

Mobile Phone Banking In Nigeria: Benefits, Problems and Prospects

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Abstract

The internet and other electronic media have had a positive impact on the lives of individuals and businesses all over the world. This study investigated the extent of the adoption and usage of the mobile phone banking services among banking customers in Nigeria and the associated problems. Mobile phones are now ubiquitous and a standard aspect of daily life for a large percentage of the world population. In addition, innovations in mobile finances offer the potential to change the way customers conduct financial transactions. Yet many banking customers all over the world remain sceptical about the benefits of mobile financial services and the levels of security provided with these services. Thus the aim of this study was to understand the levels of usage and non-usage of these financial services by customers within Nigeria. In the course of the research, ten out of twenty one banks were selected in Nigeria. The stakeholders interviewed included bank staff, customers and students from higher education institutions. Study data was gathered over a two month period using an unstructured set of interview questions and data analysis was through thematic evidences arising from the data analysed. Internet banking services were first introduced into the Nigerian financial system in 2001 and other electronic banking services such as the ATM and phone banking followed thereafter. The findings of this study however, discovered that phone banking was more established than internet banking and ATM services, but ATM services had a wider reach. In summary, the overriding factors affecting this situation included the cost and maintenance involved, education of customers, poverty and infrastructure availability. Recommendations are therefore awareness creation of the services and associated business environment, security improvement of the services and tough government regulations for general electronic banking services in the Nigerian context.

Key words: Banking, Phone banking, Customers, Banking, Nigeria.

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1. Introduction

Mobile technology, its introduction and usage are used prolifically in the world today. The innovation has impacted positively on the lives of ordinary people more than any other technology. Their usage has presented opportunities with different dimensions to all groups of individuals and businesses. Mobile commerce (M-commerce) means all forms of interface between a consumer and a mobile device (Alex 2010), these may also include but not limited to the issuance of electronic coupons and shopping over the internet through a mobile device. Mobile financial services therefore fall under this umbrella such as mobile personal banking and payments. Laukkanen,(2007) stressed that mobile banking allows banking customers to conduct their financial services such as alerts, i.e. receipt of Short-Message-Services (SMS) when there is a movement in their accounts, it also allows customers to carry out other financial services such as balance enquiries, interest rate enquiries, payment of bills, internet shopping, transfer to other accounts and password change. Studies on M-Commerce and the phone banking have been conducted

extensively in the developed countries. Some studies have been conducted in Kenya, Tanzania, Zambia and South Africa for growth in mobile banking, but this is one of the first academic studies in Nigeria, a country regarded as the most populous country in Africa and therefore the potential for the most mobile banking.

Therefore this study investigates the problems, benefits and prospects associated with mobile telephone banking services in Nigeria and recommends solutions to financial service managers, policy makers and other practitioners.

1.1 Nigeria's Experience of Mobile Phone Technologies

The Global System of Mobile communication, otherwise known as GSM was introduced into the Nigerian market in the year 2001. Since the introduction, the demand has rapidly expanded (NCC 2008). Evidence from various researches, as well as published reports of the mobile service operators suggests that less than 4.6% of the population had access to the telephone in 2003. Recent reports by the NCC (2013), states that Nigeria now has the highest number of mobile phone subscriptions in Africa - more than 93 million, representing 16% of the continent's total mobile subscriptions.

The report further states that the numbers of subscribers are expanding at about 40% every year, and is forecast to continue over the next few years. The expansions of the mobile phone market in Nigeria (NCC 2013) are linked to the deregulation of the communication sector and interplay of market forces. However, in comparison to other African countries, NCC (2013), stressed that South Africa, with its more developed infrastructure, has the highest broadband penetration - 6%, followed by Morocco with 2.8%. ITU (2011) reports that the telecommunication industry recognises that continued acceptance and usage as well as expansion, will be based on the development of business models that work for poorer people. Mobile phones are increasingly becoming an essential part of the lives of the average Nigerian and other developing countries of the world (Medhi, et al., 2009) as well as playing a key role such as:

- A development tool
- As a household expenditure that maintains social capital and contributes to economic management
- As an infrastructure – for the improvement of efficiency of markets, and contributing to empowerment
- As an economic tool for the Nigerian state – as the operators declare huge yearly profits and pay taxes for national development

Table 1: show the growth of mobile phone subscription and penetration in Nigeria between 1998 and 2012

Year	Subscribers (millions)	Penetration
1998	0.02	0.02%
1999	0.03	0.02%
2000	0.04	0.03%
2001	0.35	0.28%
2002	1.46	1.15%
2003	3.35	2.49%
2004	9.39	6.85%
2005	18.40	13.20%
2006	29.10	20.00%
2007	41.60	29.00%
2008	44.40	31.00%
2009	47.01	34.00%
2010	50.92	37.51%
2011	53.78	42.08%
2012	59.24	49.01%

Source: NCC (Nigeria Telecommunication Commission) (2012). Industry Data: Available at: www.ncc.gov.ng. Accessed March 7, 2013

Presently, the major telecommunication companies operating in Nigeria are MTN, Globacom, Etisalat, others are Visafone, M-Tel, Intercellular, Multi-Links, BhartiAirtel, Starcomms and Reliance. Table 2 shows the percentage market shares of top four operators as at December 2012.

