

# E-Commerce and Banking Performance in Nigeria

DR. C. G. E. SALAMI

Department of Business Management & Marketing, Delta State University, Abraka  
[cgesalami@yahoo.com](mailto:cgesalami@yahoo.com)

OGBETA MERCY

Department of Business Management & Marketing, Delta State University, Abraka  
[mercyogbes@yahoo.com](mailto:mercyogbes@yahoo.com)

## ABSTRACT

E-commerce is relatively new in Nigeria and this business approach is fast gaining momentum. It has gradually emerged strongly and it's advancing rapidly in all areas of financial intermediation and financial markets. This development has no doubt earned a competitive advantage owing to the fact that the recent development in telecommunications and information technology has resulted in new delivery channels for banking products and services. One of such derived benefits from e-commerce and its resultant impact on banking performance is its improved efficiency and effectiveness, convenience, reliability, flexibility, speed, etc. in order to enhance effective service delivery and boost banking performance in the Nigerian economy. However, as to how e-commerce practices can be employed in the pursuit of a sustainable development and economic growth is yet to be firmly established. This research work particularly describes the significance of e-commerce system by explaining the transition from the traditional business practices to the evolving electronic commerce practices which has broken many new grounds and has taken a global dimension. Again, it explains why the electronic commerce channels such as the use of ATM, telecommunications, social networks, internet banking, POS terminals, Mobile phones, software applications, etc could enable business to blossom and reduce the movement of cash/cash handling which in turn helps to curb crime rates, mitigate other barricading challenges and would protect us from many dangers. Also, it explains why it has gained greater height of acceptability and thus explains how information communication technology (ICT) could be exploited and enhanced for this purpose. Conclusively, it develops a strategic management framework for leveraging e-commerce practices by providing considerable and practical suggestions on the use of e-commerce - its features, benefits, success factors and possible attendant risks associated with e-commerce. It guarantees customers' patronage, improve the standard of living, as well as facilitating economic, social and technological changes as certain values are expoused by sustainable development which in turn, would help to foster economic growth in the Nigerian economy . it was recommended that government and banks should establish adequate regulatory framework that will ensure customers' protection and security of investment.

**Keywords:** *e-commerce, e-banking, mobile commerce/mobile banking, internet banking, information technology, social networks.*

## INTRODUCTION

With the emergence of the World Wide Web, the possibility of using the web as a business tool has generated much excitement and interest around the world. A number of business organizations have even taken the challenge to build their own web-based sites. Business communities, the SME's, organization, banks and financial service providers, countries, marketers and advertisers now increasingly search for easy and cheaper ways of bonding and connecting directly with their customers as a lot of the day-to-day operations are becoming automated. E-commerce activities are however expanding at an incredible pace in developing countries like Nigeria. This is because of its upsurge in acquisition of information technology which is the bedrock of e-commerce, though it is yet to be accorded an appropriate recognition in business organization. E-commerce has gradually taken a global dimension since 1960 till date. Many organizations and individuals now look to the web as the future, definitive source for information, goods, services and communication, as the amount of business transacted over the internet seems to double or triple each year; often organization small and publicly are being pushed to the web by the both customer and competitors. In some cases, traditional brick and mortar business are playing catch up and entering the e-commerce arena late in the game. All indications are that e-commerce will continue to grow, so many organizations may find themselves either having to go online or go out of business (Trepper 2002). E-commerce therefore enables the execution of transactions between two or more parties using inter-connected networks and improvements from implementing e-commerce may result in more effective performance (better quality, greater customer satisfaction and greater economic efficiency (low costs) and more rapid exchange (high speed, accelerated or real-time transaction).

However, e-commerce is really much more than just exchanging product or services for money over the internet. It is an enabling technology that allows organization to exchange information on with customers and vendors to

the benefit of everyone involved. Eventually, E-commerce will likely replace the movement of paper within organization between organizations as well as between organizations and customers (Rush 2003). Developmental standard has been bogged down largely because the leadership of those business organizations in the forefront of e-commerce has been ineffective at unifying the various participants into a relatively cohesive industry group (FredSollish, 2002). In its broadest sense, electronic commerce encompasses any commercial activity that takes place directly between a business, its partners, or its customers via a combination of computing and communications technologies. E-commerce can be used to create brand equity and to improve on organization's public image, as well as to develop and strengthen direct relationship between an organization and its customer's distributors, suppliers and retailers (Trepper, 2000). To manage transactions, e-commerce also incorporates transaction management, which organizes, routes, processes and track transactions. E-commerce as well includes consumers making electronic payments and fund transfers.

E-commerce is the purchasing, selling and exchanging of goods and services over computer networks such as the internet, e-mail, sms, phones, etc through which transactions or terms of sales are performed electronically. To many people, the term "electronic commerce also includes many other activities such as business trading with other business and internal processes that companies use to support their selling, hiring, planning and other activities. The most common technologies used are the internet and World Wide Web, wireless transmissions on mobile telephone and personal digital assistant (PDA) devices, etc. Schneider, (2004). Advancement in information and communication technologies and the emergences of the internet have revolutionized business activities' enabling new ways of conducting business. The rapid expansion of the internet in the late 1990's led to the explosion growth in electronic commerce - Akbulut,(2002). Buyers order goods and services online, they track the status of their orders via electronic mail and in some cases, they receive the goods they purchase directly over the internet. Products ordered online are delivered by traditional shipping methods (Encarta Dictionaries, 2008).

#### **STATEMENT OF THE PROBLEM**

Implementing successful e-commerce service is not as easy as most people think. Many obstacles exist and they all revolve around three major pieces of the electronic commerce puzzle viz-a-viz money, technology, and people. Sometime the cost of avoiding e-commerce is greater than the cost of initiating it. There is a big gap in the internet and e-commerce adoption between the developed and developing countries, thus creating a digital divide. The main obstacles that prevent developing countries from leveraging the internet are lack of adequate communication infrastructure, technical know-how and information processing about the economy and the environment, poorly designed websites which may not be functional always, fraudulent tendencies, etc. The lack of adequate banking infrastructure is also considered as one of the problem faced by developing countries in building economic solutions.

