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Research Paper

Managing the Threat of Digital Banking in Developing Economies

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ABSTRACT: *The study examined managing the threat of digital banking and its impact on developing economies. The objectives were to; establish infrastructural challenges of digital banking, determine the legal and security challenges associated with digital banking and analyze how customers' exposure and literacy to computers and information technology pose a challenge to digital banking. The study employed content analysis which made use of literature review to draw conclusion of the study. The findings revealed that majority of the banks are providing services on internet through their websites and that attention is more to achieving digital banking as satisfying and fulfilling customers' needs. It was also revealed that digital banking's major threat is the case of internet criminals and fraudsters attempting to steal customers' information through various methods such as phishing and pharming. It was moreso shown that Digital banking has the challenge of frequent inaccessibility to e-banking due to poor internet connection, customer inflexibility to new technology, low educational level, poor computer literacy and constructive use of internet services; language, cultural and logistical barriers; different legislation and information overload to customers. Based on this, it was recommended that marketing and education of e-banking services and products should be intensified to attract more customers. Also, regulatory authorities like Central Bank of Nigeria must enforce fully the new standards and policy, on the charges on electronic transaction which will encourage customers to do ATM transactions.*
KEYWORDS:*Digital Banking, Automated Teller Machines, banking industry, Internet banking, electronic banking, e-transaction*

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I. INTRODUCTION

The economy of most developing countries is cash driven; meaning that monetary transactions are basically made through the exchange of bank notes and coins for goods and services. However, this trend is now giving way to a modern and sophisticated payment system where the currency and notes are converted to data, which are in turn transmitted through the telephone lines and satellite transponders. This is as a result of rapid technological progress and development in the financial market (Alabar, 2012).Digital banking provides faster delivery of information from the customer and service provider, thus differentiating Internet enabled digital banking system from the traditional banking operation. This transfer process makes money to be carried in information storage medium such as cheques, credit cards, and electronic means than its pure cash form. Digital banking has thus become important channel to sell Products and Services; leading to a paradigm shift in marketing practices, resulting in high performance in the banking industry (Allen & Hamilton, 2011).

The banking industry has been undergoing changes since the mid-1990s, in the form of innovative use of information technology and development in electronic commerce. This development made digital banking pose as a threat to the traditional branch operations, despite the fact that electronic commerce is still developing and is rapidly changing (Almazari& Siam, 2018). They further explained that the importance of electronic payment system in any country can never be over emphasized, due to the dramatic transformation in technological advancements that is being experienced by the global financial industry.

Almazari& Siam (2018), further explained that, traditionally, banks have always been in the forefront of harnessing technology to improve their products, services and efficiency. Banks have been delivering a wide range of quality products and services using telecommunication networks and electronic networks. They have established direct dial up connections, private networks and public networks as their delivery channels. They have been using computers, telephone and Automated Teller Machines (ATM), as devices to offer their services. The accessibility in Nigeria of personal computer and high-tech mobile phones including iPhones and iPods has made Internet and World Wide Web (WWW) access easy. Internet is increasingly being used by banks to deliver their products and services to their customers and to receive instructions (Amor, 2010). This form of banking is referred to as Digital banking. Digital banking has been used by most of the financial institutions in Nigeria among which are the banks but the product and services offered differ widely from one bank to the other both in their sophistication and content.

From the perspective of banking products and services being offered through Internet, Digital banking is nothing more than traditional banking services delivered through an electronic communication backbone, viz, Internet. But, in the process it has thrown open issues which have ramifications beyond what a new delivery channel would normally envisage and, hence, has compelled regulators world over to take note of this emerging channel.

Some of the unique features of digital banking are; it removes the traditional geographical barriers as it could reach out to customers of legal jurisdiction and different countries. This has raised the question of jurisdiction of law / supervisory system, to which such transactions should be subjected. It also has added a new dimension to different kinds of risks traditionally associated with banking, heightening some of them and throwing new risk control challenges. Security of banking transactions, validity of electronic contract and customers' privacy, which have all along been the concerns of both bankers and supervisors have assumed different dimensions given that the Internet is a public domain, not subject to control by any single authority or group of users. It also poses a strategic risk of loss of business to those banks who do not respond in time, to this new technology, being the efficient and cost effective delivery. This study will examine managing the threat of digital banking and its impact on developing economies.

