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The mediating role of hedonic motivation on the relationship between adoption of e-banking and its determinants

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Abstract

Purpose – The purpose of this paper is to examine the combined roles that perceived usefulness (PU), perceived ease of use, perceived security and hedonic motivation play on the adoption of e-banking. It also aims to determine the ability of hedonic motivation to transfer the effect of other determinants of e-banking adoption.

Design/methodology/approach – In order to empirically test the conceptual model of this study, data were collected from the users of e-banking in Nigeria. A total of 266 questionnaires were analyzed using partial least square structural equation modeling.

Findings – The empirical results revealed a significant and positive relationship between PU, perceived security and e-banking adoption. The same result was found to be applicable to the relationship between PU, perceived ease of use, perceived security and hedonic motivation. However, support was not found for the relationship between perceived ease of use and adoption of e-banking. Hedonic motivation plays a mediating role between PU, perceived security and e-banking adoption. The study did not find a mediating effect of hedonic motivation between perceived ease of use and e-banking adoption.

Practical implications – The results of this study provide insights for banking practitioners to know which aspect of e-banking to improve and to aid with policies that will increase adoption. Furthermore, improvements in hedonic motivation will also significantly increase adoption of e-banking.

Originality/value – This study is one of the pioneer studies that tests the mediating influence of hedonic motivation.

Keywords Hedonic motivation, Perceived ease of use, Adoption, Perceived usefulness, Perceived security

Paper type Research paper

Introduction

Internet technologies application for improvement of business performance has evolved. In the last 18 years, the application of e-commerce in business has been on the increase due to its various benefits (Saffu *et al.*, 2008). As noted by Turban *et al.* (2008) and Chong *et al.* (2010), the advantages of e-commerce include but are not limited to: cost reduction, business openings, reduction in business time lag, and provision of personalized service to the clients.

The banking industry has generally adopted e-banking as a tool of e-commerce. This has brought tremendous improvements to the services and operations of banks (Chong *et al.*, 2010), especially in cost savings (Pikkarainen *et al.*, 2004), while helping facilitate the business activities of bank customers through provision of “anytime and anywhere service” (George and Kumar, 2013). These benefits are apparent as online banking has changed the nature of relationships between banks and their customers. For instance, in mortar-branch-banking, information was limited to the bank staff. In that realm, customers could only obtain service by interacting directly with bank officials (Sikdar *et al.*, 2015). E-banking has changed that system,



as an average customer can directly access bank information without recourse to the bank. As noted by Gupta and Kamilla (2014, p. 48), "Online banking facility, in general, provides direct access to information and data related to account and transactions, facilitates giving instruction, requests and applications to bank; and enables funds transfer as per the needs of the account holder."

Despite the benefits of e-banking, experience has shown that its rate of adoption is very low in developing countries, when compared with that of developed nations. This is in line with Ndubisi and Sinti (2006), who argue that the rate of internet banking adoption in a developing country like Malaysia is very low and still in the infant stage. AbuShanab *et al.* (2010) asserts that the low rate of online banking adoption calls for concern in Jordan, and is corroborated by Al-Majali and Mat (2011). Adesina and Ayo (2010) argued that while e-banking may be ubiquitous among the service providers in Nigeria, there is not enough evidence to establish its acceptance among the customers. This fact was recently supported by Agwu (2012) and further reiterated by KPMG (2013). Further, Sikdar *et al.* (2015) also raised concern about the low rate of adoption in India, confirming that e-banking is still struggling to survive and needs to be saved from premature death.

Several studies have identified possible factors causing the low rate of adoption of e-banking. For instance, Adesina and Ayo (2010) validated perceived usefulness (PU), perceived ease of use, perceived credibility and computer self-efficacy as factors influencing customers' attitude toward intention to adopt e-banking in Nigeria. Agwu's (2012) qualitative study centered on insecurity and privacy, insufficient infrastructure, lack of trust and high cost of transaction among others. Ezeoha (2005) dwelled on lack of security as a major factor inhibiting the adoption of e-banking in Nigeria. Sikdar *et al.* (2015) considered trust, ease of use, usage constraints, accessibility and intention among online banking customers in India. Kesharwani and Tripathy (2012) investigated perceived ease of use, PU, computer self-efficacy, technology complexity, pricing concerns and social influences. Chong *et al.* (2010) discussed government support, PU, perceived ease of use and trust.

Given the factors being used to predict adoption of e-banking by these scholars, it has become evident that these studies suffer from fragmentation, as no consensus has been reached about a specific driver of this information system product. Aside, the results of these studies have not been consistent, thereby heightening the confusion surrounding adoption and requiring an enhanced variable between some of these predictors and e-banking adoption. This will enable researchers to holistically explain the trend of adoption among the users.

This paper is presented in the following structure. First, a literature review on the constructs of antecedents of online banking such PU, perceived ease of use, perceived security and hedonic motivation are discussed. After, the paper discusses the methodology adopted and survey instrument used for the collection of data. On a final note, the analysis of our findings is presented while discussion, theoretical and managerial implications followed.

Literature review

Antecedents of online banking adoption

Based on previous studies, different determinants and models of e-commerce and information technology transactions have been proposed. Among these popular models are diffusion of information theory (Rogers, 1983), theory of planned behavior (TBP) (Ajzen, 1985, 1991), theory of reasoned action (TRA) (Fishbein and Ajzen, 1975), universal theory of acceptance and use of technology (UTAUT) (Venkatesh *et al.*, 2003, 2012), and technology acceptance model (TAM) (Davis, 1989; Venkatesh and Bala, 2008). Out of these models, TAM has been identified as the most simple and parsimonious model that can explain over 40 percent of users intention and behavior (Rana *et al.*, 2013; Venkatesh *et al.*, 2003; Yousafzai *et al.*, 2010). In information technology and consumer behavior field of product and

service acceptance, TAM is widely cited (Alalwan *et al.*, 2016). According to Google Scholar citation report, Davis' (1989) original TAM has been cited 7,714 times as at June, 2010 (Bradley, 2012). The core variables of TAM are PU and perceived ease of use of a technological products or services. These variables are the powerful determinants of attitude toward usage which finally creates intention to use, a reflection of user loyalty. TAM dimensions have been found to be valid and reliable in predicting adoption of e-payment (Teoh *et al.*, 2013), online shopping (Ramayah and Ignatius, 2005), online ticket reservations (Guritno and Siringoringo, 2013), mobile website (Zhou, 2011) and e-banking (Lai and Li, 2005; Sentosa *et al.*, 2012). The application of TAM cuts across different contexts such as developed and less developed countries. However, experience has shown that it is least applied in developing countries such as Nigeria and which underscores its use in this study as technology is just evolving in the country. This study therefore aims to conceptualize a simple model that can capture the adoption of e-banking among Nigerians. In view of this, the original TAM was found to be highly relevant for creating a sound theoretical foundation to propose the conceptual model instead of TAM2 or TAM3.

