



## RESEARCH ARTICLE

## ELECTRONIC COMMERCE AND SUSTAINABILITY OF SMES IN ANAMBRA STATE

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## ABSTRACT

The study examined the relationship between electronic commerce and the sustainability of SMEs in Anambra state. The objective of the study was to ascertain the relationship between electronic commerce and sustainability of SMEs in Anambra State. Three specific objectives, research questions, and hypotheses were formulated to guide the study. The study adopted the descriptive survey design which sought to ascertain the effect of online customer service on service quality; between e-payment services on business accountability; between multi-channel marketing strategy on competitive advantage and order delivery on business competency of SMEs in Anambra state. The total population of the study was 260 and also served as the sample size. The purposive random sampling technique was used in selecting the SMEs currently operating in Anambra State. The structured questionnaire was used to elicit vital information from the respondents, and this was structured on a five-point Likert scale. The data collected were analyzed using tabular presentations based on cumulative frequencies, mean and standard deviations analysis for each research question. The Pearson Product Moment Correlation Coefficient through the Statistical Package for Social Sciences (SPSS ver.23) was used in testing the various hypotheses. Based on the findings, the study showed that customer service affected service quality of SMEs in Anambra State. The second hypothesis revealed that e-payment services affected business accountability of SMEs in Anambra state. The third hypothesis also revealed that multi-channel marketing strategy affected competitive advantage and also order delivery influenced business competency of SMEs in Anambra state. The study concluded that electronic commerce had a significant relationship on the sustainability SMEs in Anambra State. The study recommended among others, that SMEs in Anambra state should embrace various forms of e-commerce to ensure better survival and sustainability in the industry. State governmental agencies, policymakers, e-marketing experts, supply chain specialists should make necessary arrangements to assist SMEs who desire to deploy e-commerce systems especially online customer service so as to strengthen their ability to render quality service. Also, operators and staff of various SMEs within the state and the country at large were advised to engage more effective multichannel marketing strategies to further enhance their competitive performance within the industry. They should embrace dynamism in their operations both in serving their customers and also in strengthening their business capabilities.

## KEYWORDS

Electronic Commerce, Sustainability, online customer service, service quality, e-payment services, SMEs.

## 1. INTRODUCTION

Electronic commerce has enabled the development of new strategies and business models in various industries worldwide, including Nigeria. The rise of online shopping has led to significant changes in supermarket retailing, such as channel development and coordination, e-payment services, multichannel marketing strategies, business scope redefinition, product ordering and delivery, new customer value creation, and online customer care (Irene, 2004). The COVID-19 pandemic further emphasized the importance of e-commerce for small and medium enterprises (SMEs), as many businesses shifted to remote work and online sales experienced a surge. Sustainability in business refers to maintaining the necessary leadership, talent, global insights, and change strategies to address unique challenges organizations face (Galvao, 2011). For SMEs in Nigeria, this means adopting flexible systems to remain viable during industrial

changes and participating in environmentally friendly activities.

Sustainable enterprises strive to offer quality service, demonstrate accountability, maintain a competitive edge, and operate competently. The Anambra State government recognizes the significance of incorporating e-commerce into the SME sector. Okonkwo reports that the Anambra State Ministry of Trade and Commerce initiated the installation of an SME data analysis and management system for efficiency and sustainable revenue generation (Okonkwo, 2019). The goal is to develop enterprise resource-based planning software applications, create sustainable e-commerce systems, and improve policy guidelines through data analysis and interpretation, web services, and capacity-building. E-commerce, a critical product of ICT technology, offers significant opportunities for domestic and international exchanges (Hsu, et al., 2014). The adoption of e-commerce among SMEs in Nigeria has grown significantly in recent years,

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paving the way for a new generation of Nigerian entrepreneurs.

### 1.1 Statement of the Problem

Although SMEs play a crucial role in the global economy and could benefit from e-commerce, adoption rates among SMEs in Anambra state remain relatively low. The slow pace of e-commerce adoption appears to be due to factors such as perceived high costs and the lack of capacity to implement and maintain such systems. Research has shown that small and medium-sized businesses in both developed and developing countries are slower to adopt e-commerce and invest less in e-commerce technologies than larger firms (Apulu and Ige, 2011; Iddris, 2012; Irefin et al., 2012). SMEs in Anambra State are not immune to this trend. Despite significant growth in Nigeria's telecommunications sector, with 187.15 million GSM subscribers and over 86 million internet users, little is known about e-commerce activities among SMEs in Anambra state. It appears that a general issue concerning e-commerce adoption, particularly for online customer service and online shopping, has negatively impacted some retail SMEs. Customers want to purchase products conveniently and feel valued for their patronage, while SMEs seek feedback for improvement and progress. The full acceptance of electronic business methods has not yet occurred, which may be limiting the quality of operations due to evolving global e-business trends. Some SME owners may lack the strategies and capacity to implement e-commerce systems or worry about online security risks, such as hacking and fraud. On the other hand, private firms and the Anambra state government have encouraged businesses, especially SMEs, to adopt electronic payment methods and transactions. However, these services, such as Point of Sale (PoS) devices, credit/debit cards, and bank transfers, are more prevalent among larger firms than SMEs. Furthermore, issues like network failures and online fraud have hindered the effectiveness of e-payment services and overall business transaction accountability, discouraging SMEs from adopting e-commerce strategies.

### 1.2 Objective of the Study

The general objective of the study is to ascertain the relationship between electronic commerce and sustainability of SMEs in Anambra state.

The specific objectives include:

1. To assess the type of relationship that exists between online customer service and service quality of SMEs in Anambra state.
2. To determine the nature of the relationship that exists between e-payment services and business accountability of SMEs in Anambra state.