Table 2: Percentage market share of top Mobile phone operators in Nigeria

Mobile phone providers	Market Share	Percentage
MTN	47,440,991	43%
Globacom	24,124,716	22%
Airtel	23,092,195	20%
Etisalat	14,912,801	14%
Mtel	258,520	1%
	86,737,028	100%

Source: NCC (Nigeria Telecommunication Commission) (2013). Industry Data: Available at: www.ncc.gov.ng. Accessed March 7, 2013

Quick (2009) stressed that the social uses of mobile phones currently drive the usage among the poor and low incomes earners. This is because it is used for chatting and keeping in touch with friends and families. Another important key factor driving the growth of mobile phones is that they are indeed 'mobile' and very much suited to remote areas with poor infrastructures. They also offer an affordable form of communication as a result of the low denomination prepaid scratch cards (Anyasi and Otubu2009). However, beeping and SMS remain the major systems applied in most cases (Quick 2009).

1.2 Mobile Banking: Meaning and Benefits

Mobile banking could be defined as a facility which provides banking services such as balance enquiry, funds transfer, bill payment, and transaction history via a user's mobile phone (Quick (2009). Segun (2011) defines mobile banking as an occurrence when customers access a bank's networks using cellular phones, pagers, personal digital assistants, or similar devices through telecommunication wireless networks. While Akpan (2009) viewed mobile banking (M-banking) as an application of mobile commerce that enables customers to bank virtually at any convenient time and place, Medhi, et al (2009) believes that the cornerstone of M-commerce is built by M-banking and many banks have taken advantage of this innovation in order to increase customer satisfactions, manage costs, increase profits and bring positive transformation of payment system in the economy.

Palvia (2009) stated that in 2004, Finland-based Nordea bank experienced a high growth of 30% from the utilisation of transaction-based mobile financial services. Mobile banking as the term connotes is banking "on the move" with the aid of a mobile telecommunication device which can be used for different purposes at anytime and anywhere. Mobile banking (M-banking) allows customers to receive short messages (SMS) through their phone, wireless application protocol (WAP), and Java enables phone support other banking activities using GPRS (General Packet Radio Service) such as direct payments confirmation and funds transfer (Yang 2009).

From various literatures reviewed, 30% of households in the United Kingdom (Quick 2009) use their mobile phones to perform banking operations. Research also shows that the internet has only a penetration rate of 16 % in a population of 140 million in Nigeria, whereas mobile technology is close to 50% penetration with prospects for growth (Alex 2010). Mobile devices show promise for the future, and the ability to reach larger customer populations irrespective of their location, which in turn can lead to customer loyalty.

Mobile banking has been said to have brought about a positive shift in customers perceptions and this could be equally true for Nigeria. Much attention has not been given to the subject matter and there is a lack of empirical research on the adoption of mobile banking in Nigeria, so therefore this research aims to bridge the gap in the subject matter. Many researchers have given proof of the advantages that can be derived from using mobile banking services (ITU 2011), which customers can get the benefit of if they are willing to adopt the facility. Over the years there have been several challenges which the banks have been facing regarding poor legacy IT systems and the Mobile Telecommunication System (MTS). Banks can take full advantage of this new platform for realistic mobile applications which have been made available (Eckhardt, et al 2009).

1.3 Benefits

The benefits attributed to mobile banking (Laukkanen 2007; Eckhardt, et al, 2009) include but are not limited to:

- Portability
- Labour free
- Reduced cost
- Convenience
- Wider customer reach
- High level of security
- Accessibility

➤ Availability

While the above benefits are measured at the individual and organisational levels, the impact of the success of the mobile phone operation within the Nigerian context has added significantly to the GDP, whilst serving as a viable infrastructure to the economy. Table 3 below shows the impact of the mobile phone operation on Nigerian GDP since its inception in 2001.

Table 3: Percentage of telecoms to GDP 2001 – 2012

2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
0.62%	0.85%	1.06%	1.27%	1.53%	1.91%	2.31%	2.92%	3.66%	4.56%	5.67%	6.3%

Source: NCC (Nigeria Telecommunication Commission) (2013). Industry Data: Available at: www.ncc.gov.ng. Accessed March 7, 2013

1.4 Banking Trends in Sub-Saharan Africa

The World Bank (2011) stressed that over the past two decades, Africa's banking industry has changed radically. The most important factor driving this change, according to the World Bank reports include advances in information technology (IT), the deregulation of financial services at the national and regional levels and the effects of globalization process. The reports further states that banking, like most industries, has been transformed by technological innovations; these has made it possible to offer alternative channels for services such as ATMs, electronic banking, credit and debit cards and execution of payments through electronic funds transfers at the point of sale (EFTPOS). Africa's domestic banks are now under intense competition from global giants such as Citigroup, HSBC, Barclays Bank, Deutsche Bank, UBS AG, etc. Improving access to financial services can contribute to transforming peoples' lives in developing countries (NCC 2008). However, the majority of the ordinary people in these countries still have limited access to these services. Today, an estimated 2.7 billion people in developing countries have no access to financial services (World Bank 2009). Over a billion people in Africa, Latin America and Asia are currently without bank accounts; however, only very few have mobile phones.

