

CONCEPTUAL FRAMEWORK FOR MOBILE BANKING ACCEPTANCE IN ZAMFARA STATE USING TECHNOLOGY ACCEPTANCE MODEL

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Abstract

This paper attempt to provide a conceptual framework where mobile banking acceptance among Zamfara populace will be tested. The paper highlighted the remarkable changes that the Nigerian banking system had undergone in terms of both the size and strength, mode of operations, innovations, products and services all of which birthed the mobile banking concept that is under study. The paper planned to apply the use of Technology Acceptance Model (TAM) to investigate the influence of the Perceived ease of use, perceived usefulness alongside with compatibility and trust. The paper planned to use purposive sampling technique to obtain data and after validation of the framework the use of Statistical Package for Social Science (SPSS) version 20 would be employed for the analysis of the data. Finally, the paper proposes an improved level of mobile banking acceptance by Nigerians. This will help in the attainment of the proposed cashless economy advocated by the Central Bank of Nigeria and improve the country's overall economic development.

Keywords: *mobile banking, perceived ease of use, perceived usefulness, compatibility and trust*

1.0 Introduction

The Nigerian banking system have experienced tremendous changes both in size, structure, mode and system of operation since its inception in 1892. These changes manifested in different phases leading to what may be categorized into the eras of banking development in Nigeria. For instance, the banking system spanned through the Free banking era (1929-1952) which saw the emergence of many indigenous banks immediately after the first indigenous bank (Industrial and Commercial Bank) was established. However, the absence of regulation governing the establishment and operations of the banks ushered in the Era of Bank Failures (1952-1959). The free banking era came to an end when the first banking ordinance of 1952 was promulgated. The ordinance ushered in the first banking legislation in Nigeria. The promulgation of this ordinance led to the collapse of indigenous banking boom due to their inability to meet the minimum requirement.

The promulgation of the 1958 Central Bank ordinance brought to fore the era of Central Banking and also set the stage for an orderly and rapid development of the Nigerian financial system. The Central Bank of Nigeria (CBN) ordinance of 1958 was later repealed and replaced with 1969 Banking Decree so as to plugged all possible loopholes and remain in force till 1991 when CBN Act No 24 and BOFI Act No 25 of 1991 were promulgated.

The level of distress in the financial sector necessitated the need for restructuring of the financial sector. Hence, the emergence of the Era of Restructuring, Recapitalization and Consolidation. During this period, the capital base of bank which was hitherto #2 billion was raised to #25 billion and consequently the number of Deposit Money Banks (DMBs) were reduced from 89 “Small Banks” to 25 Mega Banks

With the technological development in the world over, and in other to achieve the globalization of the financial sector, the need to fully develop and deepen the use of technology in the Nigerian banking industry became paramount. Hence, the introduction of Internet banking. More so, in order to achieve the proposed cashless policy by the CBN in the country, series of internet and electronic banking facilities were introduced. This include mobile banking among others.

Technological advancement in the banking industry touches and changes virtually everything that surrounds banking operations. For instance, prior to electronic banking era, banking transactions- deposit, payment, clearing, loan processing etc are done manually which is cumbersome and time-consuming. But today, with the advent of technology, electronic payment (E-money) platforms and instruments such as Point of Sale (POS), Automated Direct Credit (ADC) and Automated Direct Debit (ADD), Automated Teller Machine (ATM), Internet and Mobile banking facilities, Debit cards, etc, banking transactions are carried out real time and the results are obtained almost immediately.

E-money is simply the application of electronic devices to effect payments arising from business transactions without the use of cash. In Nigeria, the concept of e-money was introduced in 1996 when the Central Bank of Nigeria granted approval to the then All States Trust Bank Plc to offer Electronic Smart Card Account (ESCA) smart card product (Onyia and Egungwu, 2014).

The advent of mobile technology and its devices have brought about efficiency in the manner in which commercial and business activities are performed (Tiwari and Buse, 2007). One of such technology is the use of mobile telephone. Mobile telephone serves as an avenue in which mobile phones services and applications are launched (UNCTAD, 2007). Since then, Financial institutions have been using the mobile banking platforms to gain market advantage by offering a wide range offinancial services to their customers (Gupta, 2005).

Mobile banking refers to using mobile devices to provide financial information, communication and transactions to customers such as checking account balances, transferring funds and accessing other banking products and services from anywhere, at any time (Ensor, *et al.*, 2012; ITU, 2012).

