

E-COMMERCE AND E-BANKING IN NIGERIA

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Abstract

With the emergence of global economy, e-business has increasingly become a necessary component of business strategy and a strong catalyst for economic development in any nation. The study assesses the relevance of e-commerce and e-banking on the Nigerian economy. It administers questionnaires on 100 respondents and employs the non-parametric test of chi-square in testing the hypotheses. The empirical findings reveals that e-commerce and e-banking facilitates better exchange transactions, integrates the nation into the global economy , improves operational capacity and productivity of Nigerian businesses and provides avenue to boost economic growth. The study concludes that e-commerce and e-banking has been beneficial to the Nigerian economy, though it has not been optimally utilized to garner its full benefits. It recommends that government should provide adequate infrastructural facilities in the telecommunication and power sector coupled with encouraging information and communication technology usage amongst its public for more beneficial impact to be felt.

Keywords: E-commerce, E- banking, Information and Communication Technology (ICT), Nigeria, Chi-square

1. Introduction

In this information era, E-commerce is pertinent in the technologically advanced world of business. It has created electronic markets and provided opportunities for businesses to reach consumers in a very direct way (Ayo, Adewoye and Oni, 2011). This is due to advancement in information and communication technology (ICT). Information and communication technology offers enormous opportunities such as storing, processing, retrieving, disseminating and sharing of information (Apulu and Latham, 2009). The continued existence of businesses in the 21st century is engendered by information and communication technology. The adoption of ICT would change the way businesses operate in this era of globalization by changing business structures, increasing competition, creating competitive advantage and changing business operations (Ongori, 2009).

E-commerce is the use of the Internet for marketing, identification, payment and delivery of goods and services (Ayo *et al.*, 2011). The upsurge in the use of internet and telecommunication facilities in the last decade considerably increased the use of e-commerce in Nigeria. The reason for this was as a result of the establishment of private telecommunication companies like MTN, GLO, and MULTILINKS among others. E-commerce revolutionized the Nigerian economy by paving the way for firms to satisfy the public and creating a path for the nation to compete globally.

In Nigeria, e-commerce is largely visible in the banking industry in form of electronic banking. Latest developments in e-commerce are first witnessed in electronic banking services. This has created the impression that e-commerce can be interchangeably called “e-banking”; however, e-banking is just an aspect of e-commerce which has been widely adopted. It is widely believed that e-commerce contributed greatly to the rapid development of banking sector because it improves flow of information and increases the coordination of action.

Professionalism and the zeal for market leadership brought the Nigerian banking industry and the economy at large into the euphoria of electronic banking. Following the globalization trend, e-banking is cognizant in Nigeria so as to put her banking industry on the path of global competitiveness. In recent years, the adoption of e-banking began to occur quite extensively as a channel of distribution for financial services due to rapid advances in information technology and intensive competitive banking markets (Salehi and Alipour, 2010).

Ojeka and Ikpefan (2011) opined that electronic banking includes familiar and relatively mature electronically-based products such as telephone banking, credits cards, Automated Teller Machines (ATM), direct deposit, stored-value cards and internet-based stored value products. The adoption of e-banking was necessitated by the need to strategically position banks to perform its intermediation role which is necessary for economic growth.

E-commerce in Nigeria is steadily growing as a result of the vast improvement in telecommunication services. The telecommunication industry experienced exponential growth in the past few years with over 25 million telephone line subscribers. The widespread acceptance of telecommunication services was motivated by the individual need to survive in this information age. The advent of the Global System for Mobile communication (GSM) and increased use of the internet paved way for the continuous acceptance and appreciation of the variety of opportunities that exist in e-commerce.

The proper adoption of e-commerce results in easier and more flexible interaction between business entities within and outside the shores of Nigeria. It is imperative to affirm that e-banking presupposes and pave the way for e-commerce. According to Oluwagbemi, Abah and Achimugu (2011), e-banking has become the key element to strengthen the competitiveness of the national economy and improving the productivity and efficiency of both private and government banks.

Recently, the Central Bank of Nigeria (CBN) announced its desire to make the Nigeria economy a cashless one. Though, the cashless economy banking reform is still at its trail stage with its first point of call being Lagos, the CBN Governor expressed confidence that cashless economy would reduce fraud, ensure safety and increase the need to embrace e-banking and e-commerce.