#### **OBJECTIVES OF THE STUDY**

The general objective of this study is to carry out an in-depth investigation on e-commerce in Nigeria's banking industry. Other specific objectives are:

- (1) To ascertain the impact of e-commerce on the performance of Nigerian banks.
- (2) To examine the impact of e-commerce on customers' satisfaction in Nigerian banks.

#### **RESEARCH QUESTIONS**

- (1) What impact has e-commerce on the performance of Nigerian banks?
- (2) What is the effect of e-commerce on customers' satisfaction?

#### **RESEARCH HYPOTHESES**

- (1)  $H_0$  - e-commerce has not made an impact on performance in Nigerian banking sector.
- $H_1$  - e-commerce has made an impact on performance in Nigerian banking sector.
- (2)  $H_0$  - e-commerce products and services have not significantly improved customer satisfaction.
- $H_1$  - e-commerce products and services have significantly improved customer satisfaction.

#### **SIGNIFICANCE OF THE STUDY**

E-commerce offers a promising and existing way for organizations to meet various challenges of an ever-changing environment. The diffusion of electronic commerce on business transaction is achieving faster growth in Nigerian banking industry. It generally provides new ways and opportunities for organizations to broaden their participation in national and international markets. E-commerce are paraded with many benefits which

includes market changes, customer expansion, creation of wealthy job opportunities, ability to be reached worldwide, and organizational efficiencies to mention a few. Moreover, the study will be beneficial to the students, lecturers, Nigerian government, corporate bodies/organizations in Nigeria, Nigeria's banking and other financial service industries, whose aim is to beef up performance, reduce production or operational cost, increase profitability, gain competitive advantage and develop innovations. This would indubitably have a resultant impact on both business performance and everyday life.

### **THE CONCEPT OF ELECTRONIC COMMERCE**

E-commerce refers to a system that enables bank customers to get access to their accounts and general information on bank products and services through the use of bank's website without the intervention of or inconveniences of sending letters, taxes, original signatures and telephone conformations (Henry 2000; Thulani, Tofara and Longton 2009). E-commerce has a wide variety of electronic platforms for purchase orders to suppliers or service providers, via e-channels Interface, which can be faxed, e-mailed, and even to facilitate payment to obtain digital cash using smart cards and other internet services which is an information highway. E-commerce could also mean the process of execution of commercial transactions electronically with the help of leading technologies. Thousands of businesses have taken up residence at web sites. Commercial channels according to Kotler (2002) include (i) commercial channels on news, e-libraries, e-education, e-reference, e-dialogue opportunities, e-mails, etc. and (ii) internet where one can surf the net, experience a great deal of relief as business activities can now be done electronically, shop online, access news, get business updates and many more. For many, internet has become an integral part of their daily lives (Yankee Group Interactive Consumer Survey, 2002).

Users gain greater comfort level, interacting electronically and continue to establish trust in visited sites. Trust is deemed crucial as customers have to rely on promises given by an organization (Garbarino and Strahilevitz, 2004). They have to trust that their personal information will not be passed to other unauthorized parties and safe from hackers (Jarvenpaa et al, 2000; Garbarino and Strahilevitz, 2004). This is because the online environment features many possibilities for fraud (Grazioli and Wang, 2001). Hence trust is a key driver for the success of e-commerce (Jarvenpaa et al, 2000; McKnight et al, 2002; Konradt et al, 2003; Stewart, 2003; Harris and Goode, 2004; Bart et al, 2005; Schosser et al, 2006).

Success in the electronic banking era is measured in the eyes of the customer. A bank has to profitably meet the needs of customers and continuously improve its ability to do so. It has to be accurate, reliable, convenient, cheaper, more personalized, reduce customers' search cost, helpful and heighten more privacy concerns. It allows business organizations to send commercial documentation electronically. E-commerce cannot be all successful with the isolation of information technology, considering the value it has so far added to human existence, the quality of life and the standard of living. E-commerce has a great deal of advantage over "brick and mortar" stores and mail order catalogs, thereby sweeping away the traditional media advertisers/agencies and middlemen. Customers can easily search through a large database of new and already existing products and services on various service providers and financial institution websites. Users can see actual prices, build an order over several days and email it, compare prices with a click of the mouse and buy the selected product at best prices. It also increased accessibility for all businesses and made international and local operations technologically easy.

### **COMPONENTS OF ELECTRONIC COMMERCE**

The components of electronic commerce are:

- \* Electronic marketing.
- \* Electronic learning.
- \* Electronic shopping.
- \* Electronic consulting.
- \* Electronic conferencing.
- \* Electronic library.
- \* Electronic mail.
- \* Electronic forms.
- \* Electronic funds transfer.
- \* Electronic banking.
- \* Electronic advertising, etc.

## **OBJECTIVES OF ELECTRONIC COMMERCE**

The emergence of electronic commerce is a confirmation of the society's appreciation of the use of the computer as an invaluable tool towards enhancing electronic commerce and in turn, economic growth. Among others, e-commerce enables speedy and timely transactions, accuracy, reduces business frictions and operational costs, bribery and corruption, helps to build trust and enhances technological advancement, etc. Indubitably, the fastest and most efficient means of transacting businesses in the world today is via the e-commerce especially in most developed countries like the U.S, U. K and other advanced parts of the world and Nigeria as an emerging economy in West Africa is no exception to the trends of events happening around the world.

