

An Empirical Assessment of Customers' Intention to Use Internet Banking In Nigeria.

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Abstract

This study investigated how customers perceived and behaviourally intended to use Internet Banking (IB) in Nigeria. Since the consolidation of the banking industry in Nigeria, it has become imperative for them to be able to survive. This led them to introduce internet and electronic banking in order to serve their customers efficiently, to make banking easier for them and also to gain competitive advantage in the industry. This sustainable competitive advantage can lead to the enhancement of industrial development that can bring about global partnership for development which is one of the pivotal goals of the Millennium Development Goals (MDGs). Subjects for this study were three hundred and thirty-five bank customers in Oyo town, Oyo state, Nigeria. Three hypotheses were tested and the findings of the study revealed that perceived usefulness significantly predicted intention to use internet banking. The result also revealed that perceived web security had a direct relationship with intention to use internet banking. Furthermore, the result also showed that customers' attitude had a positive effect on intention to use internet banking. Based on the findings of this study, it was recommended among others that bankers should improve the security features of their systems and stress their system security and the precaution functions they have implemented so that they can reassure their customers that internet banking is a safe mode of transaction.

Keywords: internet banking, intention to use IB, perceived use, customer attitude, perceived web security, Nigeria, banks.

Introduction

Since the consolidation of the banking industry in Nigeria, it has become imperative for them to survive. This led them to introduce internet and electronic banking in order to serve their customers efficiently, to make banking easier for them, and also to gain competitive advantage in the industry. This sustainable competitive advantage can lead to the enhancement of industrial development that can bring about global partnership for development which is one of the pivotal goals of the Millennium Development Goals (MDGs).

The field of financial services, as many others has recently been open to tremendous transformation. Banking is currently going through a phase of major changes: deregulation, globalisation, demographic trends and technological developments have contributed to forming a new reality for banks and their customers. Rather banks should ask themselves if they have taken full advantage of the profound opportunity or have they merely used technology as a means for delivering information which can be gotten anywhere.

The speed of the growth and adoption rate of the Internet cannot be compared to any other invention – partly because of the quick adoption of the World Wide Web standard. The basic features of consumer behaviour that have been considered universal laws for decades have been seriously challenged by the new trends frequently associated with the postmodern society: consumers are more demanding, less loyal, they do not commit so easily to ideologies, values, brands, organizations, among others

Internet banking is a specific service. A number of researchers have classified services into search, experience and credence properties (Davies *et. al.*, 1999; Zeithaml and Bitner, 2000). In this typology Internet banking is rich in credence properties, it is a service, which is very hard to assess even after purchasing it. As the word credence implies there is a mental acceptance of the truth or actuality of something. Customers often do not fully understand the details of banking matters and they have to trust the service provider. On the other hand some of the services of Internet banks are fairly basic and not as intangible as most of the services. If a customer transfers money or pays a bill he can be quite sure of the outcome. The product intangibility becomes important when a customer has to select a channel to use for everyday banking.

In a bid to catch up with global development, improve the quality of service delivery, and reduce transaction cost, Nigerian banks have invested greatly in technology, and have widely adopted electronic and telecommunication networks for delivering a wide range of value-added products and services. To realize the full potential of IB, banks need to develop new products and services to fully utilize the Internet's capabilities. On the other hand, customers need to be made aware of Internet Banking (IB) services, and feel secure and

comfortable with using such services. There is a clear need to study the factors that influence customers' intention to use IB so that banks can better formulate their marketing strategies to increase IB usage in the future. Hence, this study is geared towards investigating the behavioral intentions of customers to use IB services with particular emphasis on users' perceptions of ease of use and usefulness of IB, and of security of using this new technology to meet their banking needs and attitudes towards embracing this innovation.

Literature review

Perceived usefulness refers to "the degree to which a person believes that using a particular system would enhance his or her job performance"(Davis et al.,1989). A number of studies have found perceived usefulness to affect adoption of and intention to continue to use e-banking services (Adesina and Ayo, 2010; Al(Sukkar and Hasan, 2005; Kamel and Hassan, 2003; Kolodinsky and Hogarth, 2001; Kolodinsky, et al., 2004; Ravi et al., 2007; and Vatanasombut et al., 2008).

