Adoption Triggers and Barriers of Mobile Banking Services in Nigeria

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Abstract

There has been tremendous growth in mobile banking penetration in many countries in the developed and developing economies and most interestingly in a number of developing countries such as Nigeria. Yet there are numbers of opportunities and threats in the mobile banking systems. However the major threat of mobile banking is its non-adoption by the banking customers. This research focuses on the perceived barriers to mobile banking adoption in Nigeria as a developing economy. The study adopted an exploratory qualitative method and this was conducted among banking customers spread across three regions of North, West and East of Nigeria. The basis of participants' selection was being active customers of the Nigerian banks. Findings indicate that there is intention to adopt the mobile banking services; unfortunately, the intentions cannot be translated into action due mainly to lack of trust on issues such as the delivery channels/technology, communication infrastructures, government policies, etc. Findings further revealed that majority of respondents do not use internet and mobile banking services, due to several identified barriers. There is however a preference for the traditional banking approaches as opposed to the mobile banking services. The study recommends that banks and other financial institutions embark on massive awareness campaign.

Key Word: *Mobile Banking, Customers, Mobile Phones, Marketing, Nigeria.*

Introduction

Mobile banking otherwise known as M-banking refers to the provision of banking and all forms of financial services with the help of mobile telecommunication devices such as the smart phones, androids, etc. With the continued growth of the smart phone markets, the use of digital applications to access mobile financial information is gaining popularity. There is a general consensus that the mobile devices are the most

promising way to reach the masses and to create a tie-in among current customers, due to their ability to provide services anytime and anywhere; moreover, these devices have high rate of penetration and potential to grow even among the less educated. Agwu (2012) stressed that the mobile phones remain the only and most available feasible means to provide mass marketing and could serve as alternative to branch banking in Nigeria. The author further stressed that the internet has only a penetration rate of 6 percent in a population of 140 million in Nigeria but mobile technology is close to 50 percent penetration with prospects for growth. Pikkarainen et al., (2004) noted that technological development has provided opportunities for service providers to develop their services and offer customers more flexibility. Lichtenstein and Williamson (2006) also noted that banks have launched multiple service access methods through new delivery channels like ATM, internet and mobile phones.

Despite these advantages and the conveniences, the use of mobile banking services is much lower than expected in both the developed and developing economies. Agwu, (2012) stated that mobile phones and its applications are still highly under-utilized. Akturan and Tezcan (2012) stressed that the market of mobile banking still remains very small when compared to other electronic banking counterparts such as ATM; internet banking, etc. Furthermore, Iddris (2012) noted that the widespread adoption and large usage of mobile telephones did not reflect on the adoption and usage of mobile banking. However, the banks in Nigeria are racing to use this latest technology to reduce their operational costs and increase customer base (Agwu (2012). Puschel, et al., (2010) also stressed that adoption and usage of mobile banking will largely depend upon customers' perception of its ease of use and usefulness. However, the understanding of the underlining problems of the reasons for the low rate of mobile banking usage non preference of mobile banking services to other electronic banking applications could assist financial managers to find ways to adjust their marketing techniques and come up with the right solution to improve their mobile banking service as well as to increase the rate of mobile banking usage. However, studies such as Mattila,, et al., (2003); Amin, et al., (2008); Cruz et al., (2010); Akturan and Tezcan (2012); Tobbin, (2012); have shown that there have been bottlenecks in the rate of adoption of mobile banking services in various parts of the world.

This paper therefore explores in detail the perceived barriers towards the adoption of mobile banking services in Nigeria. The research question based on the above is: *''what are the barriers and adoption triggers of m-banking in Nigeria?''* In the course of the analysis, the field-notes, interview data and supplementary discussions will be reviewed as well as analyzed in line with the research question. The structure of the remainder of the paper is as follows: the barriers and adoption triggers come immediately after the review of related literature, and then the methodology and methods of the study. The next section then presents the findings and discussion of the paper, and finally concludes with recommendations.