### 1.3 Research Questions

The following research questions were developed for this study:

1. What kind of association exists between online customer service and the service quality of SMEs in Anambra state?
2. What is the nature of the relationship between e-payment services and the accountability of SMEs in Anambra state?
3. How does implementing a multi-channel marketing strategy influence the competitive advantage of SMEs in Anambra state?
4. What is the nature of the relationship between order fulfillment and the business competency of SMEs in Anambra state?

### 1.4 Hypotheses

The following hypotheses ( $H_0$ ) were formulated to guide the study:

1.  $H_{01}$ : There is no significant relationship between online customer service and service quality of SMEs in Anambra state.
2.  $H_{02}$ : There is no significant relationship between e-payment services and business accountability of SMEs in Anambra state.
3.  $H_{03}$ : There is no significant relationship between multi-channel marketing strategy and competitive advantage of SMEs in Anambra state.

## 2. REVIEW OF RELATED LITERATURE

### 2.1 Conceptual Framework

#### 2.1.1 Electronic Commerce

E-commerce encompasses electronic and digital processes that support an

organization's business activities, such as marketing, sales, and human resource management (Quinn, 1999). It has expanded the marketplace and reduced transaction costs, ultimately transforming commerce and marketing. E-business involves buying, selling, or exchanging products, services, and information via computer networks, including the internet (Whitely, 2001). It automates business transactions and workflows, using technology to improve service delivery speed and cost efficiency. Electronic commerce is an emerging and evolving area of business management and information technology, influencing all aspects of business operations (Esprite, 2017).

It has garnered attention among SMEs in Nigeria due to its profitability potential. E-commerce refers to the use of communication technology, specifically the internet, for marketing, purchasing, and selling goods and services (Wigand, 2017). It can encompass business-to-business (B2B), business-to-customer (B2C), or customer-to-customer (C2C) transactions. In summary, e-commerce is transforming the business landscape by enabling more efficient and cost-effective transactions, expanding market reach, and leveraging information and communication technology (ICT) for various business processes.

#### 2.1.2 Business Sustainability

Sustainability is a comprehensive concept that involves preserving businesses, intergenerational welfare, and more (Wang et al., 2015). A group researcher has touched on this topic in their previous studies (Anoke et al., 2021; Anekwe et al., 2021). Business sustainability requires adherence to sustainable development principles, as defined by the World Council for Economic Development (WCED). This involves addressing macro-level issues such as economic efficiency, social equity, and environmental accountability. Corporate sustainability focuses on managing the triple bottom line, which consists of social, environmental, and economic demands (Bansal and Desjardine, 2014). These demands, also known as profits, people, and planet, often conflict with financial objectives in traditional corporate cultures (Financial Times, 2019). Sustainable businesses engage in environmentally friendly activities, ensuring that their processes, products, and manufacturing activities address current environmental concerns while remaining profitable. This includes designing products that capitalize on existing environmental situations and evaluating a company's performance with renewable resources.

#### 2.1.3 Small and Medium Scale Enterprises (SMEs)

Small and medium-sized enterprises (SMEs) have long been acknowledged as crucial drivers of economic growth and development. This increasing recognition has led to the World Bank consortium's commitment to the SME sector as a central component in promoting economic growth, employment, and poverty reduction. According to SMIEIS, SMEs are enterprises with a total capital investment of at least 1.5 million and no more than 200 million, including working capital but excluding land costs; they have between ten and three hundred employees (SMIEIS, 2006). SMEDAN classifies SMEs based on the following criteria: small-scale enterprises are those with ten to forty-nine employees and an annual turnover of five to forty-nine million naira, while medium-scale enterprises have fifty to one hundred and ninety-nine employees and an annual turnover of fifty to four hundred and ninety-nine million naira (SMEDAN, 2005). In Nigeria, SMEs encompass activities in all sectors. The various definitions demonstrate that there is no single concept defining SMEs, as the definitions differ across industries and countries. SMEs are a diverse group, with some owners being wealthier than others. Some SMEs are dynamic, growth-oriented, and innovative, while others remain small and maintain their traditional business practices.

Mohammed and Nzelibe highlighted the need to identify and discuss specific characteristics associated with SMEs to develop a clear understanding of the concept (Mohammed and Nzelibe, 2014). The study revealed the following features of SME businesses: Ownership and Management of SMEs involve active participation from the Chief Executive in decision-making processes and daily operations, often without adequate specialist support. The Chief Executive, who is typically the owner, founder, and manager, as well as the business controller, may be known by all employees of the company or organization. Since SMEs span various industry sectors and form a large reservoir of local enterprise and technical expertise, as well as a training ground for entrepreneurial management, it is crucial to support and prepare the SME sector for the expected surge in economic activities in Nigeria.

#### 2.1.4 Online Customer Service

A customer is someone who regularly visits a store to purchase products or services, making it a habit to buy from that specific store. Customers can

be described as the end users of products or services, which can include internal stakeholders such as employees and directors, or external parties like the public, other businesses, or government entities (Dei-Tumi, 2005). A customer is someone who purchases goods or services from a provider and may also refer to any prospective buyer. Customer service generally refers to how a company interacts with its customers. It is any service that assists customers in addressing their problems and involves direct, one-on-one communication between a consumer making a purchase and a company representative. Online customer service, therefore, involves catering to customers' needs by offering professional, helpful, and high-quality support before, during, and after their purchase via the internet.

It also focuses on delivering the value promised by the company. Dei-Tumi views customer service as an attitude rather than just a department within an organization (Dei-Tumi, 2005). He believes that a company can only retain and attract customers based on the attitude demonstrated by the organization. As Peter Drucker noted, today's customers have higher standards and expectations (Dei-Tumi, 2005). Thus, if a company consistently provides quality services that meet customers' needs and desires, it is more likely to retain those customers. Customer service involves various techniques, including effective communication skills, such as speaking and listening, appropriate language use, mannerisms, and general demeanor. Good customer service is vital for business success, as it ensures customer satisfaction and promotes repeat business.