1.5 Internet and Electronic Banking Trends in Africa

The ITU (2011) report states that Nigeria has overtaken South Africa to become the continent's largest mobile market with now close to 100 million subscribers with market penetration at only 60% in early 2012; Thulani, et al., (2009) stressed that the majority of the populations in Africa have no access to banking services, with only 20% of African families having bank accounts. For instance, in 2007, only about 30% of households in Kenya had bank accounts; and in Benin, with a population of 7 million, had only 35 bank branches in 2007. Abor (2005) also stated that the limited access to financial services in Africa stems particularly from deficient infrastructures, physical-geographical isolation or inaccessibility, financial illiteracy, all of which culminate into exceedingly high cost of providing banking services.

Ethiopia, Uganda and Tanzania for instance, each have less than one bank branch per every 100,000 people compared to 10,000 in Spain. This ratio however shows a high disparity across the continent, with Namibia having more than four, Zimbabwe more than three and Botswana nearly four bank branches per 100,000 people. Sub-Saharan Africa (SSA) has the lowest deposit institution penetration in the world standing at an average of 16.6% compared to 63.5% in developing countries (Atemnkeng and Nzongang 2006).

Thulani, et al., (2009) also stated that in the past 30 years, three products that are seen to have had the most impact on the world are in the ICT sector: the internet, PCs and mobile phones. Of these, the mobile

phone has the highest penetration in developing countries. For instance, between 1998 and 2009, mobile phone penetration in China increased from 1.92 per 100 people to 55.9 per 100; in penetration rates (mobile subscriptions per 100 people) vary from under 10% in Ethiopia to nearly 60% in Gabon, with an average of about 33% for the whole continent. The mobile phone revolution continues to leave large parts of the continent behind. While countries like South Africa (88%) and much of North Africa (e.g., Algeria 81%) are approaching 93% mobile penetration, in Ethiopia, Burundi, the Central African Republic, Eritrea and Rwanda, it is less than 7%. Low incomes, illiteracy and 'large signal black spots' are key obstacles to the acquisition and use of mobile phones.

These obstacles are further aggravated by high taxes, which in some countries such as Tanzania and Uganda can be as high as 30% of overall charges (Nwosu 2011). Thulani, et al., (2009) further stressed that the South African banking terrain are dominated by Amalgamated Banks of South Africa (ABSA) Group Ltd; Standard Chartered Investment Corporation Limited, First Rand Holding Ltd (FNB) and Nedcor Limited (NedBank). These banks are among other 45 banks and the total branch network was placed at 8,495. All these financial institutions offer internet banking services. Internet banking services which started in South Africa in 1996 was spearheaded by ABSA Bank and other banks followed suit but the adoption rate has been very slow (Anyasi and Otubu 2009).

As a result of high competition among the banks in South Africa, some foreign operators are keen to cherry-pick niche markets (Thulani, et al., 2009). Based on this, loyalty has been thrown overboard as customers opt for low price and quality services. South Africa and indeed the African continent are now exposed to the global financial market forces because of internet technology. Karjaluo, et al., (2009) pointed out that surviving banks in the present age will need to focus their attention both at home and abroad and use technology to promote their best advantages.

In another study, Jahangir and Begum (2008) stated that among non internet banking users, more than 56% were not using internet banking services as a result of security issues, and those that are unaware of internet banking products and benefits were more than 35%. Although large numbers of people were found to be ignorant of internet banking services and its benefits, the free training given by some banks have only had little effect, this is because internet banking is relatively new therefore the diffusion rate is low. As it is in South Africa so it is in most parts of African countries, from Mauritius to Ghana, and Egypt to Zambia, however, the services are not advertised like other products (Thulani, et al., 2009).

2. Research Question

Based on the above, it is necessary to explore the reasons for the lacklustre attitude of Nigerian banking customers towards internet banking services. This led to the research question: *How can financial managers positively position mobile phone banking in the Nigerian context?* A review of the Nigerian environment and the banking is deemed necessary in order to understand the state of the Nigerian economy, banks and banking.