Literature Review

Low-cost banking can bring into its fold a considerable group of consumers who formerly could be served only at too high a cost (Agwu 2012) and Table 1 documents the mobile banking services. Nigeria is recognized as a major market for telecommunications equipments and services on the African continent (Agwu 2011, 2012) and with a population of more than 140 million people, it remains Africa's most populous nation. A highly competitive market, the telecommunication industry in Nigeria has continued since 1999 to grow exponentially, which has led to increased access nationwide (Nigerian Communication Commission 2008). The market has been described as one of the world's fastest growing telecommunications markets, especially between 2001 and 2007. These achievements can be attributed largely to the foresight of the government in embracing sector reforms and creating an enabling and conducive environment with respect to policy and the regulatory regime. The Nigerian Communication Commission (NCC) has proven that its commitment to promoting a regulatory environment that is independent, fair, transparent and predictable (Nigerian Communication Commission 2008). The nation's tele-density currently exceeds 50%, with about 74 million subscriber lines as at the end of 2009. Access to modern telecommunication services is now within the reach of more than 60% of the Nigerian population.

Table 1: Mobile banking service

Account Information	- Mini-statements and checking of account history - Alerts on account activity or passing of set thresholds - Monitoring of term deposits - Access to loan statements - Access to card statements - Mutual funds / equity statements - Insurance policy management - Pension plan management
Payments & Transfers	- Domestic and international fund transfers - Micro-payment handling - Mobile recharging - Commercial payment processing - Bill payment processing
Investments	- Portfolio management services - Real-time stock quotes - Personalized alerts and notifications on security prices
Support	- Status of requests for credit, including mortgage approval, and insurance coverage - Check book and card requests - Exchange of data messages and email, including complaint submission and tracking
Content Services	- General information such as weather updates, news - Loyalty-related offers - Location-based services

Source: Adapted from Amin, et al., (2008); Puschel, et al., (2010) and Agwu, (2012)

Beyond the shores of Nigeria, lies the fact that the adoption of mobile banking services can greatly widen the market reach of financial services to the poor and rural population in Africa as well as in various developing economies all over the world (Agwu 2012). Table 2, documents the researches in M-Banking in recent times:

Table 2: Recent researches in M-Banking

Authors	Country	Findings
Pu¨schel, Mazzon, F. and C. Hernandez (2010)	Brazil	Discovered that compatibility with life-style, is one of the most important factors to be considered by a manager when launching new mobile services including M-Banking
Laforet and Li (2005)	China	Security was found to be the most important determinant for consumer adoption of mobile banking among Chinese and the main reasons for rejection of Internet banking were perception of risks, low computer and technological skills and Chinese traditional cash-carry culture
Cajee, Davies, and Stroebel (2003)	South Africa	Discovered that relative advantage, trial periods, and consumer banking needs, along with perceived risk, have a major negative influence on the adoption of M-Banking
Laukkanen and Kiviniemi (2010)	Finland	Discovered that information and guidance offered by a bank has the most significant effect on decreasing the usage barrier, followed by image, value and risk barriers respectively
Akturan and Tezcan (2012)	Turkey	Attitude was found to be major determinant of mobile banking adoption intention

Source: Akturan and Tezcan (2012); Laukkanen and Kiviniemi (2010); Zhang and Mao (2008)

Barriers and Adoption Triggers of M-Banking Services

Taking a cue from the theory of innovation resistance proposed by Ram and Sheth (1989), and Puschel,et al., (2010) in their findings, discovered that factors such as usage, value, risk, tradition, and image serve as barriers to m-banking adoption. The theory of innovation resistance adapted from the psychology and the IDT of Rogers (Rogers 2003), aims to explain why customers resist innovations even though these innovations were considered necessary and desirable. In another study, the usage barrier according to Laukkanen and Kiviniemi (2010) was found to be top among the factors militating against the adoption of M-banking. While they also found traditional barriers (such as customers preferring to chat with bank tellers) were not barriers in Finland, Riyadh and Bunker (2008) found the opposite in Bangledesh as tradition was considered as an intense barrier in the adoption and usage of m-banking services. Amin, et al., (2008) identified the effect of trust along with other dimensions on the adoption of m-banking services. In addition to these factors, Iddris (2012) also identified various consumer demographic factors to have effect on adoption of m-banking services in Ghana.

In another study, Foon, et al., (2011) found age and education to have a major influence on the use of the mobile phone for banking services in Malaysia, while, Dasgupta, et al., (2011) also found gender and age to be the main differentiators in India. In addition, findings from various researchers such as Eriksson, et al., (2005); Huili and Chunfang, (2011); Laukkanen and Pasanen (2008); Luo, et al., (2010), stressed that prior experiences with computers and technologies and attitudes towards computers influence both attitudes towards online banking and actual behaviours. In the same vein, Agwu (2012) contend that previous experiences of using mobile phone influence both attitude and intention to use mobile commerce in B2C transactions. In that study Agwu (2012) discovered that prior experience had the strongest tendency to predict the usage of mobile commerce. With reference to the differences between internet banking and mobile banking contexts, Cruz, et al., (2010) contend that customers considered mobility as the most valued feature of mobile banking and the time-critical consumers considered the always-on functionality as the most important feature of mobile banking, while banking users considered that internet banking took significant advantage in usefulness and purpose and online banking was suggested as the cheapest delivery channel.

