THE DYNAMICS THAT AFFECT IMPLEMENTATION OF E-BANKING PRODUCTS AND SERVICES IN NIGERIA

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Abstract

The implementation of e-banking products and services is growing in Nigeria, but existing evidence points to the fact that the implementation level is still low. The market is growing at a for rate, particularly after the recent banking sector reconsolidation, but e-banking implementation is constrained seriously by poor ICT infrastructure, inadequate and unreliable electricity supply and telecommunication

services, high level of illiteracy, and inadequate institutional support. More public and private investments are required for sustaining the growth and maintenance of e-banking infrastructure, and support services in Nigeria. Growth in private investment would however require more public policy effort at providing the enabling legislations and incentives.

Keywords; internet, Websites, e-banking

1. Background

Electronic banking (e-banking) is the automated delivery of banking products and services directly to customers through electronics, interactive, communications channels. Basically, e-banking enables customers and other interested parties to access accounts, transact business, or obtain information on financial products and services through a public or private network particularly the internet. This has become the trend; and in a bid to catch up with global development and improve the quality of their service delivery, Nigerian banks have invested substantially on e-banking and have widely adopted electronic and telecommunication networks for delivering a wide range of value added products and services (Chiemeke, Evwiekpaede and Chete, 2006).

Ayo, Ekong, Totulope and Adebeyi (2007) confirms that all the 25 banks in Nigeria currently adopt e-banking at different levels. This collaborates the views expressed in One World Net Channel (2007) and Elegbe (2007) that adoption of e-banking products and services is rowing in Nigeria. But Chiemeke, Evwiekpafe and Chete (2006) observes too that e-banking adoption rate in Nigeria is quite low: what are offers are facilities for basic ICT interactivity, with, most banks having mainly information sites and providing little internet banking services. The study shows further that out of a maximum of 432 grand scores allocated, websites evaluation of 12 banks in the country scored 170.5, which is only 39.46 percent of the expected scores. Another study by the Central Bank of Nigeria (CBN) shows that in 2002 out of the 89 banks then, only 13 (or 14.6 percent) of them offered e-banking services.

Low rate of the implementation of e-banking in Nigeria is generally attributed to inadequate operational infrastructure (like modern telecommunication facilities and electricity supply), increase in the rate of cybercrime (which makes banks' internet windows unattractive for domestic banking operation and legitimate international operation), and the generally high level of ICT illiteracy prevailing at present in the country.

Promoting implementation of e-banking products is necessary for modernizing Nigeria's banking sector and enhancing economic growth and development. The inflow of foreign direct investment will certainly depend, among other things, on the efficiency and security of financial transactions. When e-banking becomes institutionalized, the risks associated with handling cash reduces significantly; making more people to have confidence in banking services.

This paper reviews the dynamics that implementation of e-banking adoption in Nigeria. The relevant policies and classifications of e-banking services are also discussed. The paper concludes that more public and corporate investments are required for providing and maintaining the relevant ICT infrastructure, and raising ICT literacy level in Nigeria.

The remaining part of this paper is divided into 4 sections. Classification of e-banking services is section 2. Section 3 examines delivery of e-banking services, while adoption of e-banking services in Nigeria is section 4. Section 5 concludes the paper.

2. Classification of e-banking services

Service is defined by Kassim (2006) as an intangible and easily duplicated act that meets the benefits of people. Services can be divided into high touch or high tech services. High touch services are mostly dependent on people in the service process, whereas high tech services are predominantly based on the use of automated systems, information technology, and other types of physical resources (Gronrose, 2001). e-banking services include both high tech and high touch resources. High tech services include internet/telephone/ short messaging services (SMS)and ATM machines, whereas high tough services consist of instructions and personal assistance in using the services.

Diniz (1998) classifies the functionality of websites into three categories, viz ;

1. Information Delivery since banks often work as information disseminators;
2. Transactional Channels as avenues for conducting loans actions in the same way as in bank branch offices or ATM.
3. Customer Relationship as a tool to improve customers relationships.