## **ROLES OF ELECTRONIC COMMERCE IN BANKS**

Banks and other financial service industries have used e-commerce channels for some years now, to communicate and transact businesses with both the domestic and international corporate customers. They even use these e-channels for receiving instructions and delivering their products and services to their various customers though it varies widely in capability and sophistication. This could represent a great opportunity for banks, since they could provide an attractive option for the customers who need an online bank. These types of banks are chosen as opposed to those solely on the internet (Virtual banks) as the world's experience has demonstrated that many customers prefer selecting a traditional bank with the option of internet banking. Customers feel more comfortable with this choice knowing they have the option to visit a real branch office if they choose (Chan B. and S. Al-Hawandeh, 2002). E-commerce provides open and universal accessibility to products/services that may be difficult to obtain physically. It gives an ease of information gathering (Harris, Coles and Davies, 2003). The adoption and increased use of e-commerce channels/platforms to purchase goods and services allows the e-customer to save material resources, energy, travel and distribution costs (Spaargaren and Van Vilet, 2000). It has achieved socio-economic and environmental sustainability. It potentially puts increasing power of selection and decision making in the realm of the customers. It also facilitates economic and social changes. E-commerce has become the most wide-ranging and significant area of current development in product marketing (Barwise, Elberse and Hammond, 2002). Thanks to the power of information technology and telecommunications.

## **BUSINESS FORMS OF ELECTRONIC COMMERCE**

Marketing and promotion via the internet are somewhat controversial because of spam occurring in the e-commerce industry. Spam denotes unsolicited (unwanted) advertising e-mail. Organizations must be careful about the quantity and frequency of promotional e-mail sent to customers/consumers: otherwise, potential customers may feel initiated and turn away from a product of service. Customer service and billing are probably the hottest business functions being conducted over the web today. In many businesses and organizations, customers can carry out a host of customer services and financial activities, including checking order and shipment status, accessing account balances for such activities as cell phone usage, banking and revolving credit and investing; online bill presentation and payment is also growing rapidly. Many banks now also offer electronic bill payment directly from customer banks account. E-commerce also offers new way for large organizations. To manage inventory using VPNs rather than expensive leased lines, organizations can monitor inventory levels nationwide to prevent outages and eliminate slow moving items. The web is used for organizational station communications, some organizations station field sales and services representative all over the world. These field reps often feel disconnected from life at the organization's offices. E-mailed newspapers and organization websites with information about current organization events help distant staff feel connected.

## **ELECTRONIC COMMERCE METHODS IN NIGERIAN BANKS**

Majority of the participating banks are new generation banks, though the consolidation of Nigerian banks had brought about merging and acquisition between two or more banks. E-commerce in Nigerian banks includes Electronic banking (E-banking), information technology, social network, Internet banking (I-banking), Mobile commerce, Mobile banking (M-banking), and other transaction methods. Banks have developed new business processes and facilities in tandem with the evolution of new technologies. The banks' success in the light of full implementation of e-commerce would largely depend on well-planned internet implementation alongside other technological know-how and the required expertise of users of these facilities including its various stakeholders.

## **ELECTRONIC BANKING (E-BANKING)**

Nigerian banks have recently embraced electronic banking which has been made possible by the advancements in information technology (IT). Electronic banking can be defined as the delivery of banking services and products through the use of electronic means irrespective of the place, time and distance (Sabo, G. J. & Igbodo, R. O., 2007). E-banking comprises a system whereby all banking services and transactions are conducted via electronic medium. Such banking services and transactions among others include cash deposits and withdrawals,

checking of account balances, managing requests and many more. In this case of e-banking, the network is referred to as extranet. An extranet is the use of internet technology outside a company's premises to share commercial and operational information and task with customer (Okey, Nwosu, 2005) alternatively; it is a private network outside a business whereas the internet is a worldwide public network. No one outside is permitted but customers can see the extranet. It is securely protected, customers are able to transact on the banks website in a secured environment by using secured socket layer (SSL) (Chung, and Payter, 2002). E-banking has the potential to increase a bank's profitability and heighten customers' satisfaction as the ease and effectiveness of service delivery, cost reduction, etc. makes it possible for banks to attain efficiency and consequently boost banking performance in the Nigerian economy.

### **MOBILE COMMERCE/MOBILE BANKING**

Information resources are accessed using devices that have wireless connections. Telephone banking is a process whereby one branch of a bank calls another where the customer's account is domiciled, to confirm if the account is valid before any transaction of either a deposit or withdrawal. With the advent of global system for mobile communication (G.S.M), we now have some banks using it as a medium of conducting some of their services. Also, with this, the owner can access other transactions link, buying any of the bank e-product/service (Nwosu O., 2005). Among other electronic and/or banking transaction methods, the widely used is **Automated Teller Machine (ATM)**. ATMs are mostly used if it is mostly located outside the banking halls, airports, schools, shopping malls, places far away from home, situated in large stores, filling stations, eateries, and hotels. It also has self-supervising operating applications and diagnostic programs and incorporate sophisticated physical and logical security features (Kaplan, B. & Maxwell, J.A. 1994). The ATM is a combined computer terminal with cash vault and record-keeping system in one unit, permitting users to enter a bank's book keeping system with a plastic card containing a personal identification number (PIN). It is accessed by punching a special code number into the computer terminal linked to a bank's computerized records (Rose, 1999). It is aimed at decongesting the banking halls and providing alternative avenues for cash for customers outside banking hours. Customers can have access to their account information, check account balances, make cash withdrawals, purchase airtimes, pay bills, shop online, fund transfers, quickteller services, e.g DSTV & PHCN bills payment, etc. It offers several retail banking services to customers. First introduced as cash dispensing machine, but now provides a wide range of services (Abor, 2004).

### **INTERNET BANKING**

Internet banking is a real time solution that allows you to access your accounts with no banking restriction. It is accessible 24/7 (24hours a day, 7 days in a week). You may check your balances, view your account statements, and transaction history even for your various accounts. You can also transfer money between your accounts, pay your bills, pay salaries, vendors, contractors, manage requests such as bankdraft and chequebook requests, debit/credit cards requests, etc change your password over the internet, and all in a secure manner, view real time transactions, account balances, fund transfer, book for airline tickets, within/interbank, download activity in any format, local money transfer, monitor trade finance transaction, cheque confirmation, create, amend or cancel standing orders, direct debits, bills payment, etc. It comprises all banking transactions using a personal computer, connected to the internet via a browser and a token given by your bank. . It reduces cost, improves the flexibility of business transactions (Balachandher et al, 2001). Internet banking helps to manage your account and investments with ease. It personalizes your financial and other commercial transactions. Internet banking has made it possible for deposit or withdrawal of money irrespective of your location (Nwosu, O., 2005). Internet is often the most efficient way to distribute internal corporate information, because producing and distributing paper is usually slower and more expensive than using web based communications.