II. STATEMENT OF THE PROBLEM

Businesses keep changing every day as a result of the internet influences. In the recent past, the growth in information technology has had massive consequence on growth of more flexible modes of payment, banking services that are users' friendly and leading to more resourceful and successful banking systems. Although digital banking makes the transaction faster and more convenient, some commercial banks in Nigeria have not fully adopted this new banking product. The banks that have adopted the product have been faced with various obstacles thus necessitating a need for a study to ascertain the challenges facing digital banking and determine how they can be overcome and enhance a breakthrough in digital banking.

The popularity of digital banking is experiencing explosive growth as traditional banking practices are being transformed, placing opportunities for banks in Nigeria to maximize their share in the market, gaining competitive edge and improving on their profitability. However, there are serious challenges associated with digital banking. These challenges have made many bank customers to still prefer to go directly to the banks instead of using these facilities.

III. OBJECTIVES OF THE STUDY

The objectives of the study include:

i) To establish infrastructural challenges of digital banking
ii) To determine the legal and security challenges associated with digital banking.
iii) To analyze how customers' exposure and literacy to computers and information technology pose a challenge to digital banking.

IV. THEORETICAL FRAMEWORK

This study anchored on Innovation Diffusion theory. This theory developed by Roger in 1983 explains individuals' intention to adopt a technology as a modality to perform a traditional activity. The critical factors that determine the adoption of an innovation at the general level are the following: relative advantage, compatibility, complexity and observability. It is concerned with the manner in which a new technological idea, artefact or technique, or a new use of an old one, migrates from creation to use.

According to innovation diffusion theory, technological innovation is communicated through particular channels, over time, among the members of a social system. The stages through which a technological innovation passes are: knowledge (exposure to its existence, and understanding of its functions); persuasion (the forming of a favourable attitude to it); decision (commitment to its adoption); implementation (putting it to use); and confirmation (reinforcement based on positive outcomes from it). Early users generally were more highly educated, have higher social status, were more open to both mass media and interpersonal channels of communication, and have more contact with change agents. Mass media channels are relatively more important at the knowledge stage, whereas interpersonal channels are relatively more important at the persuasion stage. Innovation decisions may be optional (where the person or organization has a real opportunity to adopt or reject the idea), collective (where a decision is reached by consensus among the members of a system), or authority-based (where a decision is imposed by another person or organization which possesses requisite power, status or technical expertise).

Important characteristics of an innovation include: relative advantage (the degree to which it is perceived to be better than what it supersedes); compatibility (consistency with existing values, past experiences and needs); complexity (difficulty of understanding and use); trialability (the degree to which it can be experimented with on a limited basis); observability (the visibility of its results). Different adopter categories are identified as: innovators (venturesome); early adopters (respectable); early majority (deliberate); late majority (skeptical); laggards (traditional). Earlier adopting individuals tend not to be different in age, but to have more years of education, higher social status and upward social mobility, be in larger organizations, have greater empathy, less dogmatism, a greater ability to deal with abstractions, greater rationality, greater intelligence, a greater ability to cope with uncertainty and risk, higher aspirations, more contact with other people, greater exposure to both mass media and interpersonal communications channels and engage in more active information seeking.

Important roles in the innovation process include: opinion leaders (who have relatively frequent informal influence over the behaviour of others); change agents (who positively influence innovation decisions, by mediating between the change agency and the relevant social system); change aides (who complement the change agent, by having more intensive contact with clients, and who have less competence credibility but more correctly or trustworthiness credibility). The change agent functions are: to develop a need for change on the part of the client; to establish an information-exchange relationship; to diagnose the client problems; to create intent to change in the client; to translate this intent into action; to stabilize adoption and prevent discontinuance; and to shift the client from reliance on the change agent to self-reliance.

The relevance of the theory to the study is that it stresses that technological innovation which is communicated through particular channels (internet, ATM, POS), over time has ensure the efficiency and effectiveness in the banking sector, thus improve the performance of banks in Nigeria.

4.2 Concept Of Digital Banking

Digital banking is an electronic oriented payment mechanism that allows customers' accounts to be credited electronically within 24 hours. It is the ability to pay electronically for goods and services. It enables online purchases. It is an integral part of e-commerce and an essential infrastructure for e-commerce models. One of the major reasons for the widespread of e-commerce transactions is perhaps the rapid development and growth of various digital banking systems. In the developed countries, credit cards have been used even before the advent of internet (Anderson, 2018). Digital banking is a financial exchange that takes place online between buyers and sellers. The content of this exchange is usually some form of digital financial instrument (such as encrypted credit card numbers, electronic cheques or digital cash) that is backed by a bank or an intermediary, or by a legal tender. Gbadeyan&Akinyosoye (2011) noted that the various factors that have led the financial institutions to make use of digital banking are:

1. Decreasing technology cost: The technology used in the networks is decreasing day by day, which is evident from the fact that computers are now dirt-cheap and Internet is becoming available almost everywhere in the world.
2. Reduced operational and processing cost: Due to reduced technology cost the processing cost of various commerce activities becomes very less. A very simple reason to prove this is the fact that in electronic transactions we save both paper and time.
3. Increasing online commerce: Thereare many digital banking systems and broadly these digital banking systems can be grouped or classified into four categories: (1) online credit card payment system (2) online electronic cash system (3) electronic cheque system and (4) smart cards based digital banking system. These payment systems have numbers of requirements: e.g. security, acceptability, convenience, cost, anonymity, control, and traceability.

According to Babalola (2009), digital banking is a forum where a customer can access his or her bank account via the Internet using personal computer (PC) or mobile phone and web-browser. He added that digital banking system is banking service that allows customers to access and perform financial transactions on their bank accounts from their web enabled computers with Internet connection to banks' web sites any time they wish. Digital banking services also enables bank customers to perform transactions such as transfers and payments, access to latest balance, statement viewing, account detail viewing, customization, print, downloading of statements and obtaining of a history statement on all accounts linked to the bank's customers.

According to David (2018), digital banking includes the system that enables financial institution customers, individuals or businesses, access accounts, transact business, or obtain information on financial products and services on public or private network including Internet. He added that digital banking is the act of conducting financial intermediation on the Internet. It is that process whereby the customer is able to access, control and use his/her account over the Internet. Since the mid-1990s, there has been a fundamental shift in banking delivery channels toward using self-service channels such as digital banking, mainly the use of automated teller machines (ATMs) and digital banking. Denny (2018) sees digital banking as an internet portal, through which customers can use different kinds of banking services ranging from bill payment to making investments. With the exception of cash withdrawals, digital banking gives customers access to almost any type of banking transaction at the click of a mouse.

According to a survey of DeYoung (2017), the evolution of digital banking can be analyzed within a five-stage conceptual framework, where the extent of service provided through internet starts from a promotional stage and extend to transaction-enabled business innovation stage in which institutions re-designed their value chain and offer highly personalized products and services. Analyzing the customer side, Gbadeyan&Akinyosoye (2011) showed that customers seek convenience, transactional efficiency, a choice of core banking products, and access to competitive returns and prices. On the other hand, James (2009) mentioned that internet-banking has lifted the bank network as an entry barrier to the retail banking while introducing price transparency as customers can now easily compare prices online. Prices transparency also brings faster commoditization of basic services and products.

4.3 The Effect Of Digital Banking On Traditional Banking

Indeed, the use of the internet as a new alternative channel for the distribution of financial services has become a competitive necessity instead of just a way to achieve competitive advantage with the advent of globalization and fiercer competition. Ghosh (2017) state that digital banking facilitates the customers' access to their accounts and executing transactions electronically in an easier way through visiting the bank websites at any given time. In utilizing this facility, individuals and companies are saving a lot of their time and money. Almazari& Siam (2018) also agrees that electronic services contribute in reducing costs, increasing profits, activating bank's management, increasing bank's effectiveness and its competitive degree. This reflects the direct relation between increasing client's needs to reduce time, costs and between digital banking services.

Gbadeyan&Akinyosoye (2011) believe that the use of digital banking has brought many benefits amongst which include: there are no barrier limitations; it is convenient; services are offered at minimal cost; it has transformed traditional practices in banking; the only way to stay connected to the customers at any place and any time is through internet applications; it results in high performance in the banking industry through faster delivery of information from the customer and service provider; customers prefer the use of e–banking because it saves time; it makes possible the use of innovative product or service at a low transaction fees and it handles queue management which is one of the important dimensions of e–banking service quality. Amor (2010) also agrees that with the online services, customers can facilitate themselves by a number of ways: they can view their account details, review their account histories, payment and transfer funds, order and re-order cheques, pay utility bills, get loans by filling the loan application form online, activate or replace credit cards and get in touch with the customer care department.

Gbadeyan&Akinyosoye (2011) explained the multiple benefits to customers by digital banking services:

- The main benefit from the bank customers' point of view is significant saving of time by the automation of banking services processing and introduction of an easy maintenance tools for managing customer's money.
- Reduced costs in accessing and using the banking services.
- Increased comfort and timesaving - transactions can be made 24 hours a day, without requiring the physical interaction with the bank.
- Quick and continuous access to information: Corporations will have easier access to information as, they can check on multiple accounts at the click of a button.
- Better cash management: Digital banking facilities speed up cash cycle and increase efficiency of business processes as large variety of cash management instruments is available on internet sites.
- Speed: The response of the medium is very fast; therefore, customers can actually wait till the last minute before concluding a fund transfer.
- Funds management: Customers can download their history of different accounts and do a what-if analysis on their own personal computer before effecting any transaction on the web. This will lead to better funds management.