Srivastava and Sharma describe customer service as the process of creating, maintaining, and enhancing interactions among business partners to achieve the goals of the relevant parties, which often have a long-term orientation (Srivastava and Sharma, 2013). They further explain that customer service treats each buyer as a unique individual, with the organization's actions aimed at fostering communication between key partners to achieve its objectives. Haroon argues that customer service plays a crucial role in fostering customer loyalty (Haroon, 2010). Providing exceptional and superior customer service not only encourages customers to return but also creates a memorable customer experience that leads to positive feedback about the organization and drives repeat transactions.

Belás and Gabčová view online customer service as a set of activities aimed at improving customer satisfaction, which is the sense that a product or service has fulfilled a customer's expectations (Belás and Gabčová, 2016). Online customer service can be delivered by a person, such as a sales or service representative, or through an automated self-service system. This type of service typically involves accurately identifying and accommodating the needs of both potential and actual customers, as well as adjusting an organization's actions to provide outstanding customer service professionally and effectively. Customer service plays a crucial role in generating revenue and income for an organization, as it enhances the organization's ability to perform these tasks more efficiently.

### 2.1.5 E-Payment Services

E-payment also known as electronic payment system is an operational network governed by laws, rules and standards that links bank accounts and provides the functionality of monetary exchange using bank deposits (Lurigio, 2023). Electronic payment system is a mode of payment over an electronic network such as the internet. In other words, we can say that e-payment is a system in which a person can make online payments for his purchase of goods and services without physical transfer of cash and cheques, irrespective of time and location. It includes all financial operations using electronic devices, such as computers, smart phones or tablets and it also includes credit or debit card payments and bank transfers. The electronic payment system is the basis of on-line payments.

Electronic payment is described as a financial transaction between a buyer and seller facilitated through electronic communication (Kumaga, 2011). Electronic payment can be narrowly defined as e-commerce, which involves payment for goods and services bought and sold over the internet, or more broadly as any form of electronic funds transfer (Cirasino and García, 2008). Okifo and Igbunu consider e-payment as the electronic transfer of money through online transactions for business-to-business (B2B), business-to-consumer (B2C), person-to-person (P2P), and more recently, administration-to-consumer (A2C) purposes (Okifo and Igbunu, 2009). A2C payments involve paying taxes to the government. Humphrey, Kim, and Vale perceive e-payment as cash transactions and related activities conducted using electronic means (Humphrey et al., 2001). This typically involves the use of computer networks such as the internet and digital stored value systems. This electronic method enables bills to be paid directly from a bank, eliminating the need to write and mail checks.

Guttman defines e-payment as card payments or some other electronic

payment means, as opposed to payment by cheques and cash (Guttman, 2002). E-payment, also known as online payment, is simply a way of making payments for goods and services through an electronic medium. Electronic payment gives consumers a convenient alternative to paying bills and debts by cash, cheques, money order etc. Its main purpose is to reduce cash and cheque transactions. Other benefits of e-payment include reduced risk of money loss, low transaction costs, time saving, expenses control, high speed and increased convenience. For businesses, these benefits also include increased sales, instant payment and better cost control.

### 2.1.6 Service Quality

Service quality is about outperforming competitors who may be lacking in this area. To boost sales, penetrate new markets, grow market share, and ultimately achieve success, it is crucial to consider product and service quality together (Taşkın and Durmaz, 2010). Service quality is a predominantly cognitive assessment that arises from comparing the received service (perceived service) quality with the pre-purchase expectations of the consumer (Altunışık, 2009). Service quality encompasses both the end products of the production process and the manner or form in which the service is delivered. Given the intangible nature of services, service quality also has an abstract structure. As a result, the term "perceived service quality" is used instead of "service quality" due to its abstract nature. The relationship between customers' pre-service expectations and actual service performance provides insight into perceived service quality and its dynamics. Perceived service quality is the outcome of comparing pre-service expectations with actual service experiences and is viewed as the gap between the expectations of service recipients and their perceptions (Avcı Kurt and Aymankuy, 2016).

### 2.1.7 Online Customer Service and Service Quality

The role of online customer service in shaping the service quality of SMEs has been extensively documented (Rose et al., 2012; Wu et al., 2011). Effective online customer service, encompassing timely responses, personalized assistance, and efficient problem resolution, can lead to higher customer satisfaction and loyalty (Zhang et al., 2022). In turn, this enhances the sustainability of SMEs by fostering repeat business and positive word-of-mouth (Chong et al., 2011). Moreover, SMEs that invest in online customer service technologies, such as chatbots and helpdesk software, can further streamline processes and improve overall service quality. This integration can lead to increased customer trust and long-term relationships. Additionally, using customer feedback and data analytics allows SMEs to identify areas for improvement and adapt their strategies accordingly. In conclusion, online customer service plays a vital role in shaping the service quality of SMEs, leading to increased customer satisfaction, loyalty, and business sustainability. By leveraging technology and data-driven insights, SMEs can enhance their online customer service efforts and thrive in the digital age.

### 2.1.8 E-payment Services and Business Accountability

The adoption of e-payment services has been linked to improved business accountability, as these systems offer benefits such as better financial management, reduced transaction costs, and increased transparency (Okifo and Igbunu, 2015). E-payment systems provide SMEs with an efficient and secure way of managing transactions, which is particularly important in the digital age where consumers increasingly demand seamless, frictionless payment experiences. Consequently, the use of e-payment services can contribute to the sustainability of SMEs by streamlining financial operations and fostering accountability (Moghavvemi et al., 2021). Furthermore, e-payment adoption enables SMEs to track and analyze customer purchasing patterns, providing valuable insights for targeted marketing strategies and improving overall customer satisfaction.