The study seeks to assess the relevance of e-banking and e-commerce on Nigeria- the most populous black nation. The research employs a cross sectional survey which questioned respondents on e-commerce and e-banking as they affect the economy. The study will validate the importance of e-commerce and e-banking; provide policy recommendations to the various stakeholders based on its findings and create an impetus for further research. The next section discusses different conceptual issues on e-commerce and e-banking as well as reviews related empirical studies. Section three presents the research method adopted, section four provides the empirical results and discussions while the last section presents the conclusion and recommendations.

2. *Literature Review*

E-commerce provides an avenue for individual and business firms to cope with the ever-dynamic business environment. It also paves the way for wider participation in the local and international markets. The primary vehicle for e-commerce is the Internet and information and communication technology (ICT). E-commerce has been very influential to many countries, as it is adjudged as one of the main forces in their economic growth and job creation (Kalanje, 2002).

Laudon and Laudon (2007) defines e-commerce as the process of buying and selling goods and services electronically involving transactions using the Internet, network, and other digital technologies. Rayport and Jaworski (2003) opined that e-commerce can be defined as a technology-mediated exchanges between parties (individuals or organizations) as well as the electronically based intra or inter organizational activities that facilitates such exchanges.

E-commerce is simply perceived to be the use of electronic devices to trade in goods and services over the internet and telecommunication networks. E-commerce existed in various forms since the birth of internet in the late 1960s, but since early 1990s, companies could perform e-commerce activity better, faster and at a lesser cost because of the new and constantly evolving technologies.

E-commerce generally exists in two form vis-à-vis Business-to-Business (B2B) and Business-to-Customer (B2C). The Business-to-Business form entails electronic transactions between two organizations. B2B improves communication among organizations, reduce transaction cost and increase the efficiency of business processes. The Business-to-Customer (B2C) involves business transactions between the organization and consumer of its goods and services over electronic means. B2C means sales targeted at individual customers. It promotes a closer interaction of the business firm with the public.

Over the years, e-commerce has caused a shift from the orthodox way of doing business to the modern way. This was enabled because of the features e-commerce possesses. According to Laudon and Laudon (2007), the unique features of e-commerce technology includes: Ubiquity, Global reach, Universal standards, Richness, Interactivity, Information density, Personalization/Customization.

2.1. **Benefits of Electronic Commerce**

The benefits of e-commerce in any economy cannot be overemphasized. The exchange of goods and services is necessary in a society for its growth and sustainability. The emergence of e-commerce has

facilitated this exchange. From various literatures (Joze, Julie and Angela, 2002; Lee, 2001 among others), the benefits include;

- ✓ Enabling easy access to the global market.
- ✓ Reducing transaction costs.
- ✓ Improving relationships with both business partners and customers.
- ✓ Foster business processes over national boundaries thereby eliminating national boundaries.
- ✓ Improves the level of ICT usage.
- ✓ Leads to lower and better communication services.
- ✓ Creation of job and wealth.
- ✓ Provision of a cashless society.
- ✓ Expands the tentacles of businesses by allowing them make goods and services to a wider scope.
- ✓ Improves the standard of living.
- ✓ Promotes business efficiency.
- ✓ Retained and expanded customer base.

2.2. Barriers to E-Commerce

The full actualization of the benefits of e-commerce cannot be achieved in the face of barriers. Van Toorn, Bunker, Yee and Smith (2006) categorized these barriers into two; internal and external. Internal includes Lack of knowledge, Security, Owners' characteristics while External includes Lack of government support.

Lack of knowledge: The major barriers to e-commerce as contended by Kalanje (2002) are the lack of knowledge about the advantages of the technology and the value it could add to the business. The lack of knowledge exist where there is lack of technical know-how in the use of e-commerce.

Security: Lack of adequate security measures has greatly affected the adoption of e-commerce. The different forms of security issues ranges from spam, hacking, service denial, fraud, virus attack, privacy infringement etc.

Owners' characteristics: The computer literacy level of the owner and ignorance on the use of the internet technology implies that e-commerce cannot be adopted. If business owners do not perceive the technology to be useful, nor understand its potential, then he/she will be reluctant to adopt it (Cloete, 2001).

Lack of government support: Government efforts towards the adoption of e-commerce have been noted as key for the success of e-commerce. Government need to sensitize the public on its use and benefits and also provide relevant infrastructures to aid e-commerce.