### **INFORMATION TECHNOLOGY**

Information technology encompasses the performance of banking/marketing/commercial activities and functions via a complex system of computer networks. Presently, banks have been able to mediate all the financial and commercial transaction of their clients at least to a large extent. Biometrics and a large amount of data and information can now be processed, stored or transferred at a surprising speed using the computer and other wireless devices with the aid of information technology. Nigerian banks are not left out in utilizing information technology (IT) in order to improve their general service delivery. For example, some of the ICT processes that are being used by banks in Nigeria include: Mobile telephone, facsimile, Automated teller Machine (ATM), Internet Banking, etc (Adagunodo, 2002; Salawu and Sakwu, 2007; Ugwu, 1999). These technological innovations have been identified to contribute to the distribution channels of banks (GOI, 2005). New technology helps managers envision the future (Raymond, R. Burke, 1996). Technological advancement promises to change the way and manner organizations innovate and change their approach in a variety of strategic issues ranging from entering new markets to responding to a competitor's attack, especially in today's



increasingly complex and competitive business environment. Information Technology has surmounted the slow and expensive process of traditional marketing practices especially as it relates to business activities in the banks, other financial service industries and various business entities. It has been able to solve out-of-stock problems. Feedbacks gotten customers have also been able to determine customers likes/dislikes, criticisms, complaints, suggestions, etc. Data collection is fast, inexpensive, reliable, convenient, confidential, user-friendly, and provides insight into customers' preferences. Production costs are low as displays of new products/services are entertaining and digitized. Using digital technologies help sell/market your products/services (Chaffey, 2006). It is highly preferred and has an overriding advantage over the traditional banking and commercial methods and particularly more suitable because of the ease of use and cost effectiveness.

### **SOCIAL NETWORKS**

A social network is a collection of interconnected people. It comprises points - people (potential customers) and connections between these points using e-mail, sms purchases, telephone calls, etc. It helps an organization to focus on organizational resources more effectively. The rapidly evolving world of internet and social networks creates a whole new game plan for online forum, debates, blogs, etc using technological innovations. It measures the flow of information, uses network parameters to drive predictive analytics, calibrate the connections between parties in the network. It equally helps to surmount marketing challenges. It shows an emerging interest in computer mediated communications and how it enhances customer value during service encounters (Duncan and Moriarty, 1998; Rust, 1999). It is a service experience that is based on flow of information via electronic channel with little or no physical interaction.

### **ELECTRONIC COMMERCE AND CUSTOMERS SATISFACTION**

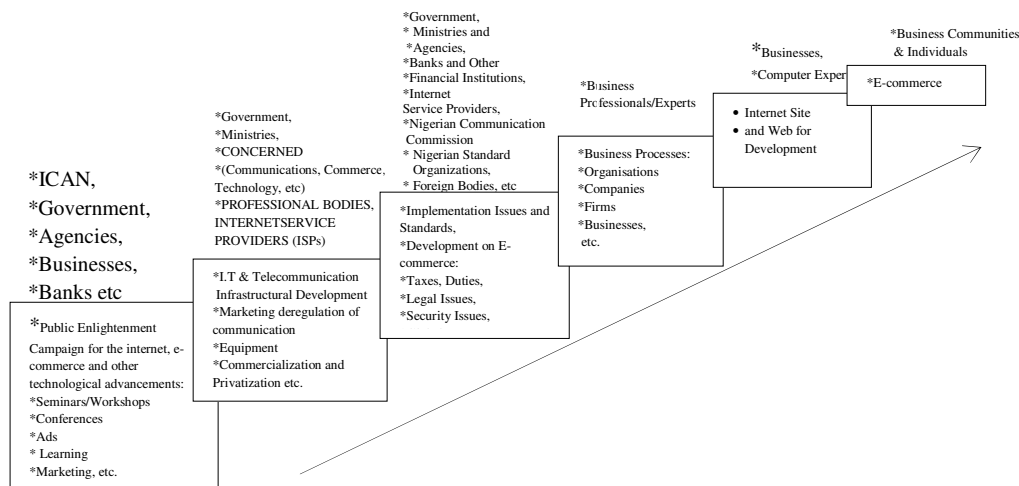
For customers to be satisfied with a product, that product must meet all requirements/specifications. But because customer satisfaction is perceived, not all customers will be satisfied with the same product or services rendered to them. E-commerce helps to track customers. Again, it aids managers to map out terrains of the future and chart the most profitable course. More and more marketing elements are being developed on the computer, new advertisements, promotional materials, merchandizing information and packaging designs are often made available in an electronic form. This has no doubt, helped to improve operational efficiency while maintaining customers' loyalty and satisfaction cum increase the total volume of businesses in the business world. According to Poon (2008), banking industry has developed e-banking services since mid-2000. The specific thing that delights the customer varies from industry to industry and from product to product. But most customers want the same thing. They want flexibility so that the specific product or service be obtained. According to (Balachandher, 2001), Customers are interested in quality. They desire good and effective service delivery. When there is no such good quality service being embedded and provided, business will fail to project the appropriate standard of service quality to satisfy its customer. Quality of webpage will show the picture the banks image and the quality of services they are providing. With the extension usage of internet and computers delivery in banking services, electronic commerce has become necessary. Feedbacks gotten also help facilitate after-sales services. Ramaswami et al (2000) pointed out that financial product/services and the internet together has made commercial operations electronically perfect and unique which offers more convenience and flexibility to customers over the traditional transactions system and other business activities. Service delivery is informational (informing customers on bank's products and services) and transactional (conducting retail banking) services.