Despite the parsimonious nature of TAM, it has however being argued that its core constructs; PEOU and PU would not be able to give full and clearer picture of users' adoption behavior (Alalwan *et al.*, 2016; Riquelme and Rios, 2010; Shareef *et al.*, 2014; Zhou, 2011) as factors that determine the adoption may be context specific. In view of this, this study has extended TAM by incorporating perceived security (George and Kumar, 2013; Pikkarainen *et al.*, 2004) and hedonic motivation (Venkatesh, *et al.*, 2012) for the purpose of making TAM to be more robust in its prediction. The inclusion of perceived security in this instance is justified as previous studies seem to have established that perceived security is one of the serious constraints inhibiting the adoption of online banking generally (Pikkarainen *et al.*, 2004) and in particular in developing countries (Ndubisi and Sinti, 2006) like Nigeria (Adesina and Ayo, 2010; Agwu, 2012; Ezeoha, 2005). Recent evidences have also shown that absence of security in the online environment constitutes major threats to users as they entertain fears that their information may be compromised and funds being lost (Pikkarainen *et al.*, 2004; Yousafzai *et al.*, 2010). This absence of security has made Nigerian banks to cumulatively lose N203 billion as at September 2014 (Nelson, 2015). To further predict adoption of e-banking among Nigerians, hedonic motivation otherwise known as perceived fun or enjoyment was also considered necessary to be included in the model as a mediating variable. Previous studies seem to have considered hedonic motivation (otherwise known as perceived enjoyment, perceived fun, perceived playfulness) as an independent predictor (Amin *et al.*, 2012; Pikkarainen *et al.*, 2004) but failed to see its mediating role in the adoption of online banking. The qualitative study of Pagani (2004) considered the mediating effect of perceived enjoyment but the findings cannot be generalized while the context and content of the study differ from ours. This is also applicable to the study of Chtourou and Souiden (2010) and Bruner and Kumar (2005) as their studies were conducted in developed countries and with contents that are differed from electronic banking that involved exchange of money. Chen *et al.* (2006) and Poong *et al.*, (2017), recently argued that information system strategies advanced in developed countries may not be directly transferred to developing countries as each region requires different research to fill knowledge gap. This study therefore seems to be the first to consider the mediating role of hedonic motivation in the adoption of electronic banking.

PU

Scholars in the electronic banking studies have generally acknowledged the importance of PU (Guriting and Ndubisi, 2006; Eriksson *et al.*, 2005; Laforet and Li, 2005; Sikdar *et al.*, 2015). PU is one of the main constructs of TAM (Davis, 1989) and has been regarded as the subjective probability that using a system would accelerate the completion of an individual's

task (Jahangir and Begum, 2008). Since TAM was conceptualized based on TRA (Fishbein and Ajzen, 1975) and theory of planned behavior (Ajzen, 1985), it has been validated as the most powerful and simple predictor of users intention and behavior (Davis, 1989; Davis *et al.*, 1989). Davis (1989, p. 320) considered PU as the “degree to which a person believes that using a particular system would enhance his or her job performance.” This fact has been corroborated further by Davis *et al.* (1992), when PU was seen as the perception of consumers with regards to the expected outcome of a service experience. Kumar and Ravindran (2012) assert that PU shows the degree to which a user believes that usage of a particular system will result to usefulness or certain benefits against other similar system. This is in line with Rogers (1962) where PU was conceptualized as “the degree to which an innovation is perceived as a better alternative to currently available products or services.” For this study, PU is defined as the users’ feeling about the benefits that can be derived from using e-banking against branch banking and which would make them to be at a vantage position. In essence therefore, e-banking users would prefer to patronize e-banking platforms because of its inherent benefits. Part of the benefits that may be derived from e-banking include mobility of the banking service, cost and time saving, anytime-anywhere opportunity and confidentiality of banking operations (Chong *et al.*, 2010; Juwaheer *et al.*, 2012; Pikkarainen *et al.*, 2004). Recent studies have validated that these similar benefits for instance, in online trading (Lee, 2009), Facebooking (Joo *et al.*, 2015), e-library (Joo and Choi, 2015), and other medium and have influenced customers to continue to patronize their service providers. Additionally, PU has been found to be instrumental to hedonic motivation. A system that is perceived to be useful can equally be seen to be full of fun that will make the users to adopt the platform (Chtourou and Souiden, 2010; Pagani, 2004).

Perceived ease of use

Similar to PU, perceived ease of use is also derived from TAM. According to Davis (1989), a system might be useful but may seem difficult to the customers especially when it requires some physical and mental rigours. Davis (1989, p. 320) hence defined PEOU as, “the degree to which a person believes that using a particular technology would be effortless.” Effortlessness as noted by Safeena *et al.* (2011) implies that the system usage is associated with easiness that makes the system to be easily interacted with. This attribute may however not be optimized when for instance the users find the usage to be tedious and complex as a result of some constraints posed by physical characteristics such as small display screen or difficulty in keying in data (Deb and Lomo-David, 2014). As noted by Rogers (1995) and recently advocated by Chong *et al.* (2010) such complexity makes acceptance of an innovation to be difficult if not impossible. It is therefore essential for the cognitive tradeoff process of individual users to be taken into consideration while configuring such platforms since less complexity helps the users to take full advantages of online banking (Alalwan *et al.*, 2016). Perceived ease of use has also been validated as an important determinant of perceived enjoyment. Even though the causal relationship between two variables has been controversial; many previous studies have established that perceived ease of use influences hedonic motivation (Bruner and Kumar, 2005; Davis *et al.*, 1992; Van der Heijden, 2004). Other school of thought however believe that the perceived enjoyment influences PU (Venkatesh, 2000; Yi and Hwang, 2003). This controversy therefore calls for a further investigation.

Perceived security

The presence of security in e-commerce transactions has been regarded as an important factor that drives customers’ adoption. The perception of security in this realm is seen as the protection of the whole transaction including the channels of payment and mechanisms through which customers’ personal information is stored and transmitted (Chang and Chen, 2009).

Yousafzai *et al.* (2010, p. 1183) defined e-commerce security as a kind of threat that creates the “circumstance, condition, or event with the potential to cause economic hardship to data or network resources in the form of destruction, disclosure, modification of data, fraud, and abuse.” Absence of security has been cited as the reasons why many customers have abandoned for instance, online banking (Alalwan *et al.*, 2016; Ndubisi and Sinti, 2006; Pikkarainen *et al.*, 2004), online trading (Roca *et al.*, 2009), and online hotel reservation (Bakar and Hashim, 2008) as transactions on these platforms involved releasing of personal sensitive information, such as credit card numbers for the fears that these information may be compromised. These high levels of uncertainties that are associated with the services being delivered through the online medium make the services to be risky than physical product (George and Kumar, 2013). The absence of personal interaction with the service provider is making many customers to be skeptical especially when they suspect that there would not be remedy if their information is compromised or funds stolen (Juwaheer *et al.*, 2012). However, security can be enhanced through encryption, verification, authentication and protection of the sites that are involved (Chellappa and Pavlou, 2002) and when the users perceived that the sites they are exploring are duly protected from insecurity they would be cognitively attached and as well be pleased with the sites. As noted by Yüksel and Yüksel (2007) pleasure is “the degree to which the person feels good, joyful, happy, or satisfied.” In essence, the feelings absence of security can inhibit fun and subsequent adoption (Ernst, 2015) while the feeling of presence of security can increase fun and aid adoption.