Perceived ease of use refers to "the degree to which a person believes that using a particular system would be free of effort"(Davis et al., 1989; Mathieson, 1991). The effect of perceived ease of use on adoption of and intention to continue using e-banking services was supported in a number of studies (Adesina et al., 2010; Al-Sukkar et al., 2005; El-Kasheir et al., 2009; Kamel and Hassan, 2003; Kolodinsky et al., 2004; Muniruddeen 2007; Ravi et al., 2007; and Vatanasombut et al., 2008). Perceived usefulness is a rational construct, which refers to the extent that a new system will improve the performance of the adopter. Perceived ease of use, on the other hand, refers to the process of adoption itself that finally should lead to the outcome.

Internet Banking in Nigeria

Electronic banking is the provision of banking services to customers through Internet technology (Daniel, 1999). Through the use of IT, banks now employ different channels such as internet technology, video banking technology, telephone banking, Automated Teller Machine, and WAP technology to deliver their services. Report on e-banking system in Nigeria reveals that e-payment machinery, especially the card technology, is presently enjoying the highest popularity in Nigeria banking market. According to Interswitch statistics, Nigeria has 30million ATM card holders who conduct over 100 million transactions on the machines every month. Nigeria's 24 banks operate over 9,000 ATM machines across the country's 36 states and Federal Capital Territory. Also to enhance effective security measure, banks have since early this year been upgrading their ATM cards from the magnetic stripe to the Euro-Visa-Master card standard, popularly known as Verve Card (www.businessdayonline.com). This latter technological device is more fraud resistant because all the data of the customer are recorded on the chip. The union of technology and finance has recorded huge success and has impacted on financial transactions. E-banking system has become the main technology (driven revolution in conducting financial transactions. However, banks have made huge investments in telecommunication and electronic systems, users have also been validated to accept e-banking system as useful and easy to use (Adesina and Ayo, 2010).

The Adoption of E-banking

There is a rich body of literature on e-banking services and their adoption but little has been done about its continual usage and how to keep customers loyal. Muniruddeen (2007) investigated factors responsible for users' acceptance of e-banking in Malaysia using extended technology acceptance model. The report showed that e-banking is accepted based on its perceived usefulness (PU) and perceived ease of use (PEOU). It also indicated that perceived security and privacy are the main concerns while using Internet banking. Reid and Levy (2008), Pikkarainen et al (2004), and Karjaluo et al (2002) also found that perceived usefulness and perceived ease of use are main factors that influence customers' acceptance of e-banking. Ayo et al. (2007) conducted a survey of electronic banking product and service in Nigeria and found that all the banks have at least one particular form of electronic service including e(banking service. Though, various e-banking systems have been implemented and accepted by customer, e-payment remains the most widely used of the e(banking solutions (Adesina and Ayo, 2010).

Technology Acceptance Models

Davis (1989) developed the Technology Acceptance Model, according to which "users' adoption of computer system" depends on their "behavioral intention to use", which in turn depends on "attitude", consisting of two beliefs, namely Perceived Ease of Use and Perceived Usefulness. Davis developed TAM by building upon an earlier theory, the Theory of Reasoned Action (TRA) by Fishbein and Ajzen (1975). In TRA, Fishbein and Ajzen (1975) proposed that intention is "the immediate determinant of the corresponding behavior", which

is divided into (1) “attitude toward behavior”, and (2) “subjective norm concerning behavior”. Davis posited in TAM that the two theoretical constructs, Perceived Usefulness and Perceived Ease of Use, are fundamental determinants of system use in an organization. These constructs also provide better measures for predicting and explaining system use than other constructs (Davis, 1989).

Method

Design

The design for the study is a survey design which measured two variables, independent variable and dependent variable. The independent variable is adoption which comprises perceived usefulness, perceived ease of use and attitudes and the dependent variable is intention to use internet banking.