Consumers' loyalty requires quality service that satisfies the consumer (Van Riet, 2001). Although it is costly and difficult in the sense of implementing it, the result will bring lots of benefits to both parties. Service quality attributes in e-banking industry are important since human-internet interaction is the main quality services to satisfy consumers' needs and earn a competitive advantage. According to Mohammed (2009), the discovery of internet and what we called electronic commerce have opened various opportunities for online trading all over the world. It has brought the market close to customers and potential customers at a relatively low cost. In fact, online purchase reduces cost compared to physical visiting of shop for purchase. This has opened the market of the developed countries to the entire world. Also, financial institutions being the financier of the economy have been the champion of this crusade where their customers i.e. borrowers of fund cut across various countries. Adesina and Ayo (2010) disclosed that with the advent of electronic commerce, communication technology and users' response has opened opportunity for many businesses including the financial institution. Pikkarainen et al (2004) highlighted two major reasons underlying online banking development and penetration. First banks get significant cost savings in their operation through e-banking service and secondly that banks have reduced their branch networks and downsized the number of services are the cheapest, the most profitable and healthiest delivery channel for banking product. Internet banking services are crucial for long-term survival of banks in the world of electronic commerce (Burnham, B, 1996). The market for internet banking is forecast to grow sharply

in the next few years, affecting the competitive advantage enjoyed by traditional branch banks (Duclaux 1996; Liao, Shao and Chen, 1999). It was also argued that internet banking would help banks present a potentially low cost alternatives to brick and mortar branch banking (Margaret and Thompson 2000). Nigeria direct (2009) Onwuka, (2006) cited in Francis and Babatunde (2009) posited that with a population of over150 million that is growing at 3 percent annually, Nigeria has witnessed an increased demand for improved service delivery and convenience by consumers. Banks can provide improved services delivery and convenience by enhancing their value networks through online banking (Sannes, 2001; Crane and Bodie 1996).

Furthermore, customer satisfaction is closely related to interpersonal trust (Gyskens, Steenkamp, Scheer and Kumar 1996). In line with earlier research (Zins 2001), it is expected that a higher level of customer satisfaction will lead to greater loyalty. However, the impact of satisfaction on customer loyalty is rather complex. Fisher (2001) believes that customer satisfaction accounts for only part of why people change product or service providers. Other studies have shown that customer satisfaction is a leading factor in determining loyalty (Anderson and Lehmann (1994). Customer satisfaction has been described as a consumer post evaluation of a purchased product or service, given pre-purchased expectations (Kotler, 1991). Customer satisfaction is a top priority for modern businesses and especially for banks which consider customer orientation a key issue. E-commerce will bring about changes in the ways that corporate bodies in general and banks in particular are expected to approach their customers.

## FRAMEWORK FOR DEVELOPING E-COMMERCE IN NIGERIA



Source: Culled from Marketing and Management Practices in Nigeria by Julius Onuorah Onah et al (2006), Fig. 20.1, Pg. 250.

## Framework for Developing E-Commerce in

### WHY WE NEED E-COMMERCE SYSTEM

E-commerce holds a lot of potentials for Nigeria and has transformed many sectors. It has brought various transactions closer to their customers and by extension much improvement in various sectors of our economy like that of some major players in the Nigerian oil industry with other oil companies, vendors and suppliers. Though it's just gaining grounds but has burgeoned in recent times. It has improved customer services, more accurate records, ensuring convenience in businesses, prompt and fair attention and faster services and has also created a more competent market. Hence its importance in the Nigerian banking system cannot be relegated to the background as this will no doubt help the banks and other financial service providers to:

- Eliminate unsafe cash handling and curb crime rate.
- Reduce the crowding in the banking hall.
- Very convenient, cost effective, reliable and saves time rather than having to stand too long on a queue waiting to be attended to.
- Improves the standard of living and helps to boost banking performance and the Nigerian economy.

- Improves the quality of life.
- Enhances capacity utilization and introduces new ideas.
- It will improve effective service delivery and increase the social wellbeing of Nigerians.
- It will enhance competitiveness and helps to gain a competitive advantage.
- Adds value to shareholders and stakeholders.
- Creates sustainable demand which in turn leads to increased production and resultant increase in higher revenue.
- Provides quicker and better services and rapid response to demand conditions.
- Interest, commitment and loyalty of wealthy customers can be increasingly sustained.
- Customers would be better informed about the recognition of new products/services that are of higher and better quality electronically.
- Investigations and enquiries of a bank's or an organization's reputation can equally be gotten electronically to enable them compare other available options.
- Facilitates economic and social changes as a forum and a vehicle for information sharing and communication.
- Enhances certain value espoused by sustainable development.

Summarily, e-commerce practice is a welcoming innovation and as such, will expose us to various multifaceted technological devices with which we can conveniently transact various businesses at the comfort of our homes, offices and even while travelling, do all banking/financial transactions without the interference of a third party and the compulsory physical presence/appearance in the banking hall. It has led to the purposeful modification of technology (Harris et al, 2003). Besides, it is operable outside working hours and days with real time reporting. Technology has arguably made lives easier. It serves both transactional and informational functions (Hoffman and Novak, 1996; Teo and Pian, 2004). Again, e-commerce has no doubt reduced the long queues in the banking hall as averred by Thornton and White, (2001). Financial institutions would have downsized and office space better used for more profitable ventures (Birch and Young, 1997). It cuts across distance, space and time thus avoiding several hassles. Indubitably, it has given greater freedom to individuals, businesses, etc without encumbrances. Thus, we should therefore embrace and adopt e-commerce practices to improve the living standard of people and expand high speed information network as it has a wide-user's base.

### **BENEFITS OF USING ELECTRONIC COMMERCE**

The benefits of e-commerce are inexhaustible. It has been generally observed that e-commerce is already having a dramatic effect on the way we buy and sell as well as the way we scoop for information, analyze, and utilize marketing information which is as a result of the stupendous advancement in technology. Organizations that continue to operate on paper-based systems that are slow and inefficient will tend to loose market share to their competitors. At the corporate and individual levels, a lot has also been gained. By enhancing the quality, quantity and readiness of information available to buyers and sellers alike, e-commerce has generated a lot of benefits for both producers and consumers. Because e-commerce enables companies to reach larger customer populations more quickly via the internet. Those organizations that implement effective e-commerce solutions will also be able to co-compete and out-compete more successfully. Some of the numerous benefits of e-commerce are enumerated below:

- E-commerce reduces administrative costs and cycle time, streamlining business processes and improving relationship with both the customers, suppliers, vendors and other business partners.
- It solves the problems of distant and delayed transactions (Journal of Admin, 2003).