   Each of these categories of activities was further divided into three different levels of interactivity namely Basic, intermediate and Advanced. Diniz (1998) believes equally that banks

providing e-banking products and services should offer to a large extent an identical and standard package of banking services and transactional capabilities.

Singh and Malhorta (2007) identifies three levels of e-banking adoption as;

(i) The back level services which uses the websites to disseminate information on different product and services offered to customers and members of the public in genral;

(ii) simple transactional level; Which uses the bank's websites to allow customers to submit their instructions, applications for different services, queries on their account balances, etc., but do not permit any fund –based transactions on their accounts;

(iii) Fully transactional level; uses bank's websites, which allows customers to operate on their accounts for transfer of funds, payments of different bills, subscribing to other products of the bank and to transact purchase and sale of securities, etc.

The adoption of e-banking services to a large extent depends on the value added services they can offer.

Diniz (1998) surveyed banks in the United state of America and reported that most of them offer basic and intermediate services at the transactional and informational levels. Awamleh et al (2003) surveyed jordanian banks and found limited of web usage at the intermediate level, while the basic level use was dominat. Guru et al (2003) found that overall bank websites evaluation rating are clearly related to the functional and interactivity levels, and Chiemeke et at (2006) in studying the level of adoption of banking in Nigeria concluded that internet banking is offered at the basic level of interactivity with most of the banks having mainly informational sites and providing little internet transactional services.

In another study of adoption of internet banking in Nigeria, Chiemeke et al (2006) added security measures of functional websites to the three proposed by Diniz (1998), but still maintained the three levels of interactivity. The security measures have to do with customer identification to reduce fraud and other vices that can temper with the convenience, confidentiality and trust of customers. At the basic level of interactivity, this involves user names and passwords; at the intermediate level, it involves customer's code and firewalls; while at the advanced level it involves digital signatory certificates, secure socket layer (SSL), and encryption security gadgets. Awamleh and Fernandes (2005) in studying adoption of e-banking in United Arab Emirate further delineates Diniz model as follows;

- INFORMATIONAL: Basic providing contact, electronic brochures and special event; Intermediate search engines, report downloads, economic information; Advanced subscriptions, interface customization and advertisements.
- TRANSACTIONAL: Basic opening accounts, checkbook requests, cards request; intermediate balance enquiry, bill payment, fund transfers; Advanced electronic cash, electronic signatures, and electronic checks.
- CUSTOMER RELATIONSHIP: Basic electronic mail, suggestions and complaints forms, feedback forms; intermediate advising tools, calculators; Adanced video conferencing and service development.

Perumal and Shanmugam (2006) categorized the level of e-banking services in order of sophistication as follows;

- Informational- the most basic level where banks have marketing information about their products and services on a stand-alone server.
- Communication which allows interaction between the customers and the bank's system. Under this level, the bank's clients make request, which the bank can subsequently respond and include electronic mail, account enquiry, loan applications, or static file updates.
- Transactional the highest level where customers are allowed to execute transactions, which may include accessing account paying bills, transferring funds, etc.

e-banking services can also be classified based on the type of customers they support (AL-Abed, 2003). The classification here falls under ;

1) Retail services; this includes accounts' management, bill payment and presentment, new account opening, consumer wire transfers, investment brokerage services, loan application and approval, and account aggregation;
2) Wholesale services; this includes account management, cash management, small business loan application, approval, or advances, commercial wire transfers, business-to business payments, employees' benefits/pensions administration. Other wholesale services rendered through e-

banking is the Alerting services which keeps customers informed about their banking details, wherever they are, and paperless statements, e-mail statements, PDF statements, online statements, and so on (Ashger, 2005).

e-Banking services can also be classified in terms of the nature of services provided. According to Al-Mudimigh(2001) these are;

A) Account information include balance summary, account details and activity, download account activity;
B) Transfers and payments including fund transfer (locally and internationally), payments, payee list, standing instructions, demand draft, and manager's check;
C) Investment services opening mutual fund accounts, completing personal investment worksheets, buying mutual funds, selling mutual funds, viewing current mutual funds portfolio, and mutual funds information;
D) Customer Services Account services, rate information, and application information;
E) Contact Center Sending messages, reading messages, and road saved messages;
F) Information Center links to the portal.

