,574
6	Nassarawa	2,604
7	Niger	2,121
Total		13,378

Source: SMEDAN website 2023

3.3 Population and sampling technique

The population used for this study consist of all registered SMEs with SMEDAN within North central ÷Nigeria. The targeted population consist of 13378 SMEs registered on SMEDAN website that are within North central region of Nigeria. The composition of the population is represented in the table below where the researchers gave a fair representation of the SMEs studied in the ratio which each state bears to the overall population using quota sampling technique.

Table 3.2 SMEs population per state and sample allocation for each state.

S/N	State	Number of registered SMEs	Sample size determination	Sample size for each state
1	Benue	1811	$1811 \times 321 \div 13378$	44
2	FCT	2825	$2825 \times 321 \div 13378$	68
3	Kogi	1027	$1027 \times 321 \div 13378$	25
4	Plateau	1574	$1574 \times 321 \div 13378$	38
5	Kwara	1416	$1416 \times 321 \div 13378$	34

6	Nassarawa	2604	2604x321÷13378	62
7	Niger	2121	2121x321÷13378	51
Total				322

Source: SMEDAN website, 2023

3.4 Sample Size Determination

To get the sample size of the study, Taro Yamane formula was adopted. Yamane (1967: P. 886) provided a simplified formula to calculate the sample size. This formula will be used to calculate the sample size for this study as shown below:

$$n = \frac{z^2 N p q}{Ne^2 + z^2 p q}$$

Where:

- n = the sample size
- Z = Standard score corresponding to a given level of Normal Distribution which this study is given as 1.96
- p = the estimated proportion of an attribute that is present in the population or % of the success rate = 70%
- q = the estimated proportion of an attribute that is not present in the population or % of the failure rate = 1-P (30%)
- e = Proportion of sampling margin of error i.e. 5% or 0.05
- N = Population size.

$$n = \frac{z^2 N p q}{Ne^2 + z^2 p q}$$

$$n = \frac{(1.96)^2 (13,378) (0.7) (0.3)}{(13,378) \times (0.05)^2 + (0.7) (0.3)}$$

$$n = \frac{3.8416 \times 3,437.7}{40.925 + 0.176}$$

$$n = \frac{13206.26832}{41.101}$$

$$n = 321.313 \text{ app. } n=321$$

It is from the above sample size, that the quota sampling was logically and systematically deployed in an informed meticulous manner so as to purposefully solicit for responses from required subjects of interest.

3.5 Research Hypotheses

H₁ There is significant impact of Facebook advertising on customers patronage of SMEs in Nigeria

H₁ there is significant impact of Youtube usage on customers satisfaction with SMEs in Nigeria

4 Data presentation, analyses and results

The results are analysed and presented based on the number of questionnaires that were fully filled and returned and based on relationship between digital strategies and the operational efficiency of SMEs in Nigeria with reference to North Central Nigeria.

4.1 Facebook advertising and customer’s patronage

Table 4.1 Distribution on whether the use of Facebook advertising impact consumer patronage of SMEs products

Options	Frequency	Percent	Valid Percent	Cumulative Percent
Undecided	20	6.7	6.7	6.7
Disagreed	70	23.3	23.3	30
Strongly disagreed	30	10	10	40
Agreed	120	40	40	80
Strongly agreed	60	20	20	100
Total	300	100	100	

Source: Field survey, 2023(SPSS Output file 20.0).

Table 4.1 The results indicate that (20 respondents, or 6.7 percent) were undecided, (70 respondents, or 23.3 percent), (30 respondents, or 10 percent), agreed, and (120 respondents, or 40 percent), with (60 respondents, or 20 percent, strongly agreeing. Data evidence revealed that the use of Facebook has great impact on customers’ patronage of SMEs products in Nigeria

4.2 Distribution on whether the use of YouTube impact customers’ satisfaction of SMEs products

Valid Options	Frequency	Percent	Valid Percent	Cumulative Percent
Undecided	30	10	10	10
Disagreed	20	6.7	6.7	16.7
Strongly disagreed	10	3.3	3.3	20
Agreed	90	30	30	50
Strongly agreed	150	50	50	100
Total	300	100	100	

Source: Field survey, 2023 (SPSS Output file 20.0)

Table 4.2. reveals that (90) respondents represented 30% of the respondents, (30) respondents represented 10% of the respondents who were undecided, (20) respondents represented 6.7% of the respondents who disagreed, while (10) respondents represented 3.3% of the respondents who strongly disagreed. (150) respondents represented 50% of the respondents who strongly agreed. The majority of respondents, according to data, were firmly in favour of the idea that the use of YouTube has great impact on customers satisfaction of SMEs products in Nigeria.