- E-commerce is devoid of customer's barriers and checkpoints hassles most especially when products are intangible (Marketing Hallmark, 2004).
- Very interactive, has real time reporting and instant feedback from customers and enhances customers' satisfaction.
- Product Exhibitions can be done online and enquiries made as well. This leads to improvement in quality and development of new service products.
- Organizations that compete efficiently and effectively in the e-commerce arena should therefore be able to make better decisions which should enhance market position and ultimately profitability. Firms are interested in e-commerce because quite simply, it can help to increase profits.
- Advertising done well on the web can get a firm's promotional message out of potential customers in every country in the world. A firm can use e-commerce to reach narrow market segments that are geographically scattered.
- A business can reduce the cost of handling sales enquires, providing price quotas and determining product availability by using electronic commerce. E-commerce techniques allow small businesses to have access to the same market as larger businesses.
- Just as e-commerce increases sales opportunities for the seller, it increases purchasing opportunities for the buyers. Businesses can use e-commerce to identify new suppliers and business partners. Negotiating price and delivery terms is easier in e-commerce because the internet can help companies efficiently obtain competitive bid information.
- Electronic commerce provides buyers with a wide range of choices than traditional commerce because buyers can consider many different products and services from a wider variety of sellers. This wide variety is available for consumers to evaluate 24 hours a day, on a daily basis.
- Organizations that use e-commerce techniques and technology will also attract additional consumers because of a higher level of consumers service.
- Organizations that move to the web will be able to help their customers resolve problems faster, which will eventually lead to better customer relations and more customers.
- The benefits of electronic commerce extend to the general welfare of society. Electronic payments of tax refunds, public retirement, and welfare support cost less to issue and arrive securely and quickly when checked, providing protection against fraud and theft losses.
- E-commerce enables people to telecommute, everyone benefits from the reduction in customer-caused traffic and pollution.
- Electronic commerce can also make purchases and services available in remote areas (Levaux, J. 2001).
- It gives an ease to interact with persons from all over the world at ease, without barriers of race and colour.

### **CONSTRAINTS OR RISKS ASSOCIATED WITH ELECTRONIC COMMERCE**

Despite its over-whelming benefits, e-commerce has some inherent problems and/or challenges, which market players have to contend with, hence e-commerce is not unconnected with some attendant challenges. There are several limitations and associated challenges barricading e-commerce practices and banking performance in the Nigerian economy. Some of them include:

- Absence of secure online payment modalities and inadequate information and technological awareness.

- Repudiation of charges even when goods may have been shipped or downloaded.
- Intermediaries would be at the risk of loosing their sources of income and livelihood.
- It is vulnerable to manipulation by competitors and unexpected retaliation of competitors.
- High possibility of frauds and theft of credit cards and unauthorized access to sensitive information by hackers. There is a high financial risk and susceptibility to forgery.
- Neither the merchant nor consumer is authenticated. Merchant could be a criminal organization. Consumers on the other hand, could be using stolen or fraudulent cards.
- Inadequate operational facilities and inadequate funding by government and its agencies cum over-dependence on cash transactions.
- Leads to downsizing and rightsizing as organizations and workers would have to keep abreast with technological advancements, which will no doubt be an expensive venture, replacing obsolete equipment and perhaps re-training personnel to handle the new equipment will incur additional overhead expenses.
- Access to ICT facilities perhaps because of the cost of ICT equipment and lack of effective and efficient telecommunication infrastructures/services for growth of internet technologies.
- Epileptic, erratic and unreliable power supply.
- Consumers fear of using credit cards such as having to reveal credit card information at multiple sites and repeatedly having to communicate sensitive information over the internet.
- Lack of skilled manpower as some people are not very familiar with the e-commerce system because of poor economic condition, lack of education, etc which somehow seems intimidating to some.
- Most of the constraints of e-commerce today however stem from the newness and rapidly developing pace of the underlying technologies, which will eventually disappear as e-commerce matures and becomes more increasingly available to and accepted by the general population.
- Return-on-investment is usually calculated before delving into certain businesses and committing to any new technology. This has been difficult to do for investments in e-commerce because the cost and benefits are difficult to quantify. Cost which is a function of technology can change dramatically even during short-lived e-commerce implementation projects.
- Lack of information is an organizations greatest enemy and prevents it from competing effectively. These organizations will not receive as much outside information as those that implement e-commerce strategies with their customers and business partners which means that they won't be able to make the same quality decisions. Making too many bad business decisions means no more business and can retard economic growth.

## RESEARCH METHODOLOGY

The data collected were analyzed using chi-square. The following shall be applied and will remain as a test for chi-square value. Therefore, Chi-square is represented by the formula  $\chi^2 = \frac{(O_i - E_i)^2}{E_i}$

Where  $O_i$  = observed frequency

And  $E_i$  = expected frequency

Also, the computation of Chi-Square requires the determination of the degree of freedom, given as:

$v = (K - 1)$ . Where  $K$  = No. of options available for respondents to choose from.

The study covered some selected banks (GTB PLC, UBA PLC, and First Bank PLC) in Asaba Delta State Nigeria. The study target population comprised customers being serviced by the banks in Asaba, 60 is the sample size of the three selected banks.