Customers will be able to obtain immediate and interactive banking services anytime and anywhere which, in turn, initiate great value for them (Malhotra, and Segars, 2005). Mobile banking service can also increase the amount of data processing and improve operational performance. Moreover, adoption of mobile banking has significant impact on reducing costs and facilitating change in retail banking (Laukkanen and Lauronen, 2005). Cruz, and Ferdinand (2010) and Dasgupta *et al.* (2011) suggested that mobile banking has great potential to provide reliable services to people living in remote areas where internet facility is limited.

In the overall, mobile banking allows a customer to virtually performs banking and related financial services such as savings, funds transfer, and stock market transactions among others on mobile devices with ease and convenience (Suoranta, 2003, Tiwari and Buse, 2007).

Considering the unprecedented growth in the telecommunication industry in Nigeria today, as well as the level at which mobile banking has become widely acceptable in the country. This paper intends to examine the extent to which the people of Zamfara state accepts the mobile banking practice owing to the fact that literature has indicated that the adoption of ICT applications such as mobile banking in a country is culturally inclined (Min, Ji, and Qu, 2008).

Researches in the area of mobile banking in Nigeria are limited. More so, the few researches that was carried out did not review the mobile banking at regional/state level, owing to the fact that cultural differences that exist in the country may affect the behavior in the use and adoption of technology. Hence, the need for this research work. The paper will apply Technology Acceptance Model (TAM) to examine the Perceived Ease of Use, Perceived Usefulness alongside the Compatibility and Trust variables to ascertain the level of acceptance of mobile banking among the people of Zamfara state, considering the level of infrastructural and educational development of the people of the state.

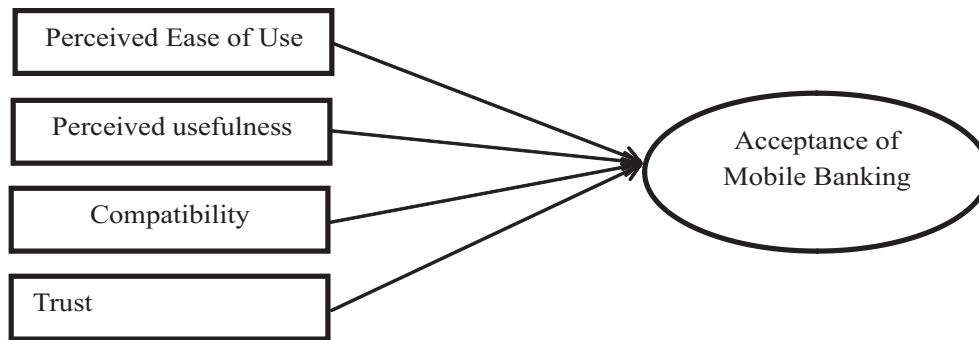


Figure 1.0 Theoretical Framework for Mobile Banking Acceptance

2.0 Theoretical Framework for Mobile Banking Acceptance

Technology Acceptance Model (TAM) has gain wider attention from different discipline in areas of research. It has been widely used in relation to acceptance of different technological inventions. TAM was developed as an extension to Ajzen and Fishbein's (1980) Theory of Reasoned Action (TRA). TRA was designed to explain the human behavior vis-à-vis his beliefs and what he attached importance to, and as such use that to predict his behavior and attitude (Fishbein and Ajzen, 1975; Ajzen and Fishbein, 1980). According to TRA, behavioral intention to exhibit a particular behavior is formed based on the individual's attitude towards the behavior and on perceived subjective norm. TAM unlike other models is mostly applied to technology related issues and has gained a wide acceptance from researchers and practitioners as a powerful model for explaining and predicting adoption, acceptance, as well as the usage intention of the individuals (Yi and Hwang, 2003). The model suggests that when users are presented with a new technology, a number of factors influence their decision about how and when they will use it. TAM involves two primary predictors as the main determinants of the attitudes toward a new technology. These are Perceived Usefulness (PU), which is defined by Davis (1989) as the degree to which a person believes that using a particular system would provide some benefits. Perceived Ease of Use (PEOU) is also defined as the degree to which a person believes that using a particular system would be free from effort (Davis 1989). In addition to the existing variable contained in the TAM Model, the current study incorporated other variables such as compatibility and trust in the use of mobile banking.

2.1 Perceived Ease of Use

Perceived Ease of Use, according to Davies (1989) refers to "the degree to which a person believes that using a particular system would be free of mental effort." This follows from the definition of "ease" i.e. "freedom from difficulty or great effort."