Hedonic motivation

Feature of e-banking like hedonic motivation is an important factor that motivates customers to adopt the alternative channel but little attention has been paid to this (Ndubisi and Sinti, 2006). Hedonic outcome is an attribute that is regarded as the intrinsic value that makes the customers to be cognitively absorbed or attached to the online platform (Weniger and Loebbecke, 2011). This is attributed to the fact that an enjoyable experience and fun in using a technological-based service does motivate users. Additionally, hedonic motivation (such as enjoyment) has been found as an important driver of technologies adoption since it helps to trigger positive attitude among users (Huang, 2015; Poong *et al.*, 2017). As defined, hedonic motivation is “the fun or pleasure derived from using a technology” (Venkatesh *et al.*, 2012, p. 161) without any specific extra benefit (Davis *et al.*, 1992). This milestone can be achieved especially in the online banking environment by incorporating music, animations and entertainment on the web. The incorporation of these mechanisms helps to arouse the emotions of the users and provide more opportunities to play with the system (Ndubisi and Sinti, 2006). Moon and Kim (2001) in this regard assert that perceived fun has three components of curiosity, enjoyment and fun and would positively attract the users to the platform. In the consumer context, hedonic motivation has also been found to be an important determinant of technology acceptance and use (e.g. Brown and Venkatesh, 2005; Childers *et al.*, 2001). Several studies on online banking have confirmed the positive relationship between hedonic motivation otherwise known as perceived enjoyment or fun and adoption of online banking (Amin *et al.*, 2012; Suki, 2010).

Hypotheses development

The relationship between PU and e-banking adoption has been examined empirically by various studies. Some of the empirical studies found a significant and positive relationship between PU and e-banking adoption (Alalwan *et al.*, 2016; Al-Majali and Mat, 2011; Chong *et al.*, 2010; Eriksson *et al.*, 2005; Juwaheer *et al.*, 2012; Pikkarainen *et al.*, 2004; Sikdar *et al.*, 2015; Tan *et al.*, 2010). However, some other studies found weak, or no correlations between PU and e-banking adoption (Akhlaq and Ahmed, 2013; El-Kasheir *et al.*, 2009). This is equally applicable to the relationship between PU and hedonic motivation as some found significant relationship

(Pagani, 2004; Chtourou and Souiden, 2010) while Liao *et al.* (2007) and Kim *et al.* (2008) did not confirm this relationship. These inconclusive results concerning the relationships call for more studies to be carried out in different contexts. Hence, the following hypotheses are proposed:

H1. PU positively influences e-banking adoption.

H2. PU positively influences hedonic motivation.

The concept of perceived ease of use has been empirically researched as its significant and positive influence on e-banking adoption and other related online service has equally been established by many studies (Gounaris and Koritos, 2008; Juwaheer *et al.*, 2012; El-Kasheir *et al.*, 2009; Ozdemir and Trott, 2009; Sohail and Shanmugham, 2003; Tan *et al.*, 2010; Yiu *et al.*, 2007). Despite the significant and positive relationship found by these studies, some others found no relationship (Nor *et al.*, 2011; Chandra *et al.*, 2010; Eriksson *et al.*, 2005; Hernandez and Mazzon, 2007; Pikkarainen *et al.*, 2004; Wang, 2008). Previous studies have equally confirmed the relationship between perceived ease of use and hedonic motivation (Bruner and Kumar, 2005; Ernst *et al.*, 2013) while others found weak or less impact (Liao *et al.*, 2008). The inconsistent findings in these previous studies signify that the research on e-banking is still inconclusive as further scholarly efforts are required especially in developing countries where the behavior of customers need to be validated (Adesina and Ayo, 2010; Ndubisi and Sinti, 2006). Therefore, the following hypotheses are by proposed for empirical examination:

H3. Perceived ease of use positively influences e-banking adoption.

H4. Perceived ease of use positively influences hedonic motivation.

In literature, perceived security has been regarded as an important construct that can promote or inhibit the adoption of online services like e-banking. In this view, many previous studies have established significant and positive relationship between e-banking and other related online service/product adoption (Aldás-Manzano *et al.*, 2009; Chang and Chen, 2009; Juwaheer *et al.*, 2012; Martins *et al.*, 2014; Nor *et al.*, 2011; Polasik and Wisniewski, 2009; Susanto *et al.*, 2013; Vatanasombut *et al.*, 2008; Wessels and Drennan, 2010; Yousafzai *et al.*, 2009). Even though many studies found significant and positive relationship, findings from some other studies reveal negative or insignificant relationship (Madininos *et al.*, 2013; Tan *et al.*, 2010). The relationship between perceived security and hedonic motivation has not been fully explored. Ernst (2015) found a negative relationship while Weniger and Loebbecke (2011) found positive relationship since they argued that the better the users access fun oriented information system in terms of content security (among other factors), the easier they will be attached cognitively to the system. Inferring from the inconsistent findings of these studies, it can be concluded that research in this perspective is still ongoing. We therefore hypothesize as follows:

H5. Perceived security positively influences e-banking adoption.

H6. Perceived security positively influences hedonic motivation.

The importance of hedonism has been acknowledged especially with frustration that almost dominates online activities. This feature is recognized to have positive and significant effect on the adoption of e-banking and other similar online services (Chemingui and Ben lallouna, 2013; Pikkarainen *et al.*, 2004). Other studies indicate that infusion of fun attributes is not significant and could create confusion for the users (Hojjatti and Rabi, 2013; Ndubisi and Sinti, 2006):

H7. Hedonic motivation positively influences e-banking adoption.