**Question 1:** what is the level of adoption of e-commerce in Nigerian banking sector?

S/N	SD		D		U		A		SA		Total
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage	
1.	-	-	6	10%	3	5%	36	60%	15	25%	60
2.	23	38%	19	32%	2	3%	7	12%	9	15%	60
3.	4	7%	7	12%	8	13%	25	42%	16	27%	60
4.	3	5%	5	8%	-	-	30	50%	22	37%	60

**Question 2:** What impact has e-commerce taken on the performance of Nigerian banks?

S/N	SD		D		U		A		SA		Total
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage	
1.	6	10%	3	5%	0	-	15	25%	36	60%	60
2.	3	5%	6	10%	6	10%	15	25%	30	50%	60
3.	2	3%	3	5%	2	3%	29	48%	24	40%	60
4.	4	7%	5	8%	1	2%	37	62%	13	22%	60

**Question3:** What is the effect of e-commerce on customer satisfaction?

S/N	SD		D		U		A		SA		Total
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage	
1.	7	12%	4	7%	6	10%	20	33%	23	38%	60
2.	-	-	4	7%	-	-	22	37%	34	57%	60
3.	2	3%	1	2%	9	15%	28	47%	20	33%	60
4.	3	5%	6	10%	-	-	33	55%	18	30%	60

**TEST OF HYPOTHESES**

The relative standard to serve as the basis for accepting or rejecting the hypotheses is 5% which is used as the minimum standard for accepting or rejecting the null and alternate hypotheses respectively. Look up for the critical value of  $\chi^2$ , using 0.05 level of significance and a degree of freedom of 4 already computed above. The figure gives 9.488. which is the critical value = 9.488.

Apply the chi-square formular

$$X^2 = \frac{(O-E)^2}{E} \text{ also, } E = \frac{\text{total questionnaire}}{\text{No of options}}$$

Where  $x^2$  = computed value of  $x$

O = observed frequency

E = expected frequency

$$E = \frac{60}{5} = 12$$

**Decision:** If the computed value for  $\chi^2$  is lesser than the critical value of  $\chi^2$ , we accept the null hypothesis and reject the alternate hypothesis while if the computed value is greater than the critical value, we reject the null hypothesis and accept the alternate hypothesis.

**Test 1:**

Ho: The adoption of e-commerce does not lead to loss of job and early retirement of employees in Nigerian banking sector.

Hi: The adoption of e-commerce has leads to loss of jobs and early retirement of employees in Nigerian banking sector.

Table iii: Table of observed and expected frequency

Responses	O	E	(O-E)	(O-E) <sup>2</sup>	(O-E) <sup>2</sup> /e = $\chi^2$
SD	-	12	-12	144	12
D	6	12	6	36	3
U	3	12	9	81	6.8
SA	36	12	24	576	48
A	15	12	3	9	0.8
Total	60	60	0	846	70.6

Table 2iv: Table of observed and expected frequency

Responses	O	E	(O-E)	(O-E) <sup>2</sup>	(O-E) <sup>2</sup> /e = $\chi^2$
SD	3	12	-9	81	6.8
D	5	12	-7	49	4.1
U	-	12	-12	144	12
SA	30	12	18	324	27
A	22	12	10	100	8.3
Total	60	60	0	698	58.2

**Decision:**

From the above tables. Since the computed values at 5% level of significance of  $\chi^2 = 70.8$  and  $58.2$  respectively is greater than the critical value of  $\chi^2 = 9.488$  eachs. We reject the null hypothesis and accept the alternate hypothesis. This means that the adoption of e-commerce has led to loss of jobs and early retirement of employees in Nigerian banking sector.

Hi: The adoption of e-commerce has leads to loss of jobs and early retirement of employees in Nigerian banking sector.

Table 1i: Table Of Observed And Expected Frequency

Responses	O	E	(O-E)	(O-E) <sup>2</sup>	(O-E) <sup>2</sup> /e = $\chi^2$
SD	-	12	-12	144	12
D	6	12	6	36	3
U	3	12	9	81	6.8
SA	36	12	24	576	48
A	15	12	3	9	0.8
Total	60	60	0	846	70.6

Table 2iv-table of observed and expected frequency

Responses	O	E	(O-E)	(O-E) <sup>2</sup>	(O-E) <sup>2</sup> /e = $\chi^2$
SD	3	12	-9	81	6.8
D	5	12	-7	49	4.1
U	-	12	-12	144	12
SA	30	12	18	324	27
A	22	12	10	100	8.3
Total	60	60	0	698	58.2

**Decision**

From the above tables, since the computed values at 5% level of significance of  $\chi^2 = 19.8$  and  $64.6$  respectively is greater than the critical value of  $\chi^2 = 9.488$  when compared individually with  $70.6$  and  $58.2$ , we reject the null hypothesis and accept the alternate hypothesis. This means that the adoption of e-commerce has led to loss of jobs and early retirement of employees in Nigerian banking sector.

**Test 2**

Ho: E-commerce has not made an impact on performance in Nigerian banking sector.

Hi: E-commerce has made an impact on performance in Nigerian banking sector.

**Table 2:** Table of observed and expected frequency

Responses	O	E	(O-E)	(O-E) <sup>2</sup>	(O-E) <sup>2</sup> /e = $\chi^2$
SD	2	12	-10	100	8.3
D	3	12	-9	81	6.8
U	2	12	-10	100	8.3
SA	29	12	17	289	24.1
A	24	12	12	144	12
Total	60	60	0	714	59.5



Table 2: -table of observed and expected frequency

Responses	O	E	(O-E)	(O-E) <sup>2</sup>	(O-E) <sup>2</sup> /e = x <sup>2</sup>
SD	4	12	-8	64	5.3
D	5	12	-7	49	4.1
U	1	12	-11	121	10.1
SA	37	12	25	625	52.1
A	13	12	1	1	0.1
Total	60	60	0	860	71.1

**Decision**

From the above tables, since the computed value at 5% level of significance of x<sup>2</sup> = 59.5 and 71.1 respectively is greater than the critical value of x<sup>2</sup> = 9.488. When compared individually with 59.5 and 71.1, we reject the null hypothesis and accept the alternate hypothesis. This means that e-commerce has made an impact on performance in Nigerian banking sector.

**Test 3**

Ho: E-commerce products and services have not significantly improved customer satisfaction.

Hi: E-commerce products and services have significantly improved customer satisfaction.