4.3 Test of Hypotheses

To assess respondent opinions on the impact of use of Facebook advertising on customers’ patronage of SMEs products in Nigeria, data from tables 4.1 and 4.2 were used.

Hypothesis One

Ha: There is significant impact of use of Facebook advertising on customers’ patronage of SMEs products in Nigeria

Ho: There is no significant impact of use of Facebook advertising on customers’ patronage of SMEs products in Nigeria.

4.3.0 Hypothesis

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.884a	0.782	0.78	0.425	0.091

a. Predictors: (Constant), digitalization strategy vs operational efficiency, Facebook advertising, customers’ patronage

b. Dependent Variable: adoption of digital strategies will promote operational efficiency

Table 4.3.2 ANOVA^a

S/N	Model	Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	191.916	3	63.972	354.07	.000b
2	Residual	53.48	296	0.181		
Total		245.397	299			

a. Dependent Variable: Digital strategies will promote customers’ patronage

b. Predictors: (Constant) digitalization strategies vs operational efficiency, Facebook vs customers’ patronage and Facebook advertising vs customers’ retention

Table 4.3.3 Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients Beta	T	Sig.	95.0% Confidence Interval for B	
	B	Std. Error				Lower Bound	Upper Bound
(Constant)	0.06	0.086		0.695	0.488	-0.109	0.229
Digitalization strategy vs Operational Efficiency	0.401	0.047	0.482	69.56	0	0.309	0.493
Facebook advert vs Customers’ patronage	0.207	0.037	0.321	45.56	0	0.135	0.279
Facebook advert vs Customers’ retention	0.095	0.029	0.136	3.285	0.01	0.038	0.151

a. Dependent Variable: adoption of digital strategies will impact customers’ patronage of SMEs products in Nigeria.

Interpretation

The fact that the regression sum of squares (191.916) is higher than the residual sum of squares (53.480) indicates that the model accounts for a larger portion of the variation in the dependent variable. The variance explained by the model is not random, according to the significance value of the F statistic, which is (0.000), which is less than 0.05.

In the chosen small and medium enterprises in North central Nigeria, R, the correlation coefficient, which has a value of 0.884, shows a significant correlation between digital strategies and customers’ patronage. R square, the coefficient of determination, demonstrates that the model

accounts for 78.2 percent of the variation in digital strategy. The estimate error for the linear regression model is minimal, at 0.425. Auto-correlation is shown by the Durbin Watson statistics of 0.091, which is less than 2, which is below 2. Customers’ patronage of SMEs products is greatly increased in north central Nigeria by the introduction of digital strategies, which is statistically significant with a customers’ patronage coefficient of 0.782 for Facebook advert, operational efficiency, customers’ patronage and customers’ retention (0.695). Therefore, it is necessary to reject the null hypothesis.

4.4.0 Hypothesis Two

Ha The use of YouTube has significant impact on customers’ satisfaction of SMEs products

H₀ The use of YouTube does not have significant impact on customers’ satisfaction of SMEs products.

Table 4.4.1 Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.871a	0.759	0.756	0.549

a. Predictors: (Constant), The use of YouTube vs customers’ satisfaction

b. Dependent Variable: Digital strategies will reduce price hikes, reduced fake products, increased demand for goods and general operational efficiency.