Many previous scholars as discussed in the preceding sections have recognized the roles of PU, perceived ease of use and perceived security in the adoption of online banking. Inferring from these various arguments, it can be asserted that e-banking website that is thoughtfully

designed with some degree of benefits (PU) will make users to adopt e-banking (Amin *et al.*, 2012). This same argument goes for perceived ease of use as a system that is perceived to be difficult to operate will be resisted despite its benefits (Davis, 1989). Considering perceived security, its presence or absence could promote or inhibit adoption (Pikkarainen *et al.*, 2004; Yousafzai *et al.*, 2010). Based on the inconsistent findings among scholars about the influence of these variables on the adoption of e-banking, it is however reasonable to say that these variables alone are not sufficient to engender adoption among users unless other factor like hedonic motivation is considered as a mediating variable that will carry the effect of the predictors to the adoption (Chtourou and Souiden, 2010; Ernst, 2015; Pagani, 2004) thereby increasing the rate of adoption. Pagani (2004) in a qualitative study of third generation mobile multimedia services confirms the mediating effect of fun between PU and adoption, Chtourou and Souiden (2010) confirm indirect effect of ease of use on act through fun in a mobile device study, while Ernst (2015) asserts that perceived enjoyment mediates between perceived risk and adoption of social network sites. Hence this study tests the mediating effects of hedonic motivation considering the fact that there is a significant difference between e-banking channels and other platforms being considered by the previous researchers. Aside, previous scholars have equally argued that successful information system strategies tested in developed countries may not be applicable in developing countries (Chen *et al.*, 2006), and thereby testing mediating effect in this study will help to fill knowledge gap in developing country (Poong *et al.*, 2017). In this view, the following hypotheses are hereby formulated:

- H8. Hedonic motivation mediates the relationship between PU and e-banking adoption.
- H9. Hedonic motivation mediates the relationship between perceived ease of use and e-banking adoption.
- H10. Hedonic motivation mediates the relationship between perceived security and e-banking adoption.

Based on the theoretical composition of the previous studies, the conceptual framework of this study is presented below. The framework (Figure 1) shows the direct relationship and indirect relationship of the variable.

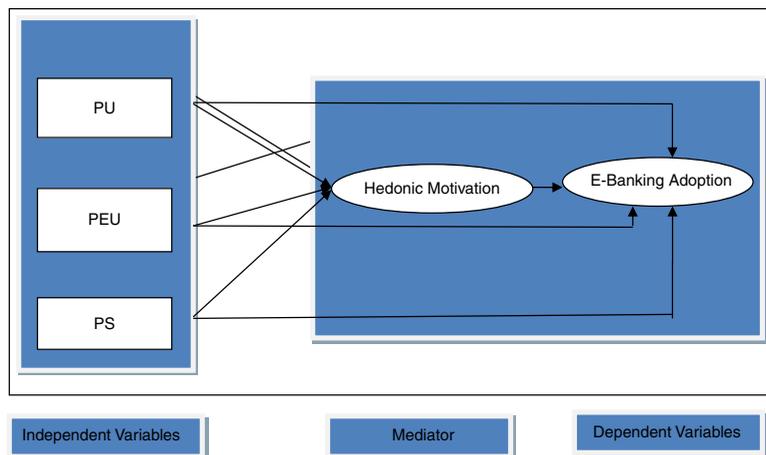


Figure 1.
Conceptual framework

Notes: PU, perceived usefulness; PEU, perceived ease of use; PS, perceived security

Methodology

The conceptual model of this study contains five variables. Each variable was measured with several items. All the items were adapted from previous studies with the purpose of improving the content validity. However, since the items were developed in different contexts, the opinion of users and other experts were sought in order to improve the clarity and understanding of the items. The final items and their sources are listed in Table AI. Significantly, each item is measured with a seven-Likert scale ranging from strongly disagree (1) to strongly agree (7). PU and perceived ease measures were adapted from Davis (1989) and Deb and Lomo-David (2014). Perceived security items were adapted from Deb and Lomo-David (2014), e-banking adoption from Juwaheer *et al.* (2012), Davis (1989) and Ho and Ko (2008) while hedonic motivation items were adapted from Pikkariainen *et al.* (2004) and Venkatesh *et al.* (2012).

Data collection

The data of the study were collected randomly via structured questionnaires from 382 users of e-banking in Nigeria. The respondents were drawn from four stratified selected commercial banks that have branches in Lagos State, Nigeria. These banks were chosen because of their considerable leading roles and investment in online banking facilities, as they are equally ranked as the most customers focused banks (KPMG, 2013, 2014). Selections of these banks will also increase external validity of the results (AbuShanab *et al.*, 2010). Based on confidentiality, the questionnaires were distributed systematically to the customers through their addresses by the head of operations of each bank as it is the policy of the banks not to avail researchers with the contacts of their customers. This method of distribution was used as experience has shown that e-banking customers do not come to the branches for transactions and to equally avoid any bias that may be associated with convenient method of distribution being used by previous studies (e.g. Mann and Sahni, 2013; Safeena *et al.*, 2011). The method of distributing questionnaires through the banks was also used by Al-Smadi (2012). It should be noted however that the process of distribution and collection spanned over three months as the researchers followed up throughout the period to ensure a fruitful exercise. Out of 382 questionnaires distributed, only 266 were eventually used having scrutinized and dropped those with too much missing values. Among the respondents, 28.2 percent were male while 71.8 percent were female. Previous mobile financial studies had similar pattern of responses where female customers were higher than male (Chemingui and Ben lallouna, 2013; El-Kasheir *et al.*, 2009). The majorities of the respondents were between 35 and 52 years old and in line with a study conducted in Nigeria (Adeoti, 2011) and 37 percent have more than three years banking experience. Table I reveals detail demographic information of the respondents.

Statistical analysis results

Partial least square structural equation modeling (PLS-SEM) was used to examine the model of the study. PLS-SEM has attracted the interest of the researchers' world because it is a latent variable modeling technique that accommodates multiple dependent constructs and obviously recognizes measurement errors (Karim, 2009). In addition, recent evidences seem to have shown that PLS-SEM is very robust in estimation and very sound in establishing construct validities than CBS-SEM (Afthanorhan, 2013; Hair *et al.*, 2014). In order to optimize this technique, a two-step approach suggested by Chin (1998) was followed. This therefore implies the measurement model was first examined in order to test its reliability and validity after which the structural model was also examined for the purpose testing the hypotheses, effect size (f^2) and predictive relevance (Q^2) of the model (Hair *et al.*, 2014).

Variable	Category	Number of cases	%
Gender	Male	75	28
	Female	191	72
Age	Between 18 and 25	86	32.33
	Between 26 and 35	104	39.10
	Between 36 and 45	45	16.92
	Between 46 and 55	26	9.77
	Above 55	5	1.88
Marital status	Single	67	25.19
	Married	173	65.03
	Divorced	19	7.14
	Widow	4	1.5
	Separated	3	1.13
Qualification	Primary school certificate	18	6.77
	Secondary school certificate	20	7.52
	Bachelor Degree/HND	141	53.0
	Post graduate degree	87	32.71
Ethnic group	Hausa	47	17.68
	Fulani	21	7.89
	Yoruba	147	55.26
	Igbo	49	18.42
	Others	2	0.75
Year of experience	Less than 1	5	1.9
	1-5	81	30.5
	6-10	124	46.6
	11-20	52	19.5
	Over 20 years	4	1.5
Type of bank account	Savings	121	45.5
	Current	139	52.3
	Deposit	3	1.1
	Domiciliary	3	1.1

Table I.
Description of sample characteristics

The measurement model

In order to examine the measurement model (outer model) for construct validity and reliability, researchers are required to assess content validity, convergent validity and discriminant validity.