Mobile Banking Services in Nigeria

The internet service was ushered into the Nigerian market in 2001 (Agwu 2012) and have gradually gained acceptance among the elites. However, mobile banking came next after several years of trials and errors as well as wait-and-see attitude by customers. Since then, mobile banking has grown at a blistering pace in across many various parts of Nigeria. Despite the very high mobile penetration rate, the use and adoption of mobile banking services remains low (Akturan and Tezcan 2012). With the advent of new mobile technologies, such as Blackberry, Iphone, Androids, etc, which serves as a catalyst, m-banking is poised to draw millions of new users within the world teeming population (Agwu 2012). Many customers who are tired of the old banking systems are looking for time saving alternatives. The review of the extant literature on m-banking have been widely researched in the developed economies, however, there is little or no research within the developing economy such as Nigeria. This research therefore fills the gap. The next session documents the research methodology and methods of adopted.

Methodology

The aim of this study is to unravel the perceived barriers as well as triggers towards the adoption of mobile banking services in Nigeria as a developing economy. Inductive approach was utilized, over deductive, due to the exploratory nature of the research and the scarcity of extant literature in Nigeria. Therefore, rich, in-depth information is necessary to understand the subject area. 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 adoptions. 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 two states of Nigeria, three bank staffs and two customers participated in the test. Suggestions from the aftermath of the test led to a little modification to increase clarity.

Data Collection

Data for this research was collected from two sources: bank staffs and bank customers in three different states of Nigeria. Seven out the twenty one banks were also targeted and this includes interviews and focus group discussions at various meetings. In total, 29 bank staffs and customers participated. These were made up of 17 males and 12 females with average age ranges of 29 and 56. The bank staffs have been in the banks for more than five years. Data was collected over four months period 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.

Information Analysis and Theme Derivation

Glesne (2006) and Berg (2007) contributed information on how information gleaned from interviews should be collated and analyzed usually through open coding. Each takes a slightly different approach, but collectively, their suggestions provided for 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. The interpretive approach to data analysis was helpful; this type of analysis recognizes that the participants are stakeholders and thus are interested in the change that might occur as an outcome of the study. A series of steps assisted in asymmetrical analysis of the data by coding the texts and creating labels, and then categorizing, identifying themes, and sorting materials to identify patterns. Finally, the identified patterns were evaluated, and in this process themes were systematically and objectively identified.

Derivation of Themes

Themes were derived from the interview techniques utilized in collection of data for this study. As stated above, open coding was utilized to identify themes from the open-ended interview questions. In total, twenty nine (29) bank staffs and customers of the selected banks participated in this study; however, comments from twenty five (25) participants, representing 86.2% of the interview participants were transcribed verbatim. The comments from four (4) participants, representing 13.8% of the interview population were discarded as a result of the scanty nature of the discussions and lack of required facts as well as the fact that the discussions with these set lasted no more than one to three minutes, as such, there was nothing concrete to extract.

Research Ethics

To maximize the protection of participants in research, Gill and Johnson (2010) 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.

Findings

The findings of this study revealed some very interesting drivers and inhibitors for the adoption of mobile banking services within the Nigerian polity. Analysis of the study data gathered through face-to-face interviews and focus group discussions revealed that mobile banking in Nigeria started from the transaction based activities whereby bank customers are notified via Short Message Services (SMS) when transactions are conducted on their accounts, i.e. credit or debit to their accounts over the counter or via ATM. This is a one way event and only for informational purposes only. Findings further revealed that Nigerian banks are now deploying fully fledged banking services via the mobile phones with array of services which were only possible in the banking halls before.

Triggers for Adoption

Data analysis further revealed that very few customers have adopted the mobile banking services despite the receipt of alerts on their mobile phones. There is therefore the need to understand the reason or reasons for the adoption to serve as a benchmark for the development of the services. Documented below are the reasons for the adoption and usage of mobile banking services in Nigeria.