2.1 Nigerian Economic Profile

The Nigerian economy depends heavily on oil, though other mineral and agricultural deposits abound (CBN 2009). In the same vein, the IMF (2010) report placed Nigeria among the richest country in the world, the country is also ranked among the major exporters of petroleum products. Despite these opulence and wealth, the majority of the population lives below the poverty line (UNICEF 2010). 28% of new born babies die before the age of three, and basic amenities such as schools, roads, electricity, pipe

borne water, hospitals, etc, are in very short supply (Chukwuemeka 2009). The root cause is often blamed on over 30 years of military rule. According to Okereke (2007), the major causes of these are the lack of economic blueprints by the military personnel. The result is a poor economy, lack of jobs, high crime rates, kidnappings and demand for ransoms by youths and cyber crime. As a result of these, the Nigerian global image has been severely dented. Furthermore, Agboola (2006) states that this was as a result of the new phase of crime nicknamed advance-fee-fraud captioned in section 41.9 in the criminal code, and an example was the celebrated and well publicized case, captioned: *‘Nwude, wealthiest ‘419’ Kingpin in the net’* in various tabloids (Ekenna 2003, p. 23). Based on these and more, the international financial institutions view payments such as cheques, electronic payments, and other financial instruments, from Nigeria with caution and some are rejected outright. Soludo (2008) noted that past and present governments have constituted different bodies to fight these corruption from all fronts, the recent being the Economic and Financial Crimes Commission (EFCC). Not much have been achieved by this and other bodies, but government oppositions often point to it as a ‘political tool’. The recent consolidation of the banks may be the right step in the right direction with a view to restoring confidence and trust in the Nigerian financial institutions (Soludo 2008; Central Bank of Nigeria 2009).

2.2 Nigerian Technological Profile

The deregulation of the telecommunication sector and the emergence of mobile phone providers, have been lauded home and abroad, as one of the greatest achievements of the immediate past administration of President Olusegun Obasanjo (Adesina and Ayo 2010). However, it was also noted by other researchers that the solid foundation required for the introduction of such an innovation was never in place especially within the school curriculum, as ICT was not widespread in schools and colleges and even the universities, neither was electricity, pliable roads, and jobs for the youths (Adogamhe 2010). The usage of mobile phones as opposed to landlines, to which most Nigerian are accustomed, became difficult in terms of purchasing handsets. The ITU, (2009) stressed that the basic infrastructures were also lacking. Hand in hand with this is the epileptic electricity supply with which to charge these mobile handsets. The epileptic electricity supply initially dissuaded many from purchasing mobile phones (Adesina and Ayo 2010). Chukwuemeka (2009) stressed that Nigeria generates more than 3500 megawatts of electricity, which is about 18% of 35000 megawatts needed for constant electricity supply for the entire nation. This low generation may have accounted for the constant power outages and the pressing need to possess a generating set by businesses and individuals. Akpan (2009, p.3) stressed that more than 92% of public and private businesses in Nigeria used generators, a commodity that is rare in the developed countries. It has however become a norm for any business venture to possess its own generator. It is a common site to find public and private businesses with different sizes and shapes of generator; these include the Central Bank of Nigeria, government agencies, banks, and various business organizations. It is estimated that Nigeria as a nation spends about N1.95 trillion on generators per annum. The current unsavoury news emanating from government quarters was the idea of Ghana, a neighbouring country, selling electricity to Nigeria from 2015 as a result of a drop in the megawatts as stated above. This is a draw-back for a country that should be self sufficient – however, this was further blamed on poor maintenance of the infrastructures (Chukwuemeka 2009). Cost and maintenance of computers and its accessories, according to Alex (2010) tops the list of reasons for lack of interest on new innovations such as the purchase of computers (desk and laptops). Furthermore, as a result of the level of income as well as levels of education in many parts of Nigeria, many see the investment on computers

and its accessories as white elephant projects. This is as a result of their lack of ability to maintain them with the epileptic nature of electricity supply.

3. Methodology

The nature of this study requires the collection of both primary and secondary data. Primary data is of paramount importance for this study due to minimal published literatures in Nigeria on the current issues of mobile banking adoption. Therefore, there is an essential need to gain first-hand insight knowledge from bank managers, business owners, industry professionals, non-bank customers and students to fill this gap in the literature. Interviews and focus group discussions were chosen over close-ended questionnaires because of their adaptability and ability to probe and investigate (Bryman and Bell (2011). However, the interview questions were pre-tested with a sample of two commercial banks in the United Kingdom and two in Nigeria. Suggestions from the aftermath led to a little modification to increase clarity.

To maximize the protection of participants in research, Patton (2011) suggests using the guiding ethical principles of informed consent, confidentiality, ensuring no conflict of interest, and avoiding deception. Saunders, et al., (2009) discusses using ethical codes as a way of maximizing protection of participants. The researcher applied all these to the fullest. Participants were apprised of all information relating to the research work. This included the reason for the research, where it was to be conducted and over what time frame, what was involved, and whom it would benefit. All participants were assured of anonymity through the use of a coding scheme developed by the researcher to ensure participant confidentiality.

Pseudonyms were however used to maintain participants' confidentiality. Individuals and focus group participants were identified with pseudo name, i.e. from Participant 1, 2, 3, and so on. Their agreement to participate was voluntary and they were free to withdraw any or all their contribution at any point during the research process, up until the time the data was analyzed and themed. Upon withdrawal, all documents associated with their contributions would be shredded and disposed of in confidential waste-management containers. As some of the bank managers who participated might be aware of the customers who also participated, it was important to address the manager's potential anxiety about their participation for fear that they might come to the bank branches to raise issues relating to internet banking fears and might end up switching banks. The managers were assured that this is purely an academic activity and as such should never be a problem with customer relationship.