E-payment services can also help SMEs attract a wider customer base, as consumers increasingly prefer cashless transactions for their convenience and security (Apasrawirotea and Yawisedb, 2021). By offering various e-payment options, SMEs can cater to diverse customer preferences, enhancing their appeal and competitiveness in the market. In addition, e-payment systems can facilitate international trade by simplifying cross-border transactions and reducing currency conversion costs, thus fostering global business opportunities for SMEs (Igudia, 2017; Garg and Thobeng, 2015). Moreover, e-payment services can enhance cash flow management and mitigate the risks associated with handling physical currency, such as theft, fraud, and loss.

This improved financial security contributes to the overall stability and sustainability of SMEs. The adoption of e-payment systems can also



contribute to environmental sustainability by reducing the use of paper-based transactions, such as invoices, receipts, and checks. By transitioning to digital payment methods, SMEs can minimize their ecological footprint and support environmentally responsible business practices. In conclusion, the adoption of e-payment services can positively impact SMEs' sustainability by improving financial management, reducing transaction costs, increasing transparency, and enhancing accountability. As consumers continue to embrace digital payment methods, SMEs that adopt and integrate these services into their operations will be better positioned to capitalize on the growth and competitiveness opportunities offered by the digital economy.

**2.2 Theoretical Framework**

**2.2.1 Technology Acceptance Theory**

This research is based on the Technology Acceptance Theory (TAT) proposed (Davis, 1989). The theory examines customers' behavioral intentions in relation to the adoption of Information and Computer Technologies (ICT). According to the theory, an individual's actual behavior is shaped by their intention to embrace technologies, which is influenced by their attitude towards and the perceived usefulness of the technology. Attitude and perceived usefulness are both affected by the ease of using technologies. To apply the TAT, it is essential to comprehend the expectations of end-users regarding the usefulness and user-friendliness of online applications and the internet.

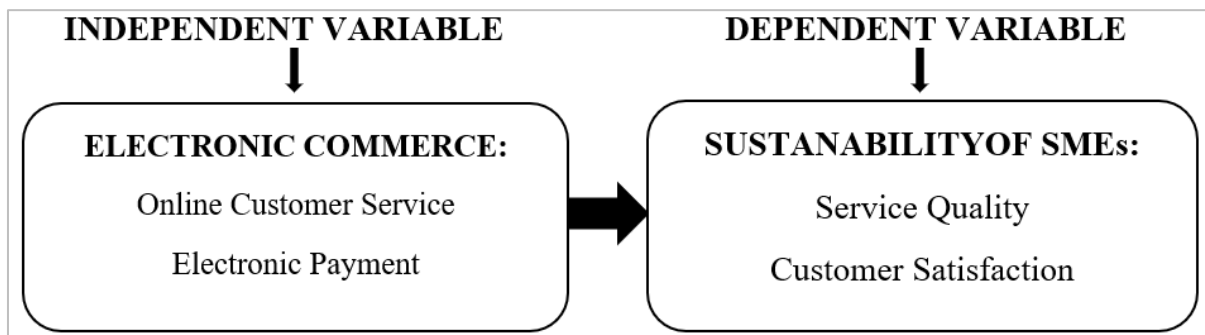
**2.2.2 Electronic Commerce and SMEs Sustainability**

Electronic commerce (e-commerce) has emerged as a critical enabler for businesses to thrive in the digital age, offering small and medium-sized enterprises (SMEs) new opportunities to expand their markets, increase efficiency, and enhance competitiveness (Mazzarol, 2015). Over the years, the e-commerce landscape has continued to evolve and grow, with global e-commerce sales surpassing \$4.2 trillion in 2021 (Digital Commerce 360, 2021). This remarkable growth has been driven by a combination of technological advancements, changing consumer behaviors, and increased internet penetration. Studies have shown that e-commerce adoption can positively impact the sustainability of SMEs by fostering innovation, improving customer relations, and reducing operational costs (Ghobakhloo and Tang, 2013; Adebajo et al., 2016).

SMEs that embrace e-commerce can take advantage of cutting-edge technologies, such as artificial intelligence, big data analytics, and the Internet of Things, to develop innovative products and services, optimize business processes, and gain a competitive edge in the marketplace. Moreover, e-commerce enables SMEs to build and maintain strong customer relationships by providing personalized shopping experiences, seamless transactions, and efficient customer support. Through data analysis and customer feedback, businesses can continuously improve their offerings and better cater to the needs of their target audience. Another significant benefit of e-commerce adoption for SMEs is the potential reduction in operational costs. By shifting from traditional brick-and-mortar stores to digital platforms, businesses can save on expenses related to physical infrastructure, inventory management, and staffing.

Furthermore, e-commerce allows for streamlined logistics and supply chain management, leading to reduced shipping and handling costs. The automation of various business processes through e-commerce platforms also contributes to increased efficiency and productivity. The COVID-19 pandemic further highlighted the importance of e-commerce in 2020 and 2021 as traditional retail channels faced unprecedented challenges due to lockdowns and social distancing measures. SMEs that had already adopted e-commerce strategies were better equipped to navigate these uncertain times, reaching their customers through digital channels and ensuring business continuity. Additionally, e-commerce democratizes the global market, enabling SMEs to access customers beyond their immediate geographic location.

This expansion of market reach can lead to increased revenue generation and business growth. E-commerce also facilitates international trade by simplifying cross-border transactions and reducing trade barriers, thus fostering economic integration and globalization. In conclusion, electronic commerce has proven to be a vital enabler for SMEs in the digital age, offering numerous opportunities to expand markets, increase efficiency, and enhance competitiveness. As e-commerce continues to grow and evolve, SMEs that adopt and adapt to these changes will be better positioned to achieve long-term success and sustainability. Figure 1 shows a representation of the conceptual framework showing the dependent and independent variables of electronic commerce and sustainability of SMEs in Anambra state.