Demand for Convenience Banking and Financial Services

Several participants stressed that the advent of handheld devices has indeed made banking services easier and very much convenient; therefore their preference for virtually all the electronic banking facilities. And their movement away from brick and mortar banking is not surprising as there is considerable dissatisfaction with traditional banking along several dimensions. Participant 7 and 12 complained of the amount of time and energy they as well as other customers had to expend in order to commute to their respective banks. Most participants in this study also complained about unwarranted delays and un-conducive atmosphere inside the banking halls. Usually this physical branch banking involves waiting in longish queues and moving from one counter to another to get even basic tasks accomplished. Visiting a bank branch is viewed as time-consuming and participants of this study stressed that they often defer other important duties for the day in order to travel to their bank branches to execute simple financial transactions. In fact, more than 50% of the participants who have adopted the m-banking services ranked bank visit as a serious problem.

Perceived Usefulness and Ease of Use

Several adopters perceived the services as very useful and user friendly. This supports the findings of other researchers such as Laukkanen and Kiviniemi (2010); Huili, et al., (2011); and Tobbin (2012). However, data analyses further revealed that education, income and employment status play key roles within these groups of adopters. Within these lies the fact that they have the wherewithal to purchase the requisite handset, foot the monthly cost of internet subscriptions; as well afford the electricity or other means to regularly charge their mobile phones. In addition to the above, findings of this study also found ease-of-use as a critical factor for the adoption of mobile banking services in Nigeria. This is attributed to the educational levels of the adopters as well as their preference to virtual banking as opposed to the brick-and-mortar system. These adopters are very familiar to the language of communication within the electronic systems, therefore, found its operations easy.

Technology Readiness

Study findings further revealed that m-banking adopters were technologically ready and already possess the right mobile phone for the services. Moreover, discussions with these groups further revealed that they have used and are still using other electronic banking systems such as ATM and internet banking services, etc. And technology readiness was discovered to be higher among the educated participants as well as those that

occupy higher positions in their respective professional callings. The levels of readiness, based on the findings did cut across all ages, educational levels and occupational strata.

Trust

Despite the deep seated distrust of the electronic financial channels, as evidenced by the findings of Yu, (2009); Luo, et al., (2010); and Agwu (2012), findings of this study revealed that so many elites in Nigeria have long embraced the mobile banking services. Some have long stopped visiting the bank branches and virtually conducts their financial transactions using only the electronic channels. The reasons for the adoption were summed up in the words of participants 18, 20 and 21, thus: (*we have a positive perception about mobile banking services; however, we still have serious concerns with the services. We cannot shy away from the screaming headlines of various tabloids, nor close our ears to the different stories going around, especially in the cafés*). In another premise, participant 15 stated that: *(I use the internet banking channel as the last resort).* The deduction from these shows that though the trust of the electronic channel is very low among some of the adopters, they still did not shy away from adopting same.

Barriers to Adoption of M-Banking

It was however noted based from the data analyzed that despite the proliferation of mobile phone hand sets of different shapes and sizes, the adoption of mobile banking was restricted to some elites. Further analysis revealed multi-faceted, yet intriguing barriers to m-banking adoption in Nigeria.

No Need for M-Banking

Money is often spent in order to receive adequate value (Agwu 2011). The nature of occupation and status often determine the demand for devices such as m-banking services. Findings of this research revealed that most customers are simply content with the short message service (SMS) they receive for any form of movement in their bank accounts. It was however noted that CBN directive requires banks to maintain mobile numbers as well as email addresses for every account. Furthermore, the banks are required by law (CBN 2010) to send short message service to the mobile number of the customer at each debit or credit in the account. Based on this, most customers are simply not interested in further harnessing the benefits derivable from mobile banking as they see the short message service as more than enough. Most participants stressed that their occupation does not require elaborate banking while others stated that they do not have enough money to expose to cyber criminals.

Perceived Risks

Mobile banking, like the traditional or brick-and-mortar banking involves risks as well as benefits. Based on the findings of this study, some bank customers have several reasons and concerns for not using the online banking system, however as there are many customers who stay away from mobile banking for several reasons so also are there those who have adopted the services due to its advantages and the benefits they intend to derive and/or derived from using it. Yang., (2010) argued that perceived risk is the likelihood that a customer may suffer financial loss resulting from the usage of m-banking services; furthermore, they viewed customers' benefits and confidence based on the degree to which the customer will turn out to be better from conduct of online transactions. Findings of this research revealed that some of the customers that have adopted internet banking services are very much aware of the risks and benefits. Jahangir and Begum (2008) stressed that despite the presence of risks, banking and other financial institutions still provide financial information to their customers through the internet. From the above analysis, it can be deduced that those that have adopted the internet banking services are well aware of the risks associated with the services. The views of the participants with respect to the risks/benefits and the adoption of the services are summed up below: ''there are no clear boundaries, and there are no enforcements, it is all a matter of choices and how one perceives and weighs the risks and benefits associated with the mobile

banking services that will determine adoption and/or non-adoption, I have not fully adopted the services but I do check my account balances online sometimes'' (Participant 3, 8 and 19).