However, it must be made clear that their refusal to participate would never have been an issue and their participation was completely optional. The risk of engaging bank managers and other stakeholders in interviews is if there is no action or valid contribution from their dialogues. While the message given to participants was that the researcher could not guarantee that their ideas will be put into action, it is the researcher's responsibility to ensure that research participants' perspectives are linked to the literature and that the information is presented in a way as to influence change (Easterby-Smith, et al., 2008; Yin 2011).

3.1 Data Collection

Data for this research was collected from three sources: bank staffs, bank customers and students of higher education institutions in Nigeria. Five out of the twenty one banks were also targeted and this includes interviews and focus group discussions. Data was collected over two months due to the delay in reaching most participants and awkward times stated by the participants, however, the amount of data collected was enough to reach a workable conclusion with respect to the research aims.

3.2 Data Analysis

Yin (2011) suggests one way of handling information analysis is by content analysis or qualitative analysis. Saunders, et al., (2009) further stressed that content should be coded under certain themes or questions being asked. Content analysis was used to categorize information obtained from both the focus group and interviews. The techniques used divided comments from bank managers, bank customers and students into bold headings and these were then further sub-divided under headings representing the questions answered. Themed data for the focus group and interviews were then broken down into relevant comments, contrasting words and ideas, and these emerged as themes. Easterby-Smith, et al., (2008) further stressed that specific types of categorized information should, ideally be consistent and reliable. In other words, if someone else were to analyze the data, similar themes and categories of information should be revealed. The views of Easterby-Smith, et al., (2008) of interpretive qualitative analysis were adopted by this researcher. This research engaged bank managers, bank customers and students to determine the reasons for the usage and non-usage of mobile banking services in Nigeria.

3.3 Study Sample:

The study sample consisted of twenty participants. And these are made up of fifteen interview participants (i.e. five bank staff and ten customers from different occupations) as depicted in Table 4. And a focus group discussion made up of five masters' degree students.

Participant number	Name of participant	Occupation
1	Executive Director Retail Banking	Bank staff
2	General Manager IT	Bank staff
3	Branch Manager	Bank staff
4	Customer Service Manager	Bank staff
5	Marketing officer	Bank staff
6	Police officer	Customer
7	Legal Practitioner	Customer
8	Business Owner	Customer
9	Food seller	Non-customer
10	Business Owner	Customer
11	University Lecturer	Customer
12	Advertising expert	Customer
13	Secondary School Teacher	Customer
14	Fisherman	Non-customer
15	Petty trader	Non-customer
16	MSc marketing Student	Student
17	MBA HRM Student	Student
18	MSc Finance Student	Student
19	MBA Management Student	Student
20	MBA Finance Student	Student

Table4: Profile of participants: 20 (15 interview participants and five masters' students for focus group discussion)

4. Information Analysis and Theme Derivation

Glesne (2006), Berg (2007), and Stringer (2007) all contributed information on how information gleaned from qualitative research should be collated and analyzed usually through open coding. Each takes a slightly different approach, but collectively, their suggestions provide a comprehensive method in collecting, collating and analysis of data collected in this study. Glesne (2006) suggested various methods of cataloguing and indexing information, as well as various methods and sources of data collection in order to be thorough. Furthermore, Berg (2007) suggests one way of handling information analysis is by content analysis or qualitative analysis. Berg further stressed that content should be coded under certain themes or questions being asked. Content analysis was used to categorize information obtained from both the focus groups and interviews. The techniques used divided comments from bank managers, bank customers and other stakeholders into bold headings and these were then further sub-divided under headings representing the questions answered. Themed data for the interviews and focus group were then broken down into relevant comments, contrasting words and ideas, and these emerged as themes. The next section documents the results and analysis of findings from the interviews and focus groups and the thematic evidences that emerged in the course of the data analysis, which assisted in findings answers to the research question.

5. Findings: Thematic Evidences on Focus Group Discussions and Interviews

5.1 Awareness

Awareness creation speeds the sales of products and, evidences from different participants, lay credence to this. The level of awareness (Palvia 2009) is an important factor in encouragement of consumers to adopt related self service facilities. The awareness level of mobile banking was captured in the views of participant 6 and 13 thus: Participant 6 – *‘I have accounts with two banks but none of them have approached me to migrate to phone banking’*. Participant 13 – *‘When I was in the US, I was given literatures and others with respect to various banking products, but none of these exists here. However, I decided to ask and I have since started usage of the services. It would be better for banks to increase the awareness of mobile banking’*. It can therefore be deduced from the above comments that there currently exists a poor level awareness within the financial services marketing structures.

5.2 Convenience, Portability and Maintenance

The convenience and portability of the phone devices is considered as an added factor for its adoption and usage by some bank customers within the Nigerian market. As opposed to internet banking and ATM services, an average business owner can conveniently walk around with more than two mobile phones of different models, shapes and sizes. As opposed to cost and maintenance required for a computer (laptop or desktop), the maintenance required for mobile phones are minimal. Its usage for banking services as well as other uses such as text messaging, calls, internet checks, etc make its more relevant and useful to most bank customers. However, some participants pointed to the lack of electricity in most towns and cities while others noted the service coverage as most mobile providers prefer the towns and cities for mast installations.