2.1 e-Banking support services

In addition to traditional banking products and services, financial institutions can provide a variety of services that have been designed or adapted to support e-commerce, these services as outlined by Al-Abed(2003) are;

1) Web linking a web link is a word, phrase or image on a web page that contains coding that will transport the viewers to a different part of the websites or a completely different websites by just clicking the mouse. Some websites are strictly informational while others also offer customers the ability to perform financial transactions, such as paying bills, or transferring funds between accounts.
2) Account Aggregation a services that gathers information from many websites, presents that information to the customers in a consolidated format, and in some cases, may allow the

customers to initiate activity on the aggregated accounts. Such information may be on credit card, brokerage and banking data;

3) Electronic Authentication through this, the identifies of customers are verified and activities of e-banking are authorized. Authentication methods includes; Passwords and Personal Identification Numbers(PIN);Digital Certificates using a public key infrastructure (PKI);Microchip- based devices such as smart cards or other types of token; Data Base Comparisons e.g fraud screening applications and Biometric identifiers;

4) Websites Hosting Financial institutions that host a business customer's websites usually store, or engage for the storage of the electronic files that make up the website, these files are stored in one or more servers that may be located on the hosting financial institutions premises;

5) Wireless e-Banking this is a delivery channel that can extend the reach and enhance the convenience of internet banking products and services. It occurs when customers access a financial institution's network(s) using cellular phones, and personal digital assistants (or similar devices) through telecommunication companies' wireless networks.

3. Delivery of e-banking Services

ICT facilities are recognized globally as the leading vehicle and engine of economic growth and development.e-banking particularly can reduce traffic in banking halls, greatly, without compromising transactions and profits. In the view of Inderscience News (2007);

> *The evolution of e-banking in the last decade has been significant. Every bank, in parallel with the traditional e-business offerings, provides more or less advanced banking services to various categories of customers… new strategic considerations for e-banking initiate a dialogue for a new era of services and required infrastrutures.*

Stakelbeck (2005)identifies 3 e-banking delivery channels, namely (a) informational,(b) electronic transfer and (c) cdeposits applications online, while electronic payment channels facilitate traditional payment entry, settlements and distribution options.

Generally, deployment of ICT in banking at any level leads to the dramatic lowering of transaction costs and creation of new types of banking opportunities that address the barriers of time and distance, as it allows individuals and organizations to interact and transact financially related business seamlessly

through a variety of sophisticated channels such as the internet wireless devices, ATMs and physical branches. The level of sophistication of e-banking operations increases progressively from the informational channels through the electronic transfer channels to the electronic payment channels, which is the highest level of sophistication at present. With e-banking, banks are better equipped to respond quickly to market trends, changes in the business environment, or new directives from the revelant regulatory authorities. Furthermore, online banking makes a variety of payment transactions easy and convenient-at any time, and at the click of a button.

With regard to services delivery, Singh (2007) opines that e-banking is designed mainly to achieve two objectives; first, e-banking makes banking transactions more convenient, second the transaction costs of banking services reduces significantly with e-banking. Rao, Singh and Maheshwari (2002) shows that in the advanced economies where e-banking is developed, banks have high overall scores indicating high quality websites at all functional and interactivity levels. Some banks that have integrated their data base with their websites and users can make address or other account changes without customers services support; and almost all the internet banks have privacy statements, and about halve of them have security statements.

Effective delivery of e-banking services requires serious security considerations. The core security areas includes confidentially, integrity, availability, and privacy. This security can be provided through the use of a user identify (ID) and password, which must be installed and be effective for preventing breach of privacy and other security concerns; like the alteration of data, abuse of information, and fraud. Effective delivery of e-banking services is equally dependent on functional and powerful ICT hardware and software, operated in an environment where recovery procedures are not lacking and telecommunication services not epileptic, with zero tolerance for delays and faults. This calls for efficiency in power supply, telecommunication and internet services, backup facilities, and effective networking.