Complexity or otherwise of a particular system will serve as a determinant that inhibit or encourage the adoption of an innovation (Rogers, 1995). According to TAM, perceived ease of use affects a person's attitude towards using the system. The existing studies suggest that ease of use is a major attribute of E-business applications such as internet-commerce. (Chen *et al.*, 2002; Heijden *et al.*, 2003), onlinebanking (Guriting and Ndubisi, 2006), and mobilecommerce (Lin and Wang, 2005; Luan and Lin,2005). Users would be concerned with the effortrequired to use the application and thecomplexityof the process involved. These among others include; perceived ease ofbrowsing, identifying information and performingtransaction. In a nutshell, all things beingequal, the easier an application is perceived to be use than another,the better it is to beaccepted by users.

2.2 Perceived Usefulness

Davies (1989) defined Perceived usefulness as "thedegree to which a person believes that usinga particular system would enhance his or herjob performance." This follows from the definitionof the word "useful" i.e. "capable of being usedadvantageously."The impact of perceived usefulness on the adoption and acceptance of a given system is clearly demonstrated in the works of Schultz and Slevin (1975) and Robey (1979), and based on that, Robey theorizes that: "A system that does not help people perform their operations is not likely to be received favorably.

This study incorporated the use of the perceived usefulness variable because of its significance in either accepting or rejecting the use of mobile banking system by the people of Zamfara state. Since the original aim of introducing any IT related approach, in this case, the mobile banking is to further enhance and boost the way and manner in which the customers carry out their daily financial transactions. As cited in the works of Schultz and Slevin (1975) and Robey (1979) above, If the mobile banking operations is considered capable of being used advantageously by the customers, the product is likely going to be received favorably.

2.3 Compatibility

Compatibility according to Rogers (2003) is the degree to which an innovation is perceived as consistent withthe existing values, past experiences, and needs of potential adopters. Hence, Compatibility is the extent to whicha new product or service is consistent and compatible with consumers' needs, belief, values, experiences, andhabits; skills and work practices of the potential adopters (Harrington & Ruppel, 1999).

Aligning this to mobile banking services, the concern will be how the services suit the customers banking and financial needs, belief, values, experience and habit. Mobile banking was designed to provide real time on-line banking and financial services using mobile devices. This is considered as compatible with the needs, status, skills, experiences and habits of the targeted population. Individuals tend to align themselves to ideas which are in accord with their interests, needs and existing attitudes (Rogers, 2003). Compatibility of an innovation was confirmed by quite number of empirical studies, as having significant positive influence on the acceptance of an innovation (Al-Ghaith et al., 2010; Amin et al., 2013; Gerrard & Cunningham, 2003; Kolodinsky, Hogarth, & Hilgert, 2004; Kaynak & Harcar, 2001; Tan & Teo, 2000; Thambiah, Eze, Tan, Nathan, & Lai, 2010). For instance, (Kaynak & Harcar, 2001) examined consumer attitudes and intentions toward the acceptance and the use of mobile banking services. The study was conducted in Turkey and the findings revealed that knowledge structures, beliefs, likes and dislikes as well as attitudes of customers influence the usage of the service. The findings further suggested that knowledge and age are crucial factors predicting the acceptance and usage of the services. Younger and educated people appeared to be the predominant user of mobile banking services. More so, (Yahaya, Wan Yusoff, Idris and Haji-Othman, 2014) examined the adoption of Islamic banking and finance among Nigerians and concluded that educational status, attitudes, values and lifestyle of the customers influence their decision to accept or reject the usage of a particular service.

Using the Technology Acceptance Model, a lot of studies conducted on E-commerce and E-payment, and other few studies conducted on Mobile banking in the country found that compatibility have a strong effect on the customers' usage of online banking in the country (Agboola, 2006; Chiemeké et al. 2006; Ayo et al. 2007). Thus, the hypothesis of this study is: *H1: There is positive correlation between compatibility and acceptance of mobile banking services*

2.4 Trust

Trust according to Agboola (2006) is the “firm belief in the reliability, truth, or ability of someone or something”. Smith and Birney (2008) described Trust as “general confidence and optimism in occurring events or believing in others in the absence of compelling reasons to disbelieve”. In a high uncertainty environment, trust is of utmost importance when making use of new technology (Grabner-Krauter and Kaluscha, 2003). Cyberfrauds and internet related crimes is at alarming rate today in Nigeria. As such, the issue of trust vis-à-vis the adoption of mobile banking is an important factor to be considered.

Research on trust has identified an abundance of dimensions of interpersonal trust between the parties concerned, such as integrity, competence, consistency, loyalty and openness (Butler and Cantrell, 1984; Robbins, 2003). It has also been proven that, the more the confidence and trust the consumers have over a given product or service, the better the acceptability, and above all, the higher the level of patronage (Bankole and Brown 2011; Yahaya and Haji-Othman 2014). However, in order to eliminate the feelings of uncertainty and ambiguity associated with mobile banking, greater trusting beliefs need to be instilled into consumers by the mobile banking service providers through proper awareness, and the services need to be designed in such a way that transactions and resources of the consumers are highly protected. Hence, this paper hypothesized that;

H1: There is significant correlation between Trust and acceptability of mobile banking services by the consumers.