5.3 Security

Issues of security with respect to financial services transactions have always been of utmost concern to every banking customer; the daily news on both the electronic and print media attests to their fears.

However, mobile phone banking is seen by most customers as being much more secure than others such as internet banking and ATM. This is because of identity theft and tampering made by fraudsters on the faces of ATMs. Mobile phone banking, a system through which a customer speaks directly to a bank staff, is seen not only as being secure but very convenient. The words of participants 6, 10 and 13 drives home the points: *Participant 6: ‘‘ Since I migrated from internet banking to mobile phone banking I have been at ease as there is nothing to worry about electricity fluctuations or the state of my computer. Furthermore, Participant 10 states that: ‘‘ I do not have to think about usernames and passwords which I do forget often and end up calling my bank to reset; and Participant 13: ‘‘ I know all the people I speak to and they also know me – it is therefore as good as going to the bank. And I carry out my financial transaction with ease.*

5.4 Reduced Cost

Hand in hand with the above is the cost associated with mobile phone banking in comparison with others such as internet banking services and ATMs. While internet banking requires a computer, log on details such as username and passwords and ATMs requires physical visit by the customer to the ATM location, phone banking simply involves the punching of numbers on a mobile handset from any where in the world. Based on the interview with some bankers – participants 1,2,3 3, and 5, this study deduced from the discussions that they believe that if just one percent of current mobile phone owners with banks accounts were to use the banks phone banking services, it will expand their customer database. Banking and banks will be a soft sell to non bankers and non users of the phone banking systems. According to Participant 1: *‘‘currently we have a usage rate of just 10 percent and awareness rate of 17percent. We believe that the fullness of time, mobile banking will be in the driving seat.* In the same vein, *Participant 5 states that: One major benefit of the mobile phone services is the anywhere/anytime characteristics of mobile phone services. A mobile phone is almost always with a customer; therefore, it can be over a vast geographical area, a customer does not need to visit the bank branches at all.*

It is evident that mobile banking has the potential to do to mobile phones what email did to the internet. Based on the findings of this research, mobile phone banking could well be the driving factor to increase sales of high-end mobile phones within the Nigerian market and even the developing countries of the world. In addition to the above, it is evident that mobile phones are relatively cheaper than computer in the average. Though there are some expensive ones. But mobile phones are readily available and accessible. Furthermore, it is cheaper to maintain.

5.5 Converting Air Time to Cash

There are presently indirect conversions of airtime to cash but this is not widely accepted and often rebuffed by most vendors. However, cash strapped individuals often solicit airtimes from loved ones and arrange to resell. The views of participants 9 and 20 are summed up thus: *Participant 9: ‘‘Sometimes my children send me loads of airtime and they come in different numbers. Since I cannot use all of them, I do ask my son to assist me by selling some them’’. And Participant 20: ‘‘I often run out of money in the campus, instead going to the bank to tell stories, I do ask my family to send me airtime of any amount and I walk across to the vendors in the campus and it is converted, sometimes, they charge a little fee. This has been very helpful to so many students, but not all vendors allow such’’. Findings of this study revealed that there are no formal avenues to change airtime back into cash; however, a willing vendor might assist by selling the airtime to someone else. Though cash convertibility would be much more*

attractive within the sub-Saharan Africa and may be other parts of the world, however, Alex (2010) stressed that there are obstacles to that must be overcome. These are:

- selling airtimes is tantamount to accepting deposits, therefore, both mobile operators and vendors will require banking licences
- Value added tax (VAT) will be charged
- Mobile operators currently pay vendors who resell to end-users a little commission, therefore buying the airtime back will amount to making losses.

These monumental obstacles, though insurmountable within an economy such as Nigeria, can only be circumvented with a complete public approval. The refusal by some vendors to resell attests to this. It is also the understanding of this researcher that airtime buy-back is a loss to both the vendor and the mobile operators.

5.6 Comparison with Other Electronic Products

Three commercial bank branches were visited in the course of this study; however records released in the course of the interview with the bank staffs were scanty due to the usual secrecy of the financial institutions. Based on the focus of this study, efforts were made to establish the level of usage of the various financial products with main emphasis on the total customer base of the branch, number of customers issued with the ATM cards and level of usage, the number of telephone banking customers and internet banking customers; presented in Table 5 is the comparative analysis of the phone banking product vis-à-vis other electronic products:

Branches in Lagos State	Customers in the database	ATM Customers	Phone banking customers	Internet banking customers
Bank A	1,465,309	164,433	175,963	2,333
Bank B	1,107,611	190,724	Nil	1,820
Bank C	1,522,723	219,559	Nil	3,102
Total	4,095,643	574,716	175,963	7,255

Table 5: Comparison of electronic banking services adoption in three different bank branches in Nigeria

The above table shows that internet banking services is lagging behind ATM and telephone banking. Customers prefer the telephone banking to internet banking due to the portability nature of the telephone handsets and the ease of maintenance, while the ATMs are accepted but most ATMs are out of reach as they only exist in corporate areas, and close to banks due to various robbery incidents. Participant 3 summed it up thus: *‘customers wants something that is cheap and easy and they found that in the ATM and telephone banking, the cost of a computer desktop or laptop, connection to the internet and all the hassles involved can be very expensive and burdensome, and not every customers want to get involved in that. Moreover the income and level and education also plays a role here, you really need to put all the factors together to find the balance. Due to the poor state of the economy and millions in poverty, with extended family structures, you need to put so many things into consideration’*.