4.4 Threats Of Digital Banking On Developing Economies

Gbadeyan&Akinyosoye (2011) identified major problems of digital banking amongst which include: the case of internet criminals and fraudsters attempt to steal customer information through various methods such as phishing and pharming. In other word, there is increased concern about privacy and security of customers' information as a result of the fragility of information collected and held electronically and transferred via computer-mediated communications. Howcroft, Hamilton & Hewer (2002) also agrees that through digital banking, fund transfers are very easy for criminals to hide their transactions; there is inaccessibility to e–banking due to poor internet connection, customer inflexibility to new technology, low educational level, poor computer literacy and constructive use of Internet services; language, cultural and logistical barriers; different legislation and information overload to customers.

They find that the most important factors encouraging consumers to use online banking are lower fees followed by reducing paper work and human error. Nancy (2001) asserts that customers complain about computer logon times which are usually longer than making a telephone call. In addition, customers have to check and recheck the forms filled online, as they are worried about making mistakes. Ladejo&Akanbi (2012) identified lack of specific laws to govern Internet banking as a major concern for both the bankers and the customers. This relates to issues such as unfair and deceptive trade practice by the supplier and unauthorized access by hackers which can increase corrupt practices (Umana, Okafor,Djobissie&Ogar, 2019).

Ikechukwu (2010) identified the basic constraints of internet banking in Nigeria as; inadequate ICT infrastructure, inadequate funding, absence of appropriate legal and regulatory framework, high cost of bandwidth/telephone lines/internet access, service inter-exchange congestion and slow internet connectivity due to high inter-national tariffs, unexpected system failure, complacence/illiteracy and security (Cyber security, data integrity, protection of customer's confidential information and identity theft).
Other Challenges include;

a. Lack of adequate Investment capital

Funds that can be used to buy new information technologies and for modernizing existing systems are generally in short supply. While there are a number of modern banking applications in use, there is also integrated banking system, which continued to experience innovations in terms of product development specifically, and there has been tremendous improvement in speed in which funds are transferred within and outside the domestic economy (International money transfer).

b. Reduces employment in the country

Digital banking in the country today has reduced the rate of employment in the country whereby most works that should be done by humans are done by machines thereby lead to minimum rate of employment and high rate of unemployment in the country

c. Encourages excessive withdrawal

Un-operational days like Saturdays when banks are not in operation customers can go and withdraw with their ATM cards, especially when there is a function like wedding ceremonies, customers with little or no money can rush to a nearby ATM machine to withdraw money for excessive spending, customers complained about this in an interview conducted by banks (Murthy, 2013).

V. CONCLUSION

Based on the finding of the study, it was concluded that; the majority of the banks are providing services on internet through their websites and that attention is more to achieving digital banking as satisfying and fulfilling customers' needs. It was also concluded that internet has changed the dimensions of competition in the retail banking sector. This has provided opportunities for emerging countries to build up their financial intermediation infrastructure.

It was equally concluded that digital banking's major threat in developing economies is the case of internet criminals and fraudsters attempting to steal customer information through various methods such as phishing and pharming. It was moreso concluded that digital banking has the challenge of frequent inaccessibility to e-banking due to poor internet connection, customer inflexibility to new technology, low educational level, poor computer literacy and constructive use of internet services; language, cultural and logistical barriers; different legislation and information overload to customers. Lastly, it was concluded that digital banking is hindered by lack of specific laws to govern internet banking as a major concern for both the bankers and the customers. This relates to issues such as unfair and deceptive trade practice by the supplier and unauthorized access by hackers.

RECOMMENDATIONS

The following recommendations were made to help in managing the threat of Digital Banking:

i) The banks should provide more ATM facilities; these should be placed at advantageous locations within the city to reduce distance and time use in accessing the facility.
ii) Marketing and education of e-banking services and products should be intensified to attract more customers.
iii) The bank should provide necessary legal codes backing to counter threats and insecurity posed to net banking.
iv) Regulatory authorities like Central Bank of Nigeria must enforce fully the new standards and policy, on the charges on electronic transaction which will encourage customers to do ATM transactions.
v) Customers should be able to secure themselves by providing reliable passwords to avoid fraud.

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