Cost of Compatible Mobile Phones and Internet Services

Another inhibiting factor for the non-usage of mobile banking services in Nigeria, as evidenced by the findings of this study, is the cost of compatible mobile phones. The smart phones may cost less than a month's salary in developed countries such as the US, UK and other parts of the world, the salary earners in Nigeria will probably need more than a month's income to buy one (Nigeria Telecommunication Commission 2008). Findings further revealed that the cost of compatible smart phones and the monthly cost of purchasing internet services are beyond the reach of most workers in both the public and private sectors as a result, they depend on the bank branches and are simply content with the short message services from the banks. And apart from the cost, the maintenance and repairs can be very difficult, these forms part of the factors for non-adoption of mobile banking services in Nigeria.

Security and Privacy Factors

Security and privacy issues from the discussion with most of the participants in this study came top and were viewed as one of the most important factors affecting the adoption and usage of mobile banking services in Nigeria. Participant 10, a small scale business owner clearly stated that she has never used and will never use the mobile banking services. According to her, *(I can't see the screen as much as I can see the computer and with the small buttons on the phone, there is tendency to make mistakes of which the banks will blame you – based on this, I prefer to visit the bank branch every evening to deposit my money and collect it when I need it).* Therefore, security is one of the very important factors in determining the decision of consumers to use mobile banking services. Consumers' concerns about security, which arise from the use of an open public network, have been emphasized as being the most important factor inhibiting the adoption and use of mobile banking services in the developed and developing countries of the world (Cruz et al., 2010; Agwu 2012).

Poor Telecommunication Infrastructures

Findings also revealed that most small businesses and individuals are simply not using the mobile banking services because of poor or unavailable telecommunication infrastructures, although many customers understands that adopting technological channels will make their banking transactions easy, however, this has not been translated into action. The non existence of the basic telecommunication infrastructures such as telephone masts, cables, electricity, etc in the rural areas coupled with low education and abject poverty has resulted in poor banking culture in the rural parts of Nigeria. It is also evident that there is a collision between culture and development even in the urban areas with respect to the adoption of these new technologies. Some of the rural dwellers who participated in this study stressed that many rural roads are not motor-able and are worse during the rainy seasons. Moreover, due to constant communal and family clashes over pieces of land which have resulted in the destruction of lives and properties, such essential but basic amenities such as roads are issues that cannot be discussed among the locals due to the need to protect their lands.

Lack of Internet Knowledge

Another factor that influences the consumer adoption of mobile banking services is the prior experience of technologies, especially prior experience of computers and the use of mobile phones for transaction purposes – beyond the simple making and receiving calls. Thus, consumer's familiarity with technologies in general facilitates his or her appreciation of the potential added values which is inherent in a technology. The prior computer experience is associated with use of PC, the internet; e-mails and mobile phones will facilitate the adoption and usage of mobile devices for financial transaction. Agwu (2012) argued that prior experience with computers and technologies and attitudes towards mobile devices influences both attitudes

towards mobile banking and actual behaviours. This study however revealed that these are scare commodities in the rural areas as most participants have no knowledge of computer operation and the mobile phones are seen as a luxury with only the basic functions utilized, i.e. making and receiving calls and sometimes sending text messages.

Poverty

Despite the opulence and wealth which has been ascribed to Nigeria as a country as a result of the abundant mineral and agricultural resources and the flamboyant lifestyle of some Nigerians who are either well placed in government or have a direct or indirect connection with powerful cliques, some Nigerians have continuously lived below the poverty line as described by the United Nations Development Programme (2010).