6. Challenges

6.1 Economic and Technological Factors

Nigeria as a nation gained independence since October 1, 1960. And as at October 1, 2012, Nigeria held a post-independence celebration of 52years. Adogamhe (2010) stated that Nigeria still lags behind some countries economically and technologically after fifty two years of independence. The over dependence on oil by the Nigerian economy and corruption culture have since eaten deep into the fabrics of the Nigerian nation and have become an albatross to job creation. The state of the economy and the lack of jobs paint reasons for the non-usage of internet banking services in Nigeria. Lack of employment opportunities means a lack of money and thus no money to deposit in the banks, the use of banks in general and internet banking services in particular is not part of the thought process for those that fall into this group.

6.2 Education

This research revealed that internet connectivity within some secondary schools visited by this researcher was non-existent. Participant 13 summed up the fate the secondary schools in most rural areas thus: *‘The lack of necessary materials for teaching and learning is not peculiar to this secondary school; it is same with most public secondary schools all over the country and may even be worse in the Northern part; and due to the lack of basic infrastructures. The teaching of technology in most Nigerian primary and secondary schools are usually in theory as there is nothing to practice with; since most teachers have not used these computers, impacting these knowledge to students can be extremely difficult – in my school, we have five old model computers and two are not functioning anymore – the remaining three are permanently in the Principal’s office and are only taken to the class when there is a computer class and all they learn are simply about the parts – hard disk, keyboard, mouse, screen, etc. since the school cannot afford to buy a generator, we are left at the mercy of the National Electric Power Authority (NEPA)’*. The telecommunication sector (NITEL which is the national carrier), just like the petroleum and electricity sectors have all been under the government portfolio, hence their poor performances. Medhi et al., (2009) pointed out that the creation of a competitive environment for telecom providers will allow for growth. However, deregulation of the telecom sector only saw the light day at the dawn of the new millennium, like the previous one, have invited private participation in the telecom and electricity industries and few investors are beginning to be interested in the Nigerian market. On the part of the students who participated in this study, two have used the phone banking services, while two claimed that they are simply not comfortable with it. Their views are summed up thus: *First student: Since I opened my account with the branch I hardly go in there as there is no reason for me to see anyone. All I need is my money and since I can get it from the ATM or through phone banking services, I am satisfied. Second student: I am afraid to use the services due to the constant news of frauds as presented in both electronic and print media. Since I do not have enough, I usually visit the bank branches. And Third student: I tried it twice but stopped as I kept hearing different voices and they kept asking me to confirm my personal details. This is money matters and Angel does not work in the banks. I am a student and I have to protect the little I have.*

6.3 Skills for Triability

The findings of this research further revealed that the Nigerian environment does not only lack telecommunication infrastructures, but more than 60% of the population (Adesina and Ayo 2010) also lacks the requisite skills to fully operate most internet technologies. In the developed countries, information and communication technology (ICT) is incorporated in the curriculum of nursery, primary, and secondary schools, colleges and even universities, but in Nigeria, it is totally absent, except for the expensive nursery, primary and secondary schools and colleges in the cities, the thousands of public

primary and secondary schools in most rural and urban areas only learn about ICT in theory; and well trained teachers in ICT are in short supply.

6.4 Occupation

Some of the research participants such as the fisherman, petty traders, food seller, etc, do not use the banks in Nigeria and most have no idea of phone banking services, however, some of them have mobile phones. Unfortunately no serious efforts, based on the findings of this research, have been made by the banks to come to the level of these men and women who form a greater percentage of the Nigerian population and who controls more than 55% (Segun 2011) of money in circulation which are currently not in the bank vaults.

6.5 Poverty

Poverty is either absolute or relative or both. Absolute poverty is that which could be applied at all times in all societies such as level of income necessary for bare subsistence; while relative poverty relates to the living standard of the poor to the standards that prevail elsewhere in the society in which they live (UNDP 2010). According to the UNDP (2010) report, 69% of able bodied youths and 65% of adults are unemployed and/or depend on their parents petty businesses such as hawking, farming, cattle rearing, timber, etc. Participant 11 summed up the effect of poverty thus: *‘the high level of poverty with able bodied men and women waking up everyday with nothing to lay their hands on is dangerous for any society. Unfortunately, this is the major reasons why there are always a handful of youths available at any given moment to be used by politicians to cause mayhems – which usually results in the wanton destruction of lives and properties – unfortunately, no one is ever held responsible for these callous acts’*.