Table 4.4.2 ANOVA^a

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	280.475	3	93.492	310.269	.000b
Residual	89.192	296	0.301		
Total	369.667	299			

a. Dependent Variable: adoption of digital strategies will reduce price hikes, reduced fake products, increased demand for goods and general operational efficiency.

b. Predictors: (Constant), Digital strategies vs operational efficiency of SMEs

Model	Unstandardized Coefficients		Standardized Coefficients Beta	T	Sig.	95.0% Confidence Interval for B	
	B	Std. Error				Lower Bound	Upper Bound
1(Constant)	0.076	0.116		0.655	0.513	-0.152	0.303
Digital strategies vs operational efficiency,	-			1.471	0.142		
Digital strategies vs reduced fake products,	0.144	0.098	-0.155	14.652	0.000	-0.336	0.048
Digital strategies vs increased demand for goods	0.814	0.056	0.711	14.300	0.000	0.705	0.924
	0.295	0.096	0.339	3.074	0.002	0.106	0.485

Interpretation

The fact that the regression sum of squares (280.475) is higher than the residual sum of squares (89.192) shows that the model accounts for a larger portion of the variation in the dependent variable. The variance explained by the model is not due to chance because the significance value of the F statistic is (0.0001), which is less than 0.05. In SMEs in north central Nigeria, R, the correlation coefficient, which has a value of 0.871, shows a significant correlation between the use of digital strategies and operational efficiency of SMES. R square, the coefficient of determination, demonstrates that the model accounts for 75.9% of the variation in adoption. The estimate error for the linear regression model is minimal, at 0.425. Auto-correlation is shown by the Durbin Watson statistics of 0.091, which is less than 2, which is below 2. The small and medium enterprises in north central, Nigeria, have a strong impact on customers' satisfaction with a coefficient of 0.759, which is statistically significant with respect to price control and increased demand (0.655). Therefore, it is necessary to reject the null hypothesis.

5.0 Discussions of the Results

The results of this study are discussed under the study objectives

5.1 To assess the impact of Facebook advertisements on customers' patronage in Nigeria.

In order to determine the impact of Facebook on customers' patronage of SMEs products in Nigeria, it was also found that digital strategies protect consumers against price hikes, fake products and product awareness. This finding is in line with the findings by Aldaas (2012), Mamadu & Gayovwi (2019) who noted that the key issues are price controls mechanisms, forex controls and the overall interest of protecting the consumers which has been the major challenge to face by the regulatory authorities in the use of Facebook marketing.

5.2 To ascertain the impact of YouTube on SMEs customers' satisfaction in Nigeria.

In order to ascertain the impact of YouTube on SMEs Customers' satisfaction in Nigeria, after asking respondents for their opinions, it was discovered, adoption and use of digital strategies by SMEs such as YouTube has significant influence on customers satisfaction. This is in line with the findings of Ravikumar et al (2019) and Efang et al (2020) who showed that digital strategies have great influence in reducing price hikes in an economy such as Nigeria. This is true because getting the products direct from the manufacturers is easier, thus eliminating the involvement of middle men in the supply chain thereby reducing unnecessary price hikes.

5.0 CONCLUSION

This study, "Digitalization strategies and operational efficiency of SMEs in Nigeria," comes at the right time and is unquestionably essential because the adoption and use digital strategies by SMES will impact on operational efficiency, reduce of fake products and unnecessary price hikes. Thus, boosting demand for SMEs products and creating value chain that is capable of strong legislation. can foster customers' confidence thereby stimulating customers' patronage.

5.1 Recommendations

According to the results, the investigation suggests the following:

- i) Design and implement detailed surveys targeting the customers of SMEs in Nigeria who have been exposed to Facebook advertising. The surveys should cover aspects such as awareness of

products/services through Facebook, perceived credibility of the advertisements, and the influence of these ads on their purchasing decisions.

ii) Employ data analytics tools to track and analyze key performance metrics related to Facebook advertising campaigns. Monitor engagement rates, click-through rates, conversion rates, and customer demographics. Utilize these metrics to draw insights into the effectiveness of the advertising strategies and their impact on SMEs' customer patronage

iii) Organize focus group discussions or interviews with SMEs' customers in Nigeria to gather direct feedback on their experiences with products or services promoted through YouTube. Explore aspects such as the clarity of information provided in YouTube content, the influence of video content on purchasing decisions, and overall satisfaction levels.

iv) Leverage YouTube analytics to extract valuable data on SMEs' video performance. Focus on metrics such as watch time, likes, comments, and subscriber growth specific to the SMEs' YouTube channels. Analyzing these metrics can help assess the popularity and impact of the video content on customer engagement and satisfaction.

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