Poverty is still a big threat to most Nigerian families and highly evident in most state capitals and in villages, based on the research findings. Poverty manifests in various forms and shapes such as lack of income and productive resources sufficient enough to ensure sustainable livelihood; hunger and malnutrition; ill health; limited or lack of access to education and other basic services, homelessness and inadequate, unsafe and degraded environment and social discrimination and exclusion (World Bank 2009, 2011). It is also characterized by lack of participation in decision making in civil, social, cultural and political life (World Bank 2009). Findings of this research further revealed that the problems of poverty are overwhelming, among others, poor sanitation, overcrowding, poor diet, health hazards, lack of family planning, and so forth. The rural areas, which make-up a larger percentage of the population of Nigeria also have a high percentage of poor individuals, hence the adoption and usage of mobile baking is still a mirage and a tall dream for these segments of the society.

Discussion, Conclusion and Recommendation

Customer experiences have become more than just a topic of discussion in the marketing departments of various financial institutions. Innovative firms, especially service providers such as banks, are launching customer experience departments to create guidelines and drive real change across the organization, from marketing, sales and customer services, to product developments, the leadership team and beyond. The big question then is: How can the banks ensure a complete business-building experience with respect to their products?

Financial managers and marketers understand that a strong customer-centric product that drives superior customer experience is the new competitive advantage that can supercharge performance. Harnessing the power of satisfied customers is a smart way to cultivate existing relationships and secure new business with powerful customer-generated testimonials. Financial managers must clearly define their marketing goals and determine the time and money to allocate to the marketing campaigns of the mobile banking services based on the few adoptions.

In the cause of data collection, the researcher observed that so many small scale traders do not patronize the banks. Discussion with these sets revealed that lack of education was responsible as most claim that they do not understand banks and banking. However, the findings of this study are of two folds: the adopters have no trust on the channel but use it due mainly to the derivable benefits. On the other hand, lack of trust and low technology readiness on the part of the non-adopters were found to be the principal barriers to the adoption of mobile banking services in Nigeria.

The non-adopters of the m-banking services view financial loss as a serious matter due to their meager incomes. Financial managers must find means to address the concerns of these segments in order to reap bountifully the envisaged online banking with less bricks and mortars and the attendant costs.

Limitation and Future Research

This study has several limitations. Though several factors were identified as triggers and barriers to m-banking services in Nigeria, however, there may be other factors that can impact on customers' adoption of mobile banking but are not covered in this study. In the light of this, additional empirical research is therefore required to identify and examine them within the Nigerian multi-cultural context. Furthermore, the number of participants could not be said to be substantial enough to be representative of the entire banking customers in Nigeria. This obviously will have an effect on the generalization of the findings of the study. This therefore, paves the way for future studies. Furthermore, another interesting angle for further research could be a detailed study on mobile banking usage in Nigerian small, medium and large scale organizations. This will to a large extent through a light on the levels of mobile banking application in these terrains.

Managerial Implications of the Study

The present study has many implications. Findings of the study revealed that security is one of the most important and serious issue among adopters and non-adopters. It might be important for banks to develop a marketing strategy for internet banking, however, banks need to visibly demonstrate concern for security and reliability with concrete solutions to improve trustworthy secure e-banking systems, and specifically protect personal information or security information for payment transactions. There is also the need to upgrade the banks' security system. However, in order to overcome such risk issues, bank management should take steps to manage and minimize perceived security and risks. Banks should implement new security policies, improve the internal communication coordination, evaluate and upgrade their services according to customers' expectations, and develop service recovery programmes. Banks should also increase their ability to control and manage the various risks inherent in electronic banking systems. Bank IT departments can use encryption, firewall, intrusion detection, and other related security devices to properly safeguard the electronic banking security systems.

Secondly, perceived risk appears to be an important inhibitor to the adoption of banking over the mobile phone. This underscores the fact that concerns about fraud and identity thefts are foremost in the minds of internet/mobile banking users. Thus, providing encryption and strong authentication to prevent fraud and identity theft should be a priority in banks product management. In this context, banks should consider focusing on the prevention of intrusion, fraud and identity theft. For example, building secure firewalls to avoid intrusion, developing methods for strengthening encryption, and authenticating websites in order to prevent fraud and identity theft are all measures that should be undertaken.

Thirdly, for prior internet knowledge, the government should provide some free basic computer training projects which can educate rural dwellers about the use of computer and the internet. The government should also improve support to the public access to the internet. As the populations have more accessibility and knowledge about the internet, there is the likelihood that they will use the services that the internet can provide, such as online shopping, and payment of bills. These incentives should increase the number of probability that bank customers adopt mobile banking services. Banks should provide free demonstration computer courses about using internet banking to bank customers. As the education level increases, people who have attended the courses would find it helpful in both application and dissemination of same to others within their domain.

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