4. Adoption Level of e-Banking services in Nigerian

Following perumal and Shanmugan (2006), Diniz (1998), Awamleh and Fernandes (2005), and Chiemeke, Evwiekpaefe and Chete (2006), there are four (4) functional areas and three (3) levels of activities in e-banking. These classifications are tabulated below;

The above classification is used to analyze adoption level of e-banking products and services in Nigeria. Nigeria like other least developed countries is an 'information poor' country. The digital computer made its first appearance in Nigeria in 1963 and was used in the analysis of the 1962/63 National Census data (Longe, 1980). By 1997 the total number of computers installed had grown to around 70. However, banks began to computerize effectively in 1982 (Nwachuku, 1980; Osuji, 1986). In a bid to streamlining ICT activities, the Federal Minister of Finance in 1986 set up an Advisory Panel to discuss microelectronic development in Nigeria, the panel recommended as follows;

A) A program of short-term activity directed towards the development, design and fabrication of prototypes of microprocessor-based systems;
B) The creation of activity centers for the implementation of the short-term plans;
C) The foundation of a Technology Development Center;
D) The formation of a national committee on high technology microelectronics.

In March 2001, the Federal Executive Council approved a national IT policy for the country, and the implementation of this policy started in April of the same year with the establishment of the National Information Technology Development Agency (NITDA) charged with the responsibility of implementing the IT policy and with a vision statement of making Nigeria an IT capable country in Africa, and a key player in the information sector by the year 2005. The ultimate goal of them initiatives was to make IT the engine for sustainable development and global competitiveness (NITDA, 2004).

To keep pace with the global trend, the 2001 policy was reviewed with the federal government setting up the Nigerian National ICT for Development (ICT4D) Strategic Action Plan Committee to develop a new ICT policy. The CBN equally developed a programme for ICT in 2006. At its MPC meeting of June 8, 2006 it was decided that the Electronic Financial Analysis Surveillance System (EFASS) be deployed so that banks will "leveraged to ensure the provactive implantation of monetary policy" (CBN,2006).

As noted rightly by Atkinson and mckay (2007):

> *In the new global economy, information and communications technology (IT) is the major driver, not just of improved quality of life, but also of economic growth. Moreover, there*

are strong indications that IT has the potential to continue driving growth for the foreseeable future

They further advised that policy makers should devote higher level of attention to IT policies and implantation.

Banking activities in Nigeria have increasingly depended on the development of ICT. Customers' insatiable appetites for efficient services have compelled financial institutions to fast-forward to a more compelled radical transformation of their business systems and models by embracing e-banking. The e-banking appeal is growing rapidly and its global acceptance has reinforced its speed of penetration. The importance of e-banking is reinforced by the recent banking sector re-capitalization exercise which has created more opportunities and finances that are necessary for driving the engines of e-banking in Nigeria (Akwaja, 2005).

First Atlantic Bank of Nigeria was first to deploy e-banking in Nigeria November of 2000, But by September 2002, out of the then 89 banks licensed by the CBN then, 17 banks offered internet banking, 24 offered basic telephone banking, 7 had ATM services, and 13 offered other e-banking services. By 2005, 35 banks had fully networked their systems, and by 2007, all the banks offer one form of e-banking or the other (Ezeoha, 2005; Agboola, 2006; Ayo et. al 2007)

The major difficulties associated with e-banking adoption in Nigeria relates generally to poor infrastructure for communication, electricity supply, and training are generally very poor and ineffective. Institutional support systems to ensure speedy development of the ICT nationally are equally inadequate. Internet services have remained quite expensive as people and organizations try to bear the private cost of providing them. The country was launched into the Global System of Mobile Phoning less than a decade ago and, understandably, ICT is not yet fully integrated into the banking system. Electricity supply is also poor, as frequent power outages and low voltage have become the norm. These infrastructural inadequacies make e-banking more costly and undependable at present in Nigeria.

Electricity generation about 3600 megawatts 1999 when chief Obasanjo first came into office; it reduced to about 1600 megawatts at the end of his regime in 2007. The situation seem to be worsening in 2008, as electricity supply dipped to an all time low level of 860 megawatts in April 2008 (see Punch May 29, 2008, page 7). Internet services are generally poor; often there is no service at all, and when Service comes transactions are slowed by excessive utilization of facilities that need to be updated.

