Conceptual Framework of Factors Influencing Customers' Usage of Mobile Banking Services in Tertiary Institutions in Oyo State, Nigeria

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ABSTRACT
This study examined factors influencing consumers' usage of mobile banking services in tertiary institutions in Oyo State, Nigeria. A descriptive survey design was employed and a conceptual model was constructed using extended TAM theoretical model with the inclusions of relative advantage, perceived compatibility, perceived risk, perceived credibility, social influence, perceived self-efficacy, perceived trust and perceived awareness. The items for each construct were adapted from the previous validated constructs in literatures with little modification to suit the objectives of the study. The study employed the use of incidental random sampling technique to select three hundred and twenty respondents from each institution making a total of one thousand, six hundred. Ten hypotheses were formulated for the study and data collected were analyzed using stepwise regression analysis at 0.05 level of significant. The results of the study showed that ten independent variables; perceived risk (PR), relative advantage (RA), perceived trust (PT), perceived ease of use (PEOU), perceived usefulness (PU), social influence (SI), perceived compatibility (PCOM), perceived credibility (PC), perceived self-efficacy (PSE and perceived awareness (PAW) significantly influence consumers' intention to use mobile banking services in tertiary institutions in Oyo State, Nigeria. Relative advantage is the strongest predictor of consumers' intention to use mobile banking services in tertiary institutions in Oyo State, Nigeria followed by perceived usefulness, perceived credibility, perceived compatibility and perceived awareness. Therefore, the providers of the service should pay much attention on relative advantage by making sure that the mobile banking services has advantage over branch banking in accessing accounts from any location and at any time, and provides greater control and flexibility in managing the customers' accounts. Also, banks and service providers should project higher security when providing mobile banking services and also developed a trustworthy system so as to yield higher consumer's acceptance and usage.
Keywords: Mobile Banking, PDA, Relative Advantage, Perceived Risk, Perceived Trust, Perceived Usefulness

INTRODUCTION
Mobile phones have become a tool for everyday use, which creates an opportunity for the evolution of banking services to reach the previously unbanked population through mobile banking (Kabir, 2013). Mobile banking (hereafter m-banking) has gained attention as a viable option in delivering financial services. M-banking provides financial transactions services such as balance check, fund transfer, and bill payment via a mobile device such as cell phone, PDA, and smart phone (Sripalawat, Thongmak and Ngarmyarn, 2011). The use of mobile banking can make basic financial services more accessible to low-income people, minimizing time and distance to the nearest retail bank branches (CGAP, 2006). Mobile banking is an activity of banking transaction carried out via a mobile phone. Mobile banking is defined as "a channel whereby the customer interacts with a bank via mobile device, such as mobile phone and Personal Digital Assistant (PDA)" (Barnes and Corbitt, 2003). Mobile banking is an application of mobile commerce which enables customers to access bank accounts through mobile devices to conduct and complete bank-related transactions such as balancing cheques