**Figure 1:** Representation of the Conceptual Framework showing the Dependent and Independent variables of Electronic Commerce and Sustainability of SMEs in Anambra State

**2.3 Empirical Review**

In a study, the impact of cashless economy channels on entrepreneurial development in Anambra State, Nigeria, was examined (Nwankwo et al., 2022). This descriptive research explored the relationship between internet banking services, automated teller machines (ATMs), crowdfunding, and entrepreneurial development. With a population of 3,574 small and medium manufacturing enterprise owner-managers in Anambra State, Nigeria, the study sampled 344 owner-managers at random. Correlation analysis and multiple regression analysis were utilized to analyze data gathered through structured questionnaires. The research findings revealed positive effects of internet banking services, ATMs, and crowdfunding on entrepreneurial development. The conclusion of the study emphasized the significant and positive influence of cashless economy channels on entrepreneurial development.

As a recommendation, the study suggested launching a comprehensive awareness campaign to inform the public about the advantages of various cashless economy channels for business performance, longevity, and customer satisfaction. The campaign should be supported by robust security measures, user-friendly services, and dependable ATMs that offer affordable fees and deposit options. In a study conducted the significance of electronic payment methods in streamlining monetary transactions in

banks in Erbil City was investigated (AL-Saji, 2019). The research sample included three banks: Cihan, RT, and Byblos. Out of the 40 distributed questionnaires, 31 were deemed valid for statistical analysis. A five-dimensional Likert scale was used in designing the questionnaire, and the SPSS program was employed for statistical analysis to derive results. Key conclusions drawn from the results included: a strong focus by the banks on electronic payment methods to attract customers and enhance customer services, and the limitation of electronic payment methods to customers with adequate internet-handling skills.

Based on these findings, the study recommended that banks should emphasize the introduction of new and innovative electronic payment methods to attract new customers and keep pace with global market advancements. Additionally, banks and other specialized organizations should conduct educational programs for clients to emphasize the importance and simplicity of using electronic payment methods in financial transactions, both locally and internationally. In a study by the researchers aimed to assess the influence of e-business adoption on organizational performance within selected service industries in Nigeria (Onyemaechi et al., 2019). The study had two specific objectives: exploring the connection between e-business service delivery and organizational performance and determining the link between e-business customer satisfaction and organizational performance. A survey research design

was applied, and the study population included 839 employees from selected companies in Lagos State. Out of 270 respondents who completed the validated questionnaire, 202 correct responses were analyzed using descriptive and inferential statistics (Spearman Rank Correlation Coefficient).

The findings showed a positive and significant association between e-business service delivery and organizational performance, as well as a positive and significant connection between e-business customer satisfaction and organizational performance. Based on these results, the study concluded that e-business adoption positively affects organizational performance in Nigerian service industries. The study recommended that management should ensure effective service delivery and incorporate feedback mechanisms to identify areas requiring improvement, enhancing the organization's effectiveness. A group of researchers carried out research on the effects of e-commerce on small and medium-sized enterprises' (SMEs) performance (Sedighi et al., 2018). The study employed a descriptive-correlational research design and had a population of 373 SME managers in Tehran. The sample size was determined using the Kerjcie Morgan table, and data were collected through a structured questionnaire. Data analysis was performed using structural equation modeling and partial least square techniques.

The findings demonstrated a significant positive relationship between e-commerce usage and SME performance, including financial performance, internal processes, customers, growth, and learning. The study also discovered that innovation moderated the relationship between e-commerce and SME performance and its components. The study advised SME owners to consistently engage in creative thinking and innovative actions to develop diverse products and services, which can contribute to business expansion and sustainability. Nwosu carried out a study on the adoption of e-commerce by small and medium enterprises in Nigeria, aiming to explore the approaches used by Nigerian SME business owners in implementing e-commerce systems (Nwosu, 2017). The research centered on retail SMEs in Lagos, Nigeria, that had operational e-commerce systems and used the dynamic capabilities framework as its theoretical foundation.

Data collection involved semi-structured interviews with four SME business owners/managers and documentation from the case companies. Interview transcripts were coded, and documentary data was analyzed to identify themes. Credibility was maintained through member checking and triangulation. Notable themes included service delivery strategies, dynamic marketing strategies, and learning and adaptation. The study recommended that the government create favorable conditions for SMEs to adopt e-commerce practices, allowing them to access wider markets cost-effectively, leading to increased wealth creation opportunities for business owners, employees, host communities, and the government. Okeke, Oboreh, and Ezeaghaego examined the influence of e-commerce on the growth of small-scale enterprises in Anambra State (Okeke et al., 2016). The study's significance was due to e-commerce's global impact on

all business functional areas and essential tasks.

The research was grounded in the Technology, Organizational, and Environmental Model (TOE model) and the Resource-Based View Theory. Data was collected from selected small-scale enterprises in Nnewi, Onitsha, and Awka, analyzed using percentage analysis, and hypotheses were tested with Z-test statistics. The study discovered that business-to-customer (B2C) significantly impacted the performance of small-scale enterprises, and that e-commerce adoption played a crucial role in their growth. The study advised small-scale enterprises that have not yet adopted e-commerce technology to do so to maintain competitiveness in their industries, as their growth relies on it.

### 3. METHODOLOGY

This section outlines the different approaches employed by in this investigation and they cover the research design, area of the study, study population, sample size and sampling methods, data collection approach, instrument validity, instrument reliability, and data analysis technique.

#### 3.1 Research Design

A correlative research design was adopted for this study. This research design would be suitable for the study as it will enable the researchers to collect data from selected SMEs currently operating in Onitsha, Nnewi and Awka, Anambra state and analyze them using the variables of the study.