2.3. Electronic Banking

Electronic banking remains a strategic tool employed by banks to gain competitive edge both within and outside the boundaries of Nigeria. According to Kamokodi and Khan (2008), e-banking is important in six different areas: augmenting profit pool, enhancing operational efficiency, customer management, distribution and reach, product innovation and efficient payment and settlement.

The concept of e-banking differs amongst scholars. This is due to the fact that e-banking encompasses variety of services provided through electronic devices and over the internet. It is the most recent delivery channel of banking services which is used for both business-to-business and business-to-customer transactions.

According to Burr (1996), electronic banking is the electronic connection between the bank and customer in order to prepare, manage and control financial transactions. E-banking also refers to the use of information and communication technology by banks to provide services and manage customer relationship more quickly and most satisfactorily (Charity-Commission, 2003).

Salehi and Alipour (2010) indicated that e-banking includes the systems that enable financial customers, individuals or businesses, to access accounts, transact business, or obtain information on financial products and services through a public or mobile phone. With e-banking, transaction costs would be low when compared to the cost of banking through conventional methods.

In conclusion, the widely accepted definition for e-banking emerged from the Basel Committee Report on Banking Supervision (1998) which describes e-banking as the provision of retail and small value banking products and services through electronic channels. Such products and services include deposit taking, lending account management, provision of financial advice, electronic bill payment, and the provision of other electronic payment products and services.

2.4. Benefits of Electronic Banking

There is no gainsaying to adjudge that e-banking provides lot of benefits. The benefits are accruable to banks, customer and the economy at large. According to this literature and Baten and Kamil(2010); Salehi and Alipour (2010), the perceived benefits to the banks include; increased operational efficiency, reduced cost of providing banking services, facilitation of proper management

of resources, easy detection of sharp unwholesome practices as regards cash management, improves service delivery channels, increased growth and profitability. To the customers, the benefits are increases convenience, facilitate access to banking services, quick and continuous access to information, better funds management. To the economy, it enhances operational efficiency, better cash management, reduced cost of financing, widening the reach of the public to financial services

2.5. Forms of Electronic Banking in Nigeria

Electronic banking comes in various forms. Presently in Nigeria, it is visible in two forms namely personal computer (PC) banking and mobile banking.

PC Banking: Baten and Kamil (2010) defined it as the use of personal computers outside bank branch location to access accounts for transactions by subscribing to and dialing into the banks internet proprietary software system using password. The password authenticates and allows customers to gain entry into the internet proprietary software system. In Nigeria, PC banking can be classified into 2 types which are online banking and internet banking. Such services or facilities that can enjoyed over PC banking include fund transfer, cash withdrawal and deposit, account statement, loan repayment facility, clearing and balance enquiry within branches of the same bank, account balance enquiry, exchange rate or interest rate inquiry, credit card statement, standing instructions, password change, bank guarantee application and lots more.

Mobile Banking (M-banking): M-banking or SMS banking as it can also be called refers to the use of mobile phone technology to enjoy banking services without necessarily being physically present in the bank. Mobile banking today is most often perform via SMS or mobile internet, but can also be used by special programs called clients downloaded to the mobile devices (Anyasi and Otubu, 2009). Some services on m-banking includes fund transfer, alerts on account activity, mini-statements and checking of account history, mandate to dishonor cheque, cash withdrawal and deposit etc.

2.6. Challenges of Electronic Banking

Though numerous benefits from the implementation of electronic banking are expected, this is not to say electronic banking is not posed with its concomitant challenges. According to a study conducted by Chiemeké, Ewwiekpaefe and Chete (2006), they identified the major inhibiting to internet banking adoption in Nigeria such as insecurity, inadequate operational facilities including telecommunication facilities and electricity supply.

Challenges to e-banking implementation as identified by Andoh-Baidoo and Osatuyi (2009) include; insufficient electricity supply, inadequate telecommunication, literacy of the customers, cost of surfing the internet, lack of understanding of the benefits of online banking, security/trust issues with online banking.

Joze *et al.* (2002) identified numerous challenges to e-banking. These can be categorized into three: technological, managerial, and business related challenges.

Technological challenges: These relates to issues concerning security, website and technology costs, software and infrastructure.

Managerial challenges: These relates to people and organizational issues and receiving the support of the top management.

Business challenges: These concerns customer service, a tenacious hold of hold habits by customers and issues relating to legal matters.