Table 3: Table of observed expected frequency

Responses	O	E	(O-E)	(O-E) <sup>2</sup>	(O-E) <sup>2</sup> /e = x <sup>2</sup>
SD	7	12	-5	25	2.1
D	4	12	-8	64	5.3
U	60	12	-6	36	3
SA	20	12	8	64	5.3
A	23	12	11	121	10.1
Total	60	60	0	310	25.8

Table 3: Table of observed and expected frequency

Responses	O	E	(O-E)	(O-E) <sup>2</sup>	(O-E) <sup>2</sup> /e = x <sup>2</sup>
SD	3	12	-9	81	6.8
D	6	12	-6	36	3
U	-	12	-12	144	12
SA	33	12	21	441	36.8
A	18	12	6	36	3
Total	60	60	0	738	61.6

**Decision**

From the above tables, since the computed value at 5% level of significance of x<sup>2</sup> = 25.8 and 61.6 respectively is greater than the critical value of x<sup>2</sup> = 9.488 when compared individually with 25.861.6, we reject the null hypothesis and accept the alternate hypothesis. This means that e-commerce product and services have significantly improved customer satisfaction.

**DISCUSSION OF FINDINGS**

The negotiated exchange of goods and services has been a tradition for thousands of years but due to the invention of internet, web technologies and other electronic devices, Electronic commerce activities have brought about increase in profitability of the organization. The trend in electronic commerce adoption is on the increase as what people do manually before, had been overtaken with the use of the internet, adding that e-commerce had made many people to transact their business with banks on the internet hitch-free, thereby leading to satisfactory and economic growth. From the preceding analysis, key findings include the following:

- E-commerce enhances competitive advantage as it would help to reduce loss of man-hour.
- The adoption of e-commerce has led to loss of jobs and early retirement of employees in Nigerian banking sector. E-commerce activities over time the synonymous with capital intensive program which

tends to replace more human labour with computers. Furthermore, employees with little or no computer skills are usually shown the exit door as a result of the introduction of e-commerce.

- E-commerce has effects on workers job security in Nigerian banking sector. Employees with technical know-how tend to be retained for a longer duration. This finding is though limited to the skilled labour and cannot be said of unskilled labour.
- E-commerce has made an impact performance in Nigerian banking sector. Ability of banks to adopt e-commerce and internet is a crucial factor that is used to judge banks' performance.

There is a relationship between e-commerce and employees satisfaction. Employees of banks that adopted e-commerce see it as a time saving, stress-free bank operation. This is in comparison with the manual banking operation. E-commerce products and services have significantly improved customers satisfaction. E-commerce make it possible for customers to do easy, convenient and time cautions transactions with their banks and other institutions. From this research study, it is deduced that e-commerce has made many people to transact business via the internet. E-commerce is essential for the development of Nigeria's economy. The introduction of e-commerce has led to move customer patronage, it guarantees everyone access to information and knowledge to contribute to the anatomy and personal development of every individual. E-commerce is the activity that has buided in terms of reduction of cost, time and huge stationeries involved in the making of business transactions, it has also helped in reducing uncertainty and increasing level of profitability of the bank that engage in it. Effective e-commerce will increase the profitability and growth of the organization.

## CONCLUSION

From the foregoing, no bank is interested in spending a huge of money on electronic commerce without anything to show for it at the end of the exercise. Thus, effectiveness and impact of electronic commerce can't be overemphasized as it plays a dominant role in the communication of product information (goods and services) to customers. This study therefore concludes that:

- E-commerce boosts and promotes organizational performance. It allows economies of scale and sustainable demands, adds value to shareholders, increases production, leading to higher revenue.
- It makes organizations, banks and other financial service providers to become competitively advantageous and reduces operational cost. Anything less, would be undesirable as it is easier to arouse a demand.
- E-commerce if adequately funded by an organization will enhance the achievement of the organization marketing and corporate objectives. Banks with a strong support and commitment to e-commerce from top management are more likely to adopt e-commerce banks that have the requisite It and business resources (infrastructures and skills) for e-commerce adoption stand a better chance of adopting e-commerce and profitability of the organization involved.
- E-commerce has made it easy to search for availability of products easily at banks, it also increases customer's satisfaction and has attracted more customers, and the website of the company should be more accessible and make the customers connection faster. E-commerce is also a major tool for adopting to the changing business environment and has brought about reduction in marketing cost, increase in banks products and profitability of the organization.

Tentatively, customers would be exposed to more contemporary and societal activities (Postrel, 2002). it is observed that the use of e-commerce in banking industry is indeed very profitable as there is an existence of a strong positive relationship between the level of profitability and investment in e-commerce. Again, it helps to improve marketing performance and marketing insight and communication effectiveness through the use of modern technologies (Journal of Database Marketing & Customers Strategy Management, 2007).

## RECOMMENDATIONS

From the foregoing, the following recommendations were made so as to heighten the use of electronic commerce as a veritable tool for the development and growth of Nigerian banking industry.

- Organizations, banks and other financial service providers should leverage their investments on information technology to fully realize the benefits of e-commerce.
- Banks should anticipate competitors' actions and develop new marketing and succession plans that are robust and contingent.
- Banking industry should embrace the use of electronic commerce for improved profitability, productivity and operate optimally amidst competitors.
- Skilled, experienced and dynamic personnel should be used, as this would lead to effective customer service delivery.
- Customers' satisfaction should be the watchword for banks because customers are the king in any business organization. Payment on the internet should be risk free. There should be free flow of information about banks and their products. Now that most people are unemployed in Nigeria, government should utilize e-commerce and get people empowered so that they can be self-employed. Government should explore the opportunities embedded in electronic commerce to create employment for the citizenry adding that it would help in reducing the high rate of cybercrime in the country.
- Our businesses should be e-commerce friendly to attract foreign investors awareness programmes should be organized such as talk shows, seminars/workshops and be taught in tertiary institutions, schools, etc.
- The availability of current technology in computing networks in Nigeria and some of the infrastructures needed for the successful take-off of e-commerce are already on ground. Government should therefore study the system to see how it can be adopted to develop the banking industry. Government should provide necessary infrastructures for e-commerce to thrive in Nigeria.

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