Sample

This study is based on a sample of 350 respondents who were bank customers in Oyo town, Oyo State, Nigeria. The study employed the purposive sampling method for easy access. The participants comprised 167 (47.7%) males, 132 (37.7%) married, 90 (25.7%) artisans.

Research Instrument

The study made use of questionnaire for data gathering which was divided into two sections. The first section measured demographical information of the respondents while the second section had subscales measuring the variables of interest. The scale for TAM by Davis (1989) was used to measure perceived usefulness and perceived ease of use which was adopted for this study and also the scale developed by Salisbury et al. (2001) was used to measure Perceived web security and intention to use internet banking as reported by Cheng et al (2007). The scales used a 7-point Likert type response format (1= strongly disagree, neutral =4, and 7= strongly agree).The authors reported Cronbach alpha ranging from 0.90 to 0.93. But for the present study, the researcher reported Cronbach alpha of 0.90 perceived ease of use, 0.86 perceived ease of use, 0.79 perceived web security, and 0.82 intention to use internet banking.

Statistical Analyses

The demographic information was analysed using frequency counts and simple percentages. Also, the hypotheses for the study were analysed using Pearson correlation, ANOVA and independent t-test. Hypothesis 1 was tested using Pearson correlation, hypothesis 2 was tested using Analysis of Variance (ANOVA) and hypothesis 3 was analysed with independent t-test.

Results

Table 1: Distribution of respondents by demographical information

Sex	Frequency	Percentage
Male	167	47.7
Female	183	52.3
Total	350	100.0
Marital status	Frequency	Percentage
Single	166	47.4
Married	132	37.7
Others	52	14.9
Total	350	100.0
Age	Frequency	Percentage
Young	8	2.3
Old	342	97.7
Total	350	100.0
Occupation	Frequency	Percentage
Farming	3	0.9
Trader	50	14.3
Civil servant	85	24.3
Artisans	90	25.7
Medical personnel	19	5.4
Accountants	25	7.1
Technicians	2	0.6
Students, pastors	76	21.7
Total	350	100.0
Educational qualification	Frequency	Percentage
No response	47	13.4
SSCE	103	29.4
OND, NCE	27	7.7
B.sc, HND	162	46.3
M..sc	8	2.3
Ph.D	3	0.9
Total	350	100.0

The table above showed that 167(47.7%) of the respondents were males while their female counterparts were 183(52.3%) respectively; 166(47.4%) were single 132(37.7%) were married. Majority of the respondents were Old (30+ years) followed by those that were Young. 3(0.9%) of the respondents were Farmers, 50(14.3%) were Traders, 85(24.3%) were Civil servants, 90(25.7%) were Artisans (i.e Carpenters, Tailors etc.) 19(5.4%) were Medical personnel, 25(7.1%) were Accountants, 2(0.6%) were Engineers, Technicians, while 76(21.7%) of the respondents were Students/Pastors respectively. Also, 103(29.4%) had Secondary school leaving certificate, 27(7.7%) were OND/NCE holders, 162(46.3%) were B.sc, HND holders, 8(2.3%) were M.sc holders, while 3(0.9%) were Ph.D holder respectively.

Hypotheses Testing

Hypothesis 1: There will be a significant relationship between perceived usefulness and Intention to use internet banking.

Table 2: Summary of Pearson correlation showing relationship between perceived usefulness and Intention to use internet banking.

Variable	Mean	Std. Dev.	N	R	P	Remark
Perceived Usefulness	19.7600	8.2434	350	.718**	.000	Sig.
Intention to use	15.5257	5.9581				

** sig at .01 level

It was shown in the above table that there was a significant relationship between perceived usefulness and Intention to use internet banking ($r = .718^{**}$, $N = 350$, $P < .05$). The hypothesis is therefore accepted.

Hypothesis 2: There will be main and interaction effect of perceived use and perceived web security on Intention to use internet banking.

Table 3: Summary of ANOVA table showing main and interaction effect of perceived ease of use and perceived web security on Intention to use internet banking.