Also, Joze *et al.* (2002) identified key challenges for online e-commerce as the costs of the technology, the lack of knowledge, managing the changing situation in e-commerce, budgeting and lastly, issues relating to linking back end systems.

2.7. Strategies to Address E-Banking Challenges

Efforts should be made by the various stakeholders of electronic banking to encourage and promote the use of electronic banking and commerce by the people of the country. The strategies include but not limited to these:

- i. Government should ensure that the people it governs are literate on the use and application of computers in this information age.
- ii. Government should also take steps to privatize the telecommunication sector to improve efficiency and productivity in the sector to improve efficiency and productivity in the sector thus increased capacity is achieved.
- iii. Banks should design their website in a way that consumers of their services would be fully aware of services provided electronically and develop ways through which questions and compliance can be made online.
- iv. Banks should on regular basis disseminate information on security of electronic banking so as to allay the fear of consumer of electronic banking services thereby winning customers' confidence.

- v. Bank should also encourage the Do-It-Yourself (DIY) attitude by customers through providing necessary and adequate information on how to use electronic banking services thereby making it user friendly.

2.8. Review of Related Empirical Studies

Ayo, Adewoye and Oni (2010) reviewed the state of e-banking implementation and evaluated the influence of trust on adoption of e-payment in Nigeria. The study revealed that perceived ease of use and perceived usefulness not only precedes the acceptance of e-banking, they are factors to retain customers to use e-banking system. Madueme (2010) assessed the impact of information and communication technology (ICT) on the efficiency of 13 commercial banks in Nigeria using TRANSLOG and CAMEL rating. The finding showed that ICT improved the efficiency of the banks and recommended increased investment in ICT by banks.

Ojeka and Ikpefan (2011) in their study explored the various challenges and benefits e-banking pose to Nigerian business, with particular inclination to the banking industry. It was discovered that there is statistically significant difference between anticipated and encountered benefits and the major challenge is the security breach experienced by customers. Periodic training on e-commerce was recommended to create awareness on latest development in e-commerce. Auta (2010) examined the impact of e-banking on the Nigerian economy using Kaiser-Meyer-Olkin (KMO) Approach and Barlett's Test of Sphericity. It could be inferred that e-banking provides several advantages to the Nigerian banking sector and Nigerian customers have security, access and inadequate knowledge regarding e-banking services. To further ensure the use of e-banking, critical infrastructure like power and telecommunication was recommended to be provided with high level of stability.

Anyasi and Otubu (2009) assessed the use of mobile phone technology in the Nigerian banking system and its economic implication. Their study showed that mobile banking offers a way to lower the costs of moving money and paving a way to bring more users in contact with the formal financial systems. Salehi and Alipour (2010) examined e-banking in an emerging economy seeking to provide empirical evidence from Iran. The results showed that e-banking is beneficial to the banking sector in several ways and customers have little or no knowledge about e-banking.

Ahmad Bello (2005) investigated the impact of e-banking on customer satisfaction in Nigeria. It was discovered that though customers are aware of the positive developments in information technology and telecommunications, they are not satisfied with the quality and efficiency of e-banking services.

The study recommended banks should improve their service delivery and provide adequate security to win customers confidence. Oluwagbemi *et al.* (2011) in their study determined the impact of information technology on the Nigerian banking industry. It revealed that application of information technology (IT) facilities has brought about fundamental changes in the content and quality of banking business.

Baten and Kamil (2010) determined the economic prospects of e-banking as well as demonstrating the scope and benefits of e-banking in Bangladesh. It could be deduced that e-banking tends to provide numerous benefits for the economy and the public lack sufficient knowledge regarding e-banking. Andoh-Baidoo and Osatuyi (2009) employed a value network theoretical model to examine the e-banking services and products provided in Nigeria. The study illustrated that Nigerian banks are not taking advantage of the full spectrum of e-banking features because of some challenges especially inadequate power supply and telecommunication. The study suggested government invests heavily in the power supply and telecommunication sector and if possible, privatize these sectors to improve efficiency and productivity of these sectors. Pohjola (2002) in the study conducted on the Finnish market sector revealed that the use of information and communication technology led to significant rise in the output of the market sector in Finland.