Content validity

In multivariate analysis, content validity is defined as a situation where the items measuring a construct display higher loadings on their respective construct than other constructs in the model. In line with the suggestion of Chin (1998) and Hair *et al.* (2010), this research uses factor loadings to assess the content validity as specified in the cross-loading table (Table II). As a matter of rule, if any item loaded higher on other constructs than their loading, it will be deleted. For this study, all the items loaded highly on their respective constructs and more than other constructs. Table III reveals the level of the significance of the factor loading and which confirms the validity of the research measurement model.

Convergent validity

The purpose of convergent validity is to ensure that the items effectively reflect their corresponding factor (Zhou, 2013). In essence, it shows the degree to which a factor positively correlates with another factor of the same construct (Hair *et al.*, 2014). The convention in SEM is that convergent validity can be examined through loadings, composite

Construct	Items	EA	EU	HM	PS	PU
E-banking adoption	EA2	0.696***	0.288	0.323	0.386	0.293
	EA3	0.736***	0.345	0.326	0.422	0.282
	EA4	0.803***	0.327	0.454	0.460	0.277
	EA8	0.669***	0.276	0.304	0.377	0.275
	EA9	0.714***	0.388	0.474	0.454	0.384
Perceived ease of use	EU6	0.241	0.696***	0.357	0.354	0.299
	EU7	0.245	0.685***	0.225	0.375	0.263
	EU8	0.332	0.763***	0.297	0.389	0.255
	EU9	0.465	0.760***	0.370	0.508	0.257
	EU10	0.293	0.709***	0.347	0.397	0.363
Hedonic motivation	HM1	0.436	0.360	0.683***	0.362	0.352
	HM2	0.390	0.230	0.636***	0.291	0.326
	HM3	0.391	0.368	0.782***	0.349	0.328
	HM4	0.416	0.422	0.830***	0.411	0.377
	HM5	0.427	0.330	0.810***	0.412	0.368
	HM6	0.346	0.312	0.745***	0.306	0.235
	HM7	0.327	0.290	0.702***	0.294	0.269
Perceived security	PS1	0.489	0.502	0.325	0.710***	0.304
	PS2	0.354	0.365	0.284	0.678***	0.249
	PS6	0.408	0.426	0.277	0.662***	0.332
	PS7	0.418	0.427	0.320	0.762***	0.214
	PS8	0.271	0.217	0.257	0.595***	0.161
	PS9	0.434	0.427	0.445	0.752***	0.281
Perceived usefulness	PS10	0.482	0.420	0.400	0.806***	0.351
	PU2	0.204	0.295	0.266	0.229	0.564***
	PU5	0.239	0.258	0.266	0.241	0.650***
	PU6	0.266	0.235	0.305	0.227	0.763***
	PU7	0.304	0.315	0.373	0.343	0.805***
	PU8	0.392	0.270	0.358	0.302	0.807***
	PU10	0.353	0.326	0.296	0.294	0.666***

Note: *** $p < 0.01$

Table II.
Factor loading and
cross-loading

reliability and average variance explained. Importantly, the items loading must be highly loaded and statistically significant in order to measure their respective constructs. The loadings of the items must be at least 0.5 while the AVE and composite reliability must not be below 0.5 and 0.7, respectively. Accordingly, any item or indicator that is loaded below 0.5 will be deleted while other best fewer items are retained (Hayduk and Littvay, 2012) in order to achieve desired AVE and composite reliability as done in this study. Retaining fewer best items helps to build sound theoretical model (Hayduk and Littvay, 2012). As shown in Table IV, we obtain loadings, AVE and composite reliability that exceeded the threshold. All the Cronbach's α also exceed 0.6 that is suggested by Nunnally (1978). This therefore shows that the convergent validity of the model has been confirmed (Bagozzi and Yi, 1988).

Discriminant validity

Discriminant validity reveals whether two factors are different statistically. It shows the degree to which a construct is actually different from another construct based on empirical yardsticks (Hair *et al.*, 2014). That is, the items of a particular construct should have variances amongst them more than the variances they shared with other variables. In order to ascertain the discriminant validity, the suggestion of Fornell and Larcker (1981) is followed in this study. Using this criterion, the researchers compare the diagonal values (square roots of AVE) with that of the correlation values as off-diagonal elements. It is quite

Construct	Items	Loadings	SE	T values	P value	
E-banking adoption	EA2	0.696	0.044	15.734	0.000	
	EA3	0.736	0.041	18.107	0.000	
	EA4	0.803	0.029	27.536	0.000	
	EA8	0.669	0.054	12.388	0.000	
	EA9	0.714	0.042	16.931	0.000	
Perceived ease of use	EU6	0.696	0.054	12.779	0.000	
	EU7	0.685	0.057	11.930	0.000	
	EU8	0.763	0.056	13.619	0.000	
	EU9	0.760	0.041	18.718	0.000	
	EU10	0.709	0.055	12.999	0.000	
Hedonic motivation	HM1	0.683	0.039	17.739	0.000	
	HM2	0.636	0.043	14.643	0.000	
	HM3	0.782	0.028	28.263	0.000	
	HM4	0.830	0.024	34.178	0.000	
	HM5	0.810	0.027	30.254	0.000	
	HM6	0.745	0.043	17.397	0.000	
	HM7	0.702	0.047	14.931	0.000	
Perceived security	PS1	0.710	0.043	16.382	0.000	
	PS2	0.678	0.055	12.420	0.000	
	PS6	0.662	0.046	14.343	0.000	
	PS7	0.762	0.039	19.643	0.000	
	PS8	0.595	0.060	9.899	0.000	
	PS9	0.752	0.038	19.729	0.000	
	PS10	0.806	0.029	27.714	0.000	
	Perceived usefulness	PU2	0.564	0.054	10.420	0.000
		PU5	0.650	0.052	12.467	0.000
		PU6	0.763	0.040	19.231	0.000
PU7		0.805	0.027	29.664	0.000	
PU8		0.807	0.025	32.580	0.000	
PU10	0.666	0.046	14.579	0.000		

Table III.
Factor loading
significant

easy for the researcher to conclude about the discriminant validity if all the diagonal values are higher than the off diagonal values located in the same rows and columns. As shown in Table V, all these conditions are fulfilled and thereby confirming that the model of this study adheres to the discriminate validity standard.

The structural model (inner model) and hypotheses testing. Having established the validity and reliability of the construct, we examined the proposed hypotheses by running Algorithm and Bootstrapping of SmartPLS. Figure 2 and Table VI depicted the products of the algorithms.

As shown in Figure 2 and Table VI, we have seven direct and three mediating hypotheses. From the direct hypotheses, only one is not supported. This is equally applicable to the mediating hypotheses as two of the hypotheses are supported. In this instance, PU has positive and significant influence on e-banking adoption ($\beta = 0.134$, $t = 2.380$, $p < 0.001$). PU has a positive and significant relationship with hedonic motivation ($\beta = 0.261$, $t = 4.800$, $p < 0.001$). Perceived ease of use has significant and positive relationship with Hedonic motivation ($\beta = 0.201$, $t = 2.645$, $p < 0.001$). Perceived security has positive and significant effect on e-banking adoption ($\beta = 0.364$, $t = 4.603$, $p < 0.001$). Perceived security has positive and significant impact on hedonic motivation ($\beta = 0.257$, $t = 4.029$, $p < 0.001$). Hedonic motivation has positive and significant impact on hedonic motivation ($\beta = 0.266$, $t = 2.822$, $p < 0.001$). In this respect, the affected direct hypotheses (*H1*, *H2*, *H4*, *H5*, *H6* and *H7*) are supported.