Source	Sum of Squares	DF	Mean Square	F	Sig.
Main Effect:					
Perceived ease of use	4659.503	3	1553.168	69.523	.000
Perceived web security	1190.093	1	1190.093	53.271	.000
	1396.046	1	1396.046	62.490	.000
2-Interactions:					
Perceived use x Perceived web security	1.192	1	1.192	.053	.817
Explained	4659.503	3	1553.168		
Residual	7729.766	346	22.340		
Total	12389.269	349			

In the table above, it was observed that there were main effects of perceived use and perceived web security on intention to use internet banking. However, the interaction effect of perceived use and perceived web security on intention to use internet banking was not significant ($F(3,346) = .053, P > .05$). The hypothesis is therefore partially rejected.

Hypothesis 3: There will be a significant difference between positive and negative attitudes and Intention to use internet banking

Table 4: Summary of t-test table showing difference between positive and negative attitudes and Intention to use internet banking

Intention for use	N	Mean	Std. Dev.	Crit-t	Cal-t.	DF	P
Positive	144	11.1944	6.0178	1.96	14.310	348	.000
Negative	206	18.5534	3.5756				

The above table showed that there was a significant difference between positive and negative attitudes and intention to use internet banking ($\text{Crit-t} = 1.96, \text{Cal.t} = 14.310, \text{df} = 348, P < .05$). The hypothesis is therefore accepted.

Discussion

The findings of the study revealed that there were significant relationships between perceived usefulness, perceived ease of use and perceived web security. However, there was no interaction effect of perceived usefulness and perceived web security on intention to use internet banking. These findings has given support to numerous research findings, for example, according to Salisbury et al. (2001), Perceived Web Security was found to favourably influence customers' intention to purchase on the WWW. Customers tend to increase purchases only if they perceive that their credit card and other sensitive information are safe.

The findings are also consistent with the findings of Davis et al. (1989), where they found that attitude does not fully intervene the effect of Perceived Usefulness and Perceived Ease of Use on Intention. These results provide several key insights into the determinants of IB usage. Firstly, perceived usefulness is a major determinant of customer's intentions to use IB. Secondly, perceived ease of use is a significant secondary determinant of customer's Intention. Finally, perceived web security is too a significant and direct determinant of customer's Intention.

Also, Muniruddeen (2007) investigated factors responsible for users' acceptance of e-banking in Malaysia using extended technology acceptance model. The report showed that e-banking is accepted based on its perceived usefulness (PU) and perceived ease of use (PEOU). It also indicated that perceived security and privacy are the main concerns while using Internet banking. Reid and Levy. (2008), Pikkarainen et al (2004), and Karjaluoto et al (2002) also found that perceived usefulness and perceived ease of use are main factors that influence customers' acceptance of e-banking. Ayo et al. (2007) conducted a survey of electronic banking product and service in Nigeria and found that all the banks have at least one particular form of electronic service including e-banking service.

The findings also support previous research where customers appear to be much more concerned with the security of the Internet bank, than they are with security of traditional banking (Minjoon and Shaohan 2001). If a person believes a certain application will help them perform their job better, it is more likely the person will use it; than if, the customer does not realise the application to be useful (Davis, 1989.) Davis (1989) and many other researchers (Karahanna et al 1999, Doll *et. al.* 1998, Venkatesh and Davis, 2000, Gerrard and Cunningham, (2003) have realised that perceived usefulness has a strong influence over the customer's usage of an application.

Implications for managers

Banks should consider how to shift the perceptions of their customers by emphasizing the positive safety features in any marketing campaign. They should pass an effective message to customers that the Web security facility now available will eliminate any third-party intrusions into their IB account in order to turn around the negative perceptions of their customers, thereby enabling customers to feel secure and comfortable in using IB services. However, incidents where on-line banking suffers from security breaches could seriously undermine consumer confidence. In this regard, proper training of customers on the safe use of internet banking could help improve security and enhance their overall confidence in long-term.

Conclusion

It is clear that Internet banking is a complicated and multifaceted issue. The findings of the study revealed that there were significant relationships between perceived usefulness, perceived ease of use and perceived web security. However, there was no interaction effect of perceived usefulness and perceived web security on intention to use internet banking. The findings of this study will go a long way to attain one of the goals of the MDGs.

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