Ironically, President Yar'Adua made improving electricity supply high point of his electoral deliverables during the 2007 presidency campaigns. He promised to declare State of Emergency in the electricity supply sector to achieve quick success. One year into his four-year tenure, conditions have indeed become worse. The situation may not improve soon as the president is now promising better electricity supply in 2011!

Recent policy reversals in the energy sector may, indeed, make the 2011 target unrealizable. First, government policy on the Independent Power Plants (IPP) initiated by ex-president Obasanjo is currently under review, and construction work at the IPP sites have been halted in many cases. The current government appears to be more concerned with the illegality of the process by which money was appropriated for the IPP projects, than the urgent need to deliver more electricity to the Nigerian public. Second, government policy on privatization of the Nigerian Telecommunication Corporation (NITEL) has been reversed without putting concrete arrangements to redress the problems faced in the past. Equally effort at unbundling Nigeria's public electricity corporation, PHCN, by the government are currently under review. Such policy reversals suggest policy inconsistency and lack of continuity, particularly as president Yar'Adua belongs to the same political party (Peoples Democratic Party) as ex-president Obasanjo. More so, President Yar'Adua as a state governor between 1999 and 2007 was an active player during president Obasanjo's eight year rule. Such policy reversals, particularly as coming from the same political party, can give wrong signals to prospective investors who may desire to take advantage of the emerging telecommunication and electricity markets.

Furthermore, private operators in Nigeria generally complain of excessive taxation and generally insensitivity of government to the high cost of doing business in Nigeria. Excessive taxation raises the cost of doing business. ICT education is largely private driven and understandably expensive. The institutional capacity to monitor service delivery of ICT hardware and software providers is quite weak, making the quality of ICT education and services generally poor.

Chiemeke, et al (2006) examined e-banking adoption behavior of the twelve (12) large online banks after the banking industry reform of 2005. Evaluation of the functionality of the bank's website showed that out of a maximum score rating of each of the four (4) functional areas of internet banking, information scored 80.5 (55.9 percent), communication or customer relationship scored 36 (25 percent), transaction scored 19 (13.19 percent) and security scored 35 (24.30 percent). These results therefore reveals that the bulk of e-banking services provided by the Nigerian banks are largely informational, and

even at that, only 55.9 percent of these services are provided. Transactional services are provided at a very low level of 25 percent, while security was provided at a level of only 24.30 percent. In evaluating the banks' interactivity levels, Chiemeke, et al (2006) reveals that out of a maximum score rating of 144 for each of the three (3) activity levels 95 (or 65.97 percent) were at basic level, 59 (or 40.97 percent) were at the intermediate level and 16.5 (or 11.46 percent)were at the advanced level. These shows the adoption level of e-banking services is generally low in Nigeria. e-banking services provided by the Nigerian banks are mostly at the basic or infancy levels.

Conclusion

Enormous potential exist in Nigeria for growth in the implementation level of e-banking services and products. With its large population and huge crude petroleum export earnings, Nigeria remains a large market with huge financial possibilities. This places Nigerian banks at the threshold of modernization and growth, particularly in this post reconsolidation era. But ICT related infrastructures in Nigeria have remained very poor and inadequate. This has reduced significantly the capacity of banks to respond to the growing demand for need for e-banking services. The major constraining factors include electricity supply, poor telecommunication and internet services, and weak capacity for developing manpower in ICT.

ICT infrastructure should ne place alongside with other development infrastructure like those for transportation, basic education, or defense. Indeed the current switch of modernization has placed ICT higher and more relevant. In much the same way that government build roads, seaports and airports, national internet networks can be provided to reduce the cost of e-banking services. This should of course be in addition to working towards the improvement of electricity supply and telecommunication services generally.

The potentials for growth of private investment in e-banking support services in Nigeria are quite enormous. But government needs to render the business environment more enabling with the appropriate legislations and incentives.

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