Construct	Items	Loadings	Cr α	CR	AVE	R2
E-banking adoption	EA2	0.696***	0.774	0.847	0.526	0.442
	EA3	0.736***				
	EA4	0.803***				
	EA8	0.669***				
Perceived ease of use	EA9	0.714***	0.775	0.846	0.523	0.442
	EU6	0.696***				
	EU7	0.685***				
	EU8	0.763***				
	EU9	0.760***				
Hedonic motivation	EU10	0.709***	0.864	0.896	0.553	0.326
	HM1	0.683***				
	HM2	0.636***				
	HM3	0.782***				
	HM4	0.830***				
	HM5	0.810***				
	HM6	0.745***				
Perceived security	HM7	0.702***	0.837	0.877	0.507	0.442
	PS1	0.710***				
	PS2	0.678***				
	PS6	0.662***				
	PS7	0.762***				
	PS8	0.595***				
Perceived usefulness	PS9	0.752***	0.804	0.861	0.511	0.442
	PS10	0.805***				
	PU2	0.564***				
	PU5	0.650***				
	PU6	0.763***				
	PU7	0.807***				
	PU8	0.666***				
	PU10	0.802***				

Note: *** $p < 0.01$

Table IV.
The convergent validity analysis

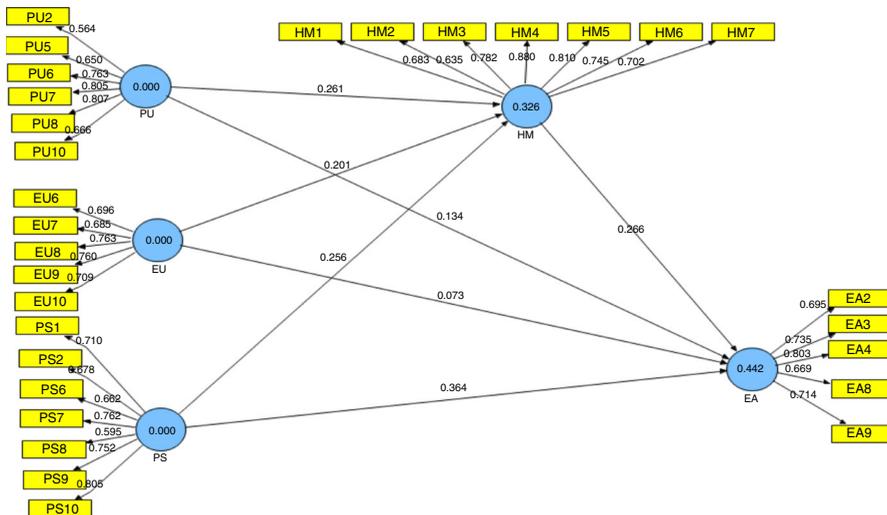


Figure 2.
PLS-SEM algorithm

To determine the mediating effect, we followed the Ned Kock (2013) approach by running the bootstrapping at 500 subsamples and used the sobel calculator to test the hypothesized mediation effect of hedonic motivation between the three exogenous constructs and the endogenous construct of the study. Based on the calculation, the result shows that the hedonic motivation mediates between PU and e-banking adoption ($\beta=0.069, t=3.024, p < 0.001$), and also mediates the relationship between perceived security and e-banking adoption ($\beta=0.068, t=2.663, p < 0.001$). This therefore implies that *H7* and *H9* are supported while *H8* is not supported as it is not significant taking into consideration the bootstrapped confidence interval. Calculating mediation through this approach has been supported by various contemporary scholars who argued that this method is superior to Baron and Kenny (1986) traditional method (MacKinnon *et al.*, 2007; Zhao *et al.*, 2010).

Predictive relevant of our model

We used R^2 and cross-validated redundancy to examine the predictive relevance of the model. R^2 is used to ascertain the degree of variance of endogenous variable that is explained by the exogenous variables. As shown in Table V, the result reveals that 44.2 percent of e-banking adoption is jointly explained by all the exogenous variables while 32.6 percent of variance in hedonic motivation is also explained by the exogenous constructs. Recent study by Thakur (2014) also found similar R^2 and which indicates that the conceptual model has substantive explanatory power. In line with the recommendation of Cohen (1988), R^2 that is above 0.26 is considered to be substantial, R^2 values of 0.13 to 0.26 is moderate while 0.02 to 0.13 is regarded to be weak. For this study, the R^2 values are above the threshold.

Additionally, cross-validated redundancy was also used to examine the quality of our model. This is done through blinding technique in PLS. The process requires the researcher

Table V.
Discriminant validity

Construct	EA	EU	HM	PS	PU
EA	0.725				
EU	0.453	0.723			
HM	0.529	0.450	0.670		
PS	0.583	0.568	0.471	0.712	
PU	0.420	0.395	0.439	0.386	0.715

Table VI.
Result of hypotheses testing

Hypotheses	Hypotheses path	Path coefficient	SE	t value	P values	95% LL	95% UL	Decision
<i>H1</i>	PU→EA	0.134	0.056	2.380	0.009***	n/a	n/a	Supported
<i>H2</i>	PU→HM	0.261	0.054	4.800	0.000***	n/a	n/a	Supported
<i>H3</i>	EU→EA	0.073	0.076	0.971	0.166	n/a	n/a	Not supported
<i>H4</i>	EU→HM	0.201	0.076	2.645	0.004***	n/a	n/a	Supported
<i>H5</i>	PS→EA	0.364	0.079	4.603	0.000***	n/a	n/a	Supported
<i>H6</i>	PS→HM	0.257	0.064	4.029	0.000***	n/a	n/a	Supported
<i>H7</i>	HM→EA	0.266	0.094	2.822	0.003***	n/a	n/a	Supported
<i>H8</i>	PU→HM→EA	0.069	0.023	3.024	0.001***	0.024	0.114	Mediated
<i>H9</i>	EU→HM→EA	0.053	0.03	1.777	0.038	-0.006	0.112	Not mediated
<i>H10</i>	PS→HM→EA	0.068	0.026	2.663	0.004***	0.018	0.118	Mediated

Notes: R^2 of endogenous variables are 0.442 and 0.326 which are acceptable based on recommendation of Falk and Miller (1992) that R^2 of 0.10 and above is acceptable. *** $p < 0.01$

to remove some data values which would be estimated as missing values. The omission distance for the blind folding running is seven and after which certain values would be generated and a comparison will be made in order to test how close the real result from the assumed results. The rule for the predictive relevance is that the value must be above zero as it is applicable in this study (see Table VII). In the table, the cross-validated redundancy values are 0.201 for e-banking adoption and 0.165 for hedonic motivation confirming that the adequacy of the predictive relevance of the model.