#### 3.2 Area of the Study

The study concentrates on SMEs in Anambra state, specifically focusing on Onitsha, Nnewi, and Awka. Onitsha is situated at a significant east-west crossing point of the Niger River, serving as a major trade hub between coastal regions, the north, and eastern and western Nigeria. Nnewi is a prominent trading and manufacturing center in Nigeria, attracting numerous migrants due to its extensive commercial activities. Awka, the capital of Anambra State, features a large, basic informal market selling a variety of goods, from food products to clothes and household items. Onitsha, Nnewi, and Awka are undoubtedly among the most populated and business-driven areas in Anambra state, characterized by a wide range of businesses across various industries, including pharmaceuticals, manufacturing, and services.

#### 3.3 Population of the Study

The population of the study (Table 1) comprised of employees in three SMEs companies in Anambra state. These small and medium scale companies were randomly selected from among all other SMEs operating in Onitsha, Nnewi and Awka. The SMEs were selected from the three main towns in Anambra State, each representing one of the three senatorial zones in Anambra State. Based on the recent statistical record from the Corporate Affairs Commissions in Anambra state, the total population of employees in the three selected enterprises is 260.

**Table 1:** Tabular Representation of Employees

S/N	Names of Firms	Location	No. of Employees
1	Goodwill Bakery	Onitsha	156
2	Slot Phones & Accessories	Nnewi	41
3	Roban Stores.	Awka	63
	<b>Total</b>		<b>260</b>

#### 3.4 Sampling Size and Sampling Technique

The researchers deemed it fit to use the population size as the sample size as the total population is relatively small to be sampled. This study hence adopted a purposive random sampling technique in selecting three SMEs which include Goodwill Bakery operating in Onitsha, Slot Phones & Accessories operating in Nnewi and Roban Stores operating in Awka to suit the study. This technique was adopted for better accessibility and to enable better coverage of the study content. This would help conclude the study based on the findings.

#### 3.5 Instrument of Data Collection

The primary source of data for this study is a structured questionnaire, designed to gather information about the impact of electronic commerce on the sustainability of SMEs in Anambra state. The questionnaire consists of two sections: the first collects demographic information and provides instructions, while the second section obtains information related to the research problem, objectives, and questions. The items are rated on a five-point Likert scale, ranging from Strongly Agree to Strongly Disagree, with corresponding weights of 5, 4, 3, 2, and 1. This approach aims to examine

the relationship between the independent and dependent variables. The questionnaire can be found in Appendix A.

#### 3.6 Validity of the Instrument

The instrument was subjected to content validation by experts in the field of research and evaluation from the Department of Business Administration, Nnamdi Azikiwe University, Awka. Corrections were also made on the contents and structure of questions asked. After effecting these corrections, the final copy was drafted and vetted valid for the study.

#### 3.7 Reliability of the Instrument

To establish the reliability co-efficient of the instrument a test re-test method was used. Thirty (30) copies of the questionnaire were administered to SMEs operating outside the study area. After a five-day interval, the questionnaire was re-administered to the same respondents and two sets of scores were obtained. Upon testing the reliability of the instrument using the Spearman correlation coefficient, the result showed 0.9 which proves that the instrument is very reliable. The reliability test table is attached as Appendix II of the study.

### 3.8 Ethics

In conducting we carefully considered several ethical aspects to ensure the highest ethical standards were maintained throughout the research process.

1. **Informed Consent:** Prior to their participation, all participants were provided with a clear and detailed explanation of the research's purpose, procedures, and potential risks and benefits. They were informed of their right to withdraw from the study at any time without any negative consequences. Participants were asked to provide written consent, ensuring that they understood the nature of the research and voluntarily agreed to participate.
2. **Confidentiality and Anonymity:** We ensured the confidentiality and anonymity of the participants by keeping their personal information separate from the data collected. Any identifying information was removed from the final analysis and presentation of the results. Data was stored securely, with access restricted to the research team members.
3. **Data Collection and Analysis:** Data collection designed and conducted in a way that respected the privacy, autonomy, and dignity of the participants. Our team ensured that the data collection process was transparent, and participants were aware of the purpose and use of the information they provided. The data analysis was conducted objectively and without bias, focusing on providing accurate insights and conclusions based on the collected data.
4. **Cultural Sensitivity:** Throughout the study, we were mindful of potential cultural differences among SMEs operating in various

regions and industries. Researchers approached participants with respect and sensitivity, ensuring that cultural norms and expectations were considered in both data collection and analysis.

### 3.9 Method of Data Analysis

In this research, data collected were analyzed using tabular presentations based on cumulative frequencies, mean and standard deviations analysis for each research question. The Pearson Product Moment Correlation Coefficient with the aid of Statistical Package for Social Sciences (SPSS ver.23) was used to test the various hypotheses stated in this study as the study sought to examine the relationship existing between the independent variables (of e-commerce) and the dependent variables (of sustainability).

**Decision Rule:** The decision rule states that: Reject the null hypothesis ( $H_0$ ) and accept the alternate hypothesis ( $H_A$ ) if  $calP$ -value is less than 0.05; otherwise accept the null hypothesis.

### 3.10 Data Analysis and Presentation

This section focuses on presentation of data collected for the study and the analysis of various stated hypotheses. 260 copies of the questionnaire were administered to selected small and medium enterprises operating in Onitsha, Nnewi and Awka, Anambra state of which only 200 which is 77 percent were successfully completed and returned while 60 copies which constitute 23 percent were not filled. Data collected were analyzed using a percentage, mean, standard deviation and the Pearson Product Moment Correlation Coefficient (SPSS version 23) was adopted in testing the various hypotheses stated for this study.