6.6 Age

Many participants believe that all age ranges, especially in the rural areas, are simply content with visiting the banks and some of their feelings were summed up by participants 5 and 8: *participant 5 (64 years of age): ‘at this age and with this harsh economic crisis, with plenty mouth to feed and other responsibilities to attend to; I believe that many bank customers cannot try a technology they cannot understand, instead, they will rather go, as usual, to the bank and either pay in or withdraw their my money – rather than engage in endless story-telling. I do go to the bank branches’*. And Participant 8 (legal practitioner, 63years of age) stated that: *‘most bank customers have only pension to rely on now – or sales from either their little farm produce or money sent to them by their children or relatives. How much will these amounts to that will require the use of phone banking?’* However the findings further revealed that, most poor and elderly people in the developed countries like the UK, USA, Canada, who have plenty of free times and some without central heating or enough heating in their homes, often love to leave their homes to keep warm in public buses, and bank environments, same applies to some with no jobs, these set mainly love to go visit the branches of banks, even if they have a mobile phones and a computer at home. This applies to Nigeria, as most elderly people who are fortunate to have money in the banks, often love visiting the banks; this is clearly supported by the social support theory. Therefore, the phone banking services would not appeal to these set of bank customers.

6.7 Discussion

Findings of this study reveal that Africa is an extremely fast-growing mobile market and yet few Nigerians are making innovative use of mobile phone technology to meet the need for a cashless system. Airtime is now effectively being used as a virtual currency with people buying scratch cards and sending the code numbers as a text to each other as a means of cashless transfer. To enable this the Nigerian financial sector has been concentrating on banking reforms as well as management of the traditional financial services with the aim of promoting a sound financial environment. However, the prevailing view is that these services are unlikely to be fully used and enjoyed by the rural poor, due to lack of telecommunication infrastructures in these areas, on the basis that this is not a profitable market. Mobile phone banking based on the findings of this study can be regarded as an effective banking and financial service delivery channel. This is based on the fact that the challenges posed by distances to the ATM machines and the cost of computer equipments for internet banking services are mitigated and serves as major benefits based on portability and convenience of the phones. Further evidence from the findings also showed that mobile phones are much more affordable and easy to maintain as opposed to internet banking that requires computers. Therefore it can be accessed easily; hence accessibility and affordability are evidential benefits. Another major benefit is that while the internet banking is directly linked to the availability of the internet services, phone banking does not depend on the internet to function. It is therefore evident that mobile phone banking has the potential to boost the convenience of banking services more than the ATM and internet banking combined. Despite these gigantic advantages, the challenges within the Nigerian context call for attention and require urgent redress. The limited coverage by the operators must be addressed and cost of top-up cards reduced to enhance affordability by the low income earners. Banks on their parts must create adequate awareness especially among the non-users. Banking culture and bank usage must be promoted to enhance usage of both banks and the bank services such as phone banking. Furthermore, government must enact strict regulations to protect users to entrench trust and loyalty.

6.8 Managerial Contribution

The lack of telecommunication infrastructures to enable the phone banking services is in short supply in most rural areas. The telephone cables, masts, and other telecommunications gadgets are installed and maintained within the cities and towns; however, the greater populations in the rural areas do not enjoy these privileges. Government and the financial operators must step up their action in this regard to ensure the installation of such infrastructures. Findings further discovered that the telephone handsets has no service in most villages and rural areas – non receipt of signals can often dissuade potential users from the adoption of mobile phone banking services. The issues of lack of government intervention in the area of promulgation of relevant laws to safeguard customers' money have also been blamed as a factor; however, this research revealed that a proper education and enlightenment programme by the government and its agencies will also go along way in checkmating the incidences of phone banking crimes. It is extremely important for the government to join the global war on cyber crime by promulgating tougher laws as well as ensuring their implementation. Bank customers must be managed as ambassadors of the bank as they can provide a strategic advantage by assisting in breaking the cultural barriers and permeating the hearts and minds of those that are unenthusiastic to the idea of banking and banking services.

6.9 Limitations and Future Research

Although the data collected for this study revealed the benefits and problems as well as showcased ways for growth prospects, it was focused exclusively on only a handful of participants so response bias cannot be ruled out. Future research could however, see to address the unanswered questions such as reasons for resistant to use of mobile telephone banking and the role of cultural factors.

7. Conclusion

Mobile banking is the evolutionary step for banking services in Nigeria. It is an additional service built upon existing financial solutions which have all made financial services easy and at reduced cost both to customers and financial service providers. It has also reduced the reliance on bank branch infrastructures and even access to the internet through the computers. Most customers view the phone banking as being very secure and are comfortable with its usage. Currently within the Nigerian banking services, phone banking is fighting for the number one position after ATMs. It is therefore expected that with the right infrastructures and adequate financial laws promulgated to safeguard customers that phone banking will in the nearest future be the most preferred and convenient device for conducting banking transactions in Nigeria and most developing countries of the world. Mobile phones by their vary nature also bridge a gap in an environment of an inadequate and erratic power supply. Currently, the Joint Admission and Matriculation Board (JAMB) have recorded a significant mile-stone with mobile phones among its student populace.

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