Effect size of the model

The essence of R^2 value of endogenous constructs is that it helps to show the strength of the model. However, a change in the R^2 value as a result of omitting certain exogenous construct in the model can also be used to assess the contribution of the omitted construct on the endogenous constructs (Hair *et al.*, 2014). This measure is regarded as the effect size (f^2). The effect size is calculated by excluding an exogenous variable once from the model (generating R^2 excluded) and include the exogenous construct once again in the model (generating R^2 included). According to Cohen (1988), f^2 values of 0.02, 0.15, and 0.35 indicate small, medium and large effects of the exogenous latent variable, respectively (Hair *et al.*, 2014).

As can be seen from Tables VIII to IX, all the exogenous constructs have small and medium effect size indicating the contribution of each contribution to the overall model variance.

Discussions and conclusions

The primary objective of our study was to critically examine the mediating role of hedonic motivation on the relationship between e-banking adoption and its various determinants (PU, perceived ease of use and perceived security). As noted from the empirical results of

Total	R^2	Cross-validated redundancy
E-banking adoption	0.442	0.201
Hedonic motivation	0.326	0.165

Table VII.
Predictive relevance
of the model

Exogenous construct	R^2 included	R^2 excluded	R^2 included- R^2 excluded	1- R^2 included	Total effect
PU	0.442	0.428	0.014	0.558	0.025
PE	0.442	0.425	0.017	0.558	0.030
PS	0.442	0.365	0.077	0.558	0.138
HM	0.442	0.399	0.043	0.558	0.077

Table VIII.
Effect size of
exogenous constructs
on endogenous
constructs
(e-banking adoption)

Exogenous construct	R^2 included	R^2 excluded	R^2 included- R^2 excluded	1- R^2 included	Total effect
PU	0.326	0.271	0.055	0.558	0.099
PE	0.326	0.300	0.026	0.558	0.047
PS	0.326	0.284	0.042	0.558	0.075

Table IX.
Effect size of
exogenous constructs
on endogenous
constructs
(hedonic motivation)

this study, hedonic motivation mediates the relationship between PU, perceived security and e-banking adoption to explain and resolve the inconsistencies that dominate the results of the past studies.

The findings from this study reveal that all the direct relationships were supported except for the relationship between perceived ease of use and e-banking adoption. Therefore, *H1*, which estimated a positive relationship between PU and e-banking adoption, is supported. The same finding has been reported by previous studies (Chong *et al.*, 2010; Pikkarainen *et al.*, 2004; Wei *et al.*, 2009). This result suggests that when users derive certain benefits or are aware of advantages of e-banking over traditional banking, they will continue to use the platform.

H2 estimated a positive and significant relationship between PU and hedonic motivation and was supported, confirming the findings of other studies (Chtourou and Souiden, 2010; Pagani, 2004). This finding conceptualizes that fun is an important tool that can be used to increase the rate of adoption among e-banking users as it appeals to their emotions as facts have begun to emerge that online banking consumers want to enjoy themselves while transacting on the internet as they prefer to patronize an alternative channel of banking that provides underground music and other facilities that can make them properly interact with the "machine." Zhou (2013) and Chtourou and Souiden (2010) in this regard argued that a site may be frustrating if the consumers could not perceive or obtain an enjoyable experience that can further trigger their satisfaction toward usage.

H4, which estimated a positive and significant relationship between perceived ease of use and hedonic motivation, was also supported (Bruner and Kumar, 2005; Igbaria *et al.*, 1995; Van der Heijden, 2004). The result suggests that one of the best ways to increase the fun that is associated with use of electronic banking platforms is to ensure the platforms can be easily used. The finding reinforces the fact that consumers of the contemporary time give more importance to ease of use of the platform. This would result in users becoming cognitively attached and continue to use the platform. It holds that a site that is easily navigated and interacted with can be used to generate fun that will subsequently increase the rate of adoption.

Furthermore, *H5*, which estimated a positive relationship between perceived security and e-banking adoption and was also supported. This aligns with the findings of past studies (Nor *et al.*, 2011; Susanto *et al.*, 2013; Yousafzai *et al.*, 2009). This result also indicates that the presence of security is a motivation for customers to adopt e-banking facilities. Susanto *et al.* (2013) argued that security may constitute greater challenges for the banks to address the deficiencies in infrastructures, and that this may build serious barriers for adoption. Mann and Sahni (2013) also validate this claim by asserting that lack of security is a major barrier to e-banking adoption by the majority of the customers.

The positive and significant relationship between perceived security and hedonic motivation (*H6*) found in this study contradicts the findings of (Ernst, 2015) but aligns with that of Weniger and Loebbecke (2011). In Ernst's study, the author found that perceived risk reduces fun but in this study, presence of security tends to intensify fun and can make users to be cognitively absorbed or attached to the electronic banking channels. Weniger and Loebbecke (2011) note that the better the access users have to fun oriented information system platforms (with respect to system security among other factors), the easier they will be mentally attached to the system. This points to the important link between security and fun.

Furthermore, the mediating effect of hedonic motivation on the relationship between PU, and e-banking adoption (*H8*) was confirmed and in line with the findings of Pagani (2004) and Chtourou and Souiden (2010). Chtourou and Souiden (2010) argued that it is important for a system usefulness to result in fun or enjoyment for users.

Similarly, the study found a mediating effect of hedonic motivation between perceived security and e-banking adoption (*H9*), confirming the findings of Ernst (2015). This in essence

indicates that positive feelings about presence of security on the e-banking platform generate fun or enjoyment which eventually makes the users to adopt e-banking. This finding is essential especially with the frustration that dominates online banking and other similar transactions.

Theoretical implication

This study has made an important theoretical contribution by critically considering the effect that PU, perceived ease of use and perceived security has on hedonic motivation, which previous studies have largely neglected. By incorporating all these variables into a single model, this research has been able to answer the call for more research to be conducted. Additionally, the mediating role of hedonic motivation as a mechanism that can be used to explain the link between PU, perceived ease of use, perceived security and e-banking adoption, is regarded as a theoretical contribution in the field of e-banking. This study is among the pioneer studies that directly and indirectly link hedonic motivation to perceived security.

Practical implication

The findings of this study have several practical implications that are a reference point for e-banking designers, marketers, managers and the government. The research reveals some factors that can play significant roles in influencing adoption of e-banking. For instance, PU positively and significantly predicts hedonic motivation (mediator), which eventually influences the adoption. This suggests that bank practitioners and designers should not just emphasize the utilitarian feature of e-banking, but give preference to the intrinsic motivation of the platform as this will guarantee adoption. This holds the arguments of previous studies that maintain that a system may seem to be satisfying the usefulness and ease of use objective of the customers while it may still be regarded as frustrating if the customers cannot enjoy it.