### 3.11 Data Presentation

Table 2: Demographic Information of Respondents		
Items	No of Responses	Percentage
<b>Gender</b>		
Male	126	63%
Female	74	37%
<b>Respondents Marital Status</b>		
Single	70	35%
Married	101	50.5%
Others	29	14.5%
<b>Years in Business</b>		
0 - 2yrs	77	38.5%
3 - 4yrs	65	32.5%
5 - 6yrs	39	19.5%
7yrs and above	19	9.5%
<b>Total</b>	<b>200</b>	<b>100</b>

Table 2 shows the descriptive statistics of respondents. Under the gender section, the analysis revealed that male respondents were 126 or 63 percent while female respondents were 74 or 37 percent. This result proves that male respondents worked in the SME sector than the females. The second section analyzed the marital status of respondents. Based on the results, single respondents were 70 or 35 percent; those married were 101 or 50.5 percent while others which included divorced, widows and widowers were 29 or 14.5 percent. This analysis led to the assertion that most small and medium scales workers were married. The table also revealed that respondents who have been in business for 0 to 2yrs were 77 or 38.5 percent, those who have been in business for 3 to 4yrs were 65 or 32.5 percent; 5 to 6yrs were 39 or 19.5 percent and 7yrs and above were 19 or 9.5 percent. More of the employees have been in business for 1 month till 4 years which is 70% of the total respondents.

### 3.12 Descriptive Statistics

The mean average above which the decision would be accepted is 3.0 using the 5 Point Likert Scale. Means below 3.0 would be rejected.

Table 3 shows the descriptive statistics on the extent of relationship that exists between online customer service and service quality of SMEs in Anambra state. The analysis showed that all items in this table were

accepted because they had mean scores which were above the average of 3.0. The cluster mean of 3.8 indicated that good online customer service fosters better service quality as the business environment in most sectors especially that of the SMEs is technologically advancing.

#### 3.12.1 Test of Hypothesis One

**H<sub>01</sub>:** There is no significant relationship between online customer service and service quality of SMEs in Anambra state.

Data obtained from Questions 1 - 6 (Appendix A) were used in testing Hypothesis 1

Table 4 above revealed the extent of relationship that exists between online customer service and service quality of SMEs in Anambra state. Based on the analysis, the correlation between both variables revealed that  $r = .918^{**}$ ,  $calP$ -value = .000, and  $N = 30$ . Since the  $calP$ -value = .000 is less than 0.05, the researcher rejected the null hypothesis and accepted the alternate hypothesis which states that there is a significant relationship between online customer service and service quality of SMEs in Anambra state. Statistically, this result implies that when SMEs embrace electronic ways of attending to customers, it will boost the quality of their services as well as increase the sales coverage.

**Table 3: Descriptive Statistics on the Type of Relationship That Exists Between Online Customer Service And Service Quality of Smes in Anambra State.**

S/N	Items	N	Mean	Std. Dev.	Decision
<b>Online Customer Service</b>					
1	We take product orders from our customers online.	200	3.8663	1.2949	Agree
2	My firm has a good online sales rep that manage customers' requests.	200	4.2780	1.0561	Agree
3	Management uploads my firm's products online for easy purchase.	200	3.0481	1.3572	Agree
<b>Service Quality</b>					
4	My firm is very focused on serving our customers with high quality products.	200	4.1604	1.4433	Agree
5	Our online purchases are always very detailed and well documented.	200	3.1925	1.2442	Agree
6	We try to maintain our website so as to increase our customer's accessibility from any part of the country.	200	4.3529	1.7373	Agree
<b>Cluster Mean</b>			<b>3.8</b>		

**Table 4: Observed Data between Online Customer Service and Service Quality of SMEs**

<b>Correlations</b>			
		<b>Online Customer Service</b>	<b>Service Quality</b>
<b>Online Customer Service</b>	Pearson Correlation	1	.918**
	Sig. (2-tailed)		.000
	N	30	30
<b>Service Quality</b>	Pearson Correlation	.918**	1
	Sig. (2-tailed)	.000	
	N	30	30

\*\*Correlation is significant at the 0.01 level (2-tailed). (Source: SPSS ver. 23 Outputs)

**Table 5: Descriptive Statistics on the Nature of Relationship That Exists Between E-Payment Services And Business Accountability of Smes in Anambra State.**

S/N	Items	N	Mean	Std. Dev.	Decision
<b>E-payment Services</b>					
7	Management is willing to provide electronic machines for customers who would want to use it for purchase.	200	4.2941	1.4424	Agree
8	My firm adopts various payment systems to meet up with the changing buying habits of customers.	200	3.5935	1.2473	Agree
9	Customers are free to buy products using any electronic payment facilities transfers, credit cards, PoS etc.	200	3.5614	1.3041	Agree
<b>Business Accountability</b>					
10	Using electronic means of payment helps my firm keep proper documentation of all transaction.	200	4.4705	1.3973	Agree
11	My firm has supervisors that monitors all cash and electronic payments.	200	4.5187	1.3222	Agree
12	I am obliged to record and report all products sales and materials as well as all daily transactions.	200	4.1123	1.0559	Agree
<b>Cluster Mean</b>			<b>4.0</b>		

Table 5 shows the descriptive statistics on the extent of relationship that exists between e-payment services and business accountability of SMEs. by respondents. Under this section items 7 to12 were accepted because they had mean scores that were above the average mean of 3.0. The cluster mean which indicated 4.0 reveals that there is a great need for e-payment services within SMEs as it facilitates proper accountability and easy sustainability of the business.

**3.12.2 Test of Hypothesis Two**

**H02:** There is no significant relationship between e-payment services and business accountability of SMEs in Anambra state.

Data obtained from Questions 7 – 12 (Appendix A) were used in testing

Hypothesis 2.

Table 6 above revealed the extent of relationship that exists between e-payment services and business accountability of SMEs in Anambra state. Based on the analysis, the correlation between both variables indicated that  $r = .502^{**}$ ,  $\text{sig}P\text{-value} = .000$ , and  $N = 30$ . Since the  $\text{sig}P\text{-value} = .000$  is less than 0.05, the researcher rejected the null hypothesis and accepted the alternate hypothesis which states that there is a significant positive relationship between e-payment services and business accountability of SMEs in Anambra state. Based on this result, it therefore statistically implies that including various e-payment system in SMEs operations will assure business accountability in their business transactions whether physical cash or electronic transfers.