3. Methodology

The scope of the study comprises of 100 respondents selected from banks and the general public; responses from the randomly selected sample will be used to generalize the whole findings of the study. The hypotheses formulated are tested using the Chi-square statistical method. The Chi-square computation is depicted as;

$$X^2 = \frac{\sum [O-E]^2}{E}$$

Where, X^2 = Chi-square

O = Observed frequency

E = Expected frequency

The hypothesis for the study is stated in nulls as follows;

1. E-commerce and E-banking is not a convenient and faster means of transact business in Nigeria.
2. E-commerce and E-banking does not contribute significantly to the active participation of Nigeria in the global economy.
3. E-commerce and E-banking does not improve the operational capacity and productivity of Nigerian businesses.

4. E-commerce and E-banking has not contributed significantly to the growth of the Nigerian economy.

4. *Empirical Results and Discussion*

100 questionnaires were distributed during the survey, 86 questionnaires were fully administered and 14 not returned. This implies that 86% of respondents filled in responses while 14% of the respondents were not cooperative. It can be depicted that majority of the respondents fall between age bracket of 41-50 years and closely followed by those between 31-40 years. The gender responses revealed that males dominated the population of total respondents representing 60.7%. It can also be deduced 90.4% of total respondents are either employed or self-employed.

4.1 **Testing the Hypotheses**

The decision rule states that when the chi-square calculated is less than the chi-square tabulated at 5% significance level, the null hypothesis (H_0) should be accepted and if otherwise, it should be rejected. The chi-square tabulated at 5% significance level is 7.81 (*obtained from statistical table*).

From the results, the chi-square (X^2) calculated for hypothesis 1 is 67.9. Therefore, the null hypothesis is rejected at 5% significance level and concludes that e-commerce and e-banking is perceived to be a faster and convenient means compared to the orthodox method of transacting business in Nigeria. This shows that e-commerce and e-banking facilitates better exchange transactions and reduces the drudgery associated with business transactions. This has been the major reason that has retained customers to the use e-commerce and e-banking systems earlier suggested by Ayo *et al.* (2010). The $X^2_{cal.}$ for hypothesis 2 is 62.56; hence the null hypothesis is void. The result provides evidence to remark that Nigeria has been well integrated into the global economy and also foster her trade relations with the rest of the world. This means that the adoption of e-commerce and e-banking has eased the access to the global market and the resultant effect is that the gains of globalization would be reaped. Hypothesis 3 has its $X^2_{cal.}$ to be 104; this led to the rejection of the null hypothesis. This implies that e-commerce and e-banking enabled businesses in Nigeria to adequately meet customer's demand by improving their operational capacity and productivity thereby increasing their efficiency. This is consistent with Madueme (2010) that asserted that ICT improved efficiency. The increase in efficiency makes the businesses to increase their output, enjoy better economies of scale and further expand their horizon. Hypothesis 4 is also rejected because the

$X^2_{cal.}$ is 42.19. E-commerce and E-banking provides an avenue for the nation to boost her economic growth. The impact of e-commerce and e-banking is positive to the overall level of output of the economy as suggested by the empirical finding. The acceptance of ICT has led to increase in output of the various sectors in the domestic economy as also adduced by Pohjola (2002) in the study of the Finnish market sector, hence improving economic performance.

5. *Conclusion and Recommendations*

E-commerce and E-banking are phenomenon that any society in this present age cannot afford to dispatch itself from. The main objective of the study has been to show the relevance of e-commerce and e-banking in Nigeria. The empirical results deduced that e-commerce and e-banking has taken the nation to greater heights. It could therefore be adjudged that e-commerce and e-banking has a growth-stimulating effect on Nigeria. The analysis led to the rejection of all hypotheses formulated for the study. Hence, it can be concluded that e-commerce and e-banking positively impacts on the economy by facilitating better exchange transactions, promoting active participation in the international market, enhance effectiveness and efficiency in Nigerian business and lastly, it has led to significant improvement in the growth of the economy.

In order for e-commerce and e-banking to further provide more benefits to the economy, government is advised to provide adequate infrastructural facilities especially in the area of telecommunication and power and take steps to encourage ICT usage amongst its public. Government should also strengthen the regulatory framework to ensure security of transaction. Banks on their part are recommended to improve its e-commerce and e-banking facilities and ensure good connectivity for a hitch-free transaction via electronic means and carry out constant and extensive training of its employees and customers so as to make them abreast of latest developments in e-commerce and e-banking.

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