This finding therefore places responsibility on bank practitioners to incorporate those attributes that will serve both functions of usefulness and fun. Today, several organizations have started yielding to these calls by incorporating music, cartoons and other animation into their different online platforms. And as argued by Lowry *et al.* (2012), hedonic motivation system is outweighing utilitarian motivation system by clocking billions in sales revenues annually, and it is only one organization that can switch that will be able to join the team of winners. Recently, Apple and Sony have just bought into this mantra by developing devices with touch control and attractive design and which indicates the importance of the fun variable in affecting consumers' adoption of new products (Chtourou and Souiden, 2010). Considering the practical implication of PU toward influencing e-banking adoption also, it is highly essential for the banks to consider other innovative features that will make the general quality of e-banking transactions to be improved, while efficiency of users in other endeavors is enhanced using these platforms. For instance, experience has shown that many users of e-banking have reduced usage or totally abandoned e-banking platform for lack of personal interaction that is often enjoyed in the traditional banking system since they believe that "machine" cannot relate like a human being. It is essential for banks to incorporate attributes that would make users enjoy high quality of interactions as this would assist them to enjoy the full benefit of adoption.

Furthermore, the positive relationship between perceived security, hedonic motivation and adoption requires the banks to start rethinking their strategies. Given high level of insecurity that has dominated e-banking platforms, banking practitioners must begin to incorporate those features that will make the customers to be rest assured. It is therefore essential for banks to embed security measures such as Padlock Symbol, PKI, virtual keyboard, automatic lockout on multiple incorrect entries of passwords, mandatory use of special characters in passwords, and so on. As equally advised by George and Kumar (2013) and supported by other scholars, the banks should state the need for their customers not to compromise their passwords, and do not access their accounts using public Wi-Fi or public

systems because of key logger software that may have been incorporated into such system. When these steps are taken, the customers would be absorbed cognitively to the system and start to enjoy it without any apprehension of losing their information or money. It is also important for bank practitioners to specifically consider aspects of risk and intrusion of privacy of e-banking platforms, since evidence from this study reveals that response in this aspect is low when compared with other factors. In this wise, the banks must put innovative and practical mechanism in place that would make the customers to perceive e-banking platform to be of lower risk and an avenue where their privacy cannot be intruded.

The study also has implication for the government to equally put certain policy in place that will reassure the users of e-banking especially in the area of security. Recent events have shown that customers are quickly losing their money due to insecurity and no assurance that such money would be paid back. For instance, the total money lost to e-fraudster in the banking sector of Nigeria has risen from N159 billion in the first quarter of 2013 to N203 billion by the third quarter of year 2014. This therefore reveals that insecurity has become endemic and needs to be checked immediately and using the findings of this study will help the government to institute policies that will make the customers to be rest assured.

Limitation and future direction

This study just like any other one has some limitations that must be taken into consideration while the results of this study are being interpreted. First, this study was conducted in a developing country and among users of electronic banking. This comes as a limitation because of the peculiarity of the developing country where the level of technology is still just coming up. Hence, it is recommended that future researchers should replicate this study in other developing countries in order to test the veracity of our findings. The second part of this limitation is that we used users of electronic banking and recommended that future researchers should carry out a comparative study among users and non-users of e-banking so as to dig deep into factors that make the intending users to be willing to adopt this platform and make the actual users to either continue or discontinue usage. Notably too, the research model only explained 44.2 percent of the total variance of e-banking adoption and which indicates that there are other possible factors that may explain variance in the construct. It is therefore imperative for future researchers to consider such factors which may include perceived value, perceived cost and attitude as recommended by Sikdar *et al.* (2015).

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Variable	Item	Source
E-banking adoption	1 My time is saved using e-banking	Davis (1989), Ho and Ko (2008), Juwaheer <i>et al.</i> (2012)
	2 E-banking helps me to perform my banking in privacy	
	3 E-banking is helpful in the management of my banking activities	
	4 Having access speed is helpful for e-banking transactions	
	5 I have feeling of personal achievement for using e-banking	
	6 The tasks of e-banking are within my limit	
	7 I use e-banking because it is available 24 hours daily	
	8 I carry little cash around because I use e-banking	
	9 I prefer to use e-banking instead of branch services	
Perceived usefulness	1 I perceive that e-banking is useful in achieving my task daily	Davis (1989), Deb and Lomo-David (2014)
	2 Generally the quality of my banking transactions has improved	
	3 I monitor my banking transaction using e-banking platforms	
	4 I believe that e-banking saves time as compared to branch banking	
	5 I perceived that my work efficiency has improved due to e-banking usage	
	6 I perceived that e-banking has more uses than branch banking	
	7 I perceived that I am becoming efficient in my private activities because I am using e-banking	
	8 I think that the benefits of e-banking outweigh that of branch banking	
	9 I feel that I would have been facing some challenges with my financial activities without e-banking	
	10 In all, e-banking is useful for me to utilize banking services	
Perceived ease of use	1 I perceived that e-banking is not difficult to use	Davis (1989), Deb and Lomo-David (2014)
	2 I believe that operation of e-banking is easier when compared to branch banking	
	3 Interfaces of e-banking are more interactive	
	4 I feel that e-banking steps are easily remembered	
	5 I believe the interfaces of e-banking are friendly	
	6 Becoming skillful while using e-banking is easier	
	7 I don't need outside assistance while interacting with e-banking platform	
	8 I exercise little physical or mental effort while using e-banking	
	9 I believe I can quickly recover from mistakes and errors using e-banking	
	10 I can easily remember my codes and passwords when using the e-banking platform	
Perceived security	1 I feel secured to supply my data over the e-banking website	Deb and Lomo-David (2014), Juwaheer <i>et al.</i> (2012), Mann and Sahni (2013)
	2 I am not worried to use e-banking as I know my transactions will be secured and safe	
	3 I believe that the bank will not expose my personal information to the third party	

(continued)

Table AI.
Measurement of
constructs items and
their sources

Variable	Item	Source
	4 I do not entertain fear that the platform of e-banking will wrongly process my transactions	
	5 I feel assured that my money would be refunded if my account is hacked and money stolen	
	6 I perceived that the latest technology my banks provide would help to stop intrusion into my account	
	7 I perceived that the laws are effective to protect users against loss that may happen through e-fraud	
	8 I believe that the associated risk with e-banking is minimal	
	9 My bank gives a lot of security Instructions on how to protect account from e-fraudsters	
	10 Overall, I believe that e-banking is secured	
Hedonic motivation	1 My curiosity is often stimulated by e-banking platform	Pikkarainen <i>et al.</i> (2004),
	2 I get a lot of fun in the course of using e-banking platforms	Venkatesh <i>et al.</i> (2012)
	3 The e-banking features are entertaining	
	4 My thoughts are always aroused while using e-banking	
	5 I always feel happy with the features of e-banking	
	6 I feel pleased with the adoption of e-banking	
	7 Overall, I enjoy using e-banking	

Table A1.

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