**Table 6: Observed Data Between E-Payment Services and Smes Business Accountability**

<b>Correlations</b>			
		<b>E-payment Services</b>	<b>Business Accountability</b>
<b>E-payment Services</b>	Pearson Correlation	1	.502**
	Sig. (2-tailed)		.000
	N	30	30
<b>Business Accountability</b>	Pearson Correlation	.502**	1
	Sig. (2-tailed)	.000	
	N	30	30



**Table 7: Descriptive Statistics on The Type of Relationship Exists Between Multi-Channel Marketing Strategy and Competitive Advantage of Smes in Anambra State**

S/N	Items	N	Mean	Std. Dev.	Decision
<b>Multi-channel Marketing Strategy</b>					
13	My firm provides various platforms for clients to have access to our products.	200	3.8663	1.2949	Agree
14	We use more than one channel to reach out to our customers.	200	4.2780	1.0561	Agree
15	Management implores various promotions to encourage and retain our customers.	200	3.0481	1.3572	Agree
<b>Competitive Advantage</b>					
16	Management is open to listen to my ideas on how to device means of serving our customers better.	200	4.1604	1.4433	Agree
17	I believe my firm is one of the best when it comes to rendering quality services to meet customers' demands.	200	3.1925	1.2442	Agree
18	Using various marketing techniques has increased my firm's competitive strength in the business sector.	200	4.3529	1.7373	Agree
<b>Cluster Mean</b>			<b>3.8</b>		

Table 7 above shows the descriptive statistics on the extent of relationship that exists between multi-channel marketing strategy and competitive advantage of SMEs in Anambra state. The tabular analysis revealed that all mean scores from item 13 to 18 were accepted because they were above the benchmark mean of 3.0. The cluster mean which indicated a value of 3.8 asserts that providing various platforms to reach out to customers and avail products and services at their reach is essential to gain more market ground and edge over other competitors.

**3.12.3 Test of Hypothesis Three**

**H<sub>03</sub>:** There is no significant relationship between multi-channel marketing strategy and competitive advantage of SMEs in Anambra state.

Data obtained from Questions 13 – 18 (Appendix A) were used in testing Hypothesis 3

Table 8 above revealed the extent of relationship that exists between multi-channel marketing strategy and competitive advantage of SMEs in Anambra state. Based on the analysis, the correlation between both variables indicated that  $r = .766^{**}$ ,  $_{cal}P\text{-value} = .000$ , and  $N = 30$ . Since the  $_{cal}P\text{-value} = .000$  is less than 0.05, the researcher rejected the null hypothesis and accepted the alternate hypothesis which states that there is a significant positive relationship between multi-channel marketing strategy and competitive advantage of SMEs in Anambra state. This therefore statistically implies that multichannel strategies help boost the competitive strength of SMEs.

**Table 8: Observed Data Between Multi-Channel Marketing Strategy and Competitive Advantage**

<b>Correlations</b>			
		<b>Multi-channel Marketing Strategy</b>	<b>Competitive Advantage</b>
<b>Multi-channel Marketing Strategy</b>	Pearson Correlation	1	.766**
	Sig. (2-tailed)		.000
	N	30	30
<b>Competitive Advantage</b>	Pearson Correlation	.766**	1
	Sig. (2-tailed)	.000	
	N	30	30

\*\*Correlation is significant at the 0.01 level (2-tailed) (Source: SPSS ver. 23 Outputs)

**Table 9: Descriptive Statistics on the Nature of Relationship That Exists Between Order Delivery and Business Competency of Smes In Anambra State**

S/N	Items	N	Mean	Std. Dev.	Decision
<b>Order Delivery</b>					
19	My firm engages in home delivery of certain products.	200	4.2780	1.0561	Agree
20	We have personnel who are in charge of online products/services in which customers will make order and it will be delivered.	200	3.8663	1.2949	Agree
21	We keep track of all deliveries and orders as well as encourage customers to engage in it through discounts.	200	4.3541	1.2843	Agree
<b>Business Competency</b>					
22	My firm has continued without stoppage, irrespective of the adverse circumstances of the business environment.	200	3.3923	1.0683	Agree
23	I am able to carry out effectively my daily task because my management is competent.	200	3.5614	1.3041	Agree
24	I believe that my firm has acquired the capability to ensure progress in their business operation over time.	200	4.2611	1.4222	Agree
<b>Cluster Mean</b>			<b>3.9</b>		

Table 9 above shows the descriptive statistic on the extent of relationship that exists between order delivery and business competency of SMEs in Anambra state. The tabular analysis revealed that all mean scores from item 19 to 24 were accepted because they were above the benchmark mean of 3.0. The cluster mean which indicated a value of 3.9 asserts that for SMEs to maintain a good portfolio for taking and delivering customers' order shows how competent and capable they are. Embracing electronic commerce strengthens the business capacity of SMEs especially the ones in Anambra state.

**4. CONCLUSION**

This study aimed to explore the relationship between electronic commerce and SMEs' sustainability in Anambra State, given the challenges they face in staying profitable and competitive. The study utilized Pearson Product Moment Correlation Coefficient to test several hypotheses, and the results showed a significant positive correlation between electronic means of customer service, e-payment systems, multichannel marketing strategies, and order delivery on SMEs' quality of service, business



accountability, competitive advantage, and business competency. Therefore, it is recommended that SMEs adopt e-commerce systems, with support from government agencies, policymakers, e-marketing experts, and supply chain specialists. Operators and staff should be trained in effective multichannel marketing strategies, and online platforms should be made accessible to integrate e-commerce activities into SMEs' structure and the business environment. The adoption of e-payment systems can lead to productivity gains, system efficiencies, expanded market reach, and customer satisfaction, all of which are vital for SMEs' sustainability and survival in the industry.

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