3.0 Methodology

The targeted respondents of this research work are the customers of the commercial banks currently operating within Zamfara state. Due to the topography of the state as well as the current security challenges bedeviling the state. Respondents across all the local government area of the state may likely not be accessible. Hence, the researchers resort to the use of purposive sampling method to select the needed sample for the study. While this could be a shortcoming for the generalization of the findings, it will still provide an insight of the banking consumers' behavior vis-à-vis the adoption of mobile banking in the country. Data would primarily be collected from the respondents. A structured questionnaire would be administered to the respondents using a hand delivery technique at the selected banking halls during the banking hours. The questionnaire would be in two parts with the first part containing questions based on demographic profile of the respondents, i.e education level, gender, age, marital status, religion, income as well as the type of account operated. Question on the product(s)/service(s) that are most preferable to the customers would also be included. The second part of the questionnaire would contain the questions based on the proposed research framework shown in Figure 1.0 above. The questionnaire items would be adopted from previous studies in the related area. A five-point Likert scale style would be used ranging from Strongly Disagree (SD)=1 to Strongly Agree (SA)=5.

4.0 Conclusion

This paper proposes a theoretical framework which aimed at examining the acceptability level of mobile banking services among the bank customers in Zamfara state.

It highlights the relevance of Technology Acceptance Model and relevant past studies were evaluated using the model. The paper proposes high acceptability level of mobile banking services by the customers and sets to test its influence using independent but moderating variables including the perceived ease of use, perceived usefulness, trust and compatibility. It is hopeful that useful outcome of immense importance to the internet and mobile banking services providers, practitioners and other relevant stakeholders would emerge when the framework is validated.

Reference

- Agboola, A. (2006). Electronic Payment Systems and Tele-banking Services in Nigeria. *Journal of Internet Banking and Commerce.*, 11(3), 1-10.
- Ayo, C. E. (2007). M-Commerce Implementation in Nigeria: Trends and Issues, . *Journal of Internet Banking and Commerce.*, 12(2), 1-15.
- Brown, I. C. (2003). Cell Phone Banking Predictors of Adoption in South Africa – An Exploratory Study. *International Journal of Information Management*, 23, 3, 381-393.
- Cruz, P. L.-G. (2010). Mobile Banking Rollout in Emerging markets: Evidence from Brazil. *International Journal of Bank Marketing*, 28(5), 342-371.
- Dasgupta, S. R. (2011). Factors affecting behavioral intentions towards mobile banking usage: Empirical evidence from India. *Romanian Journal of Marketing*, , 3(1), 6-28.
- Ensor, B. M. (2012). The state of mobile banking 2012. *Forrester Research, USA*.
- F., D. (1989). Perceived Ease of Use, Perceived Usefulness and User Acceptance of Information Technology. *MIS Quarterly*, pp. 319-337.
- Fishbein, I. a. (1975). Beliefs, Attitude, Intention and Behaviour: An Introduction to Theory and Research. *Addison-Wesley, Reading, MA*.
- Fishbein, M. a. (1975). Believe, Attitude, Intention and Behavior: An Introduction to Theory and Research. . *Addison-Wesley, Reading*.
- Gefen, D. K. (2003, September). Trust and TAM in online shopping: an integrated model *MIS Quarterly*, Vol. 27 No. *MIS Quarterly*., pp. 51-90.
- Gerrard, P. &. (2003). The diffusion of internet banking among Singapore consumers. *International Journal of Bank Marketing*, , 21(1), 16-28.
- Ginzberg, M. (1989). Early Diagnosis of MIS Implementation Failure: Promising Results and Unanswered Questions. *Journal of Management Science*, 459-478.
- Grabner-Krauter, S. a. (2003). Empirical Research in On-line Trust: A Review and Critical Assessment, . *International Journal of Human-Computer Studies.*, 5,8, 783-812. .
- Gu, J. L. (2009). Determinants of behavioral intention to mobile banking. *Expert Systems with Applications*, Vol. 36 No. 9, pp. 11605-11616.
- Gumel, A. M. (2013). Reflecting customers' innovativeness and intention to adopt islamic banking in Nigeria. *Business Management Quarterly Review*, 4(3 & 4), 27-37., pp. 4(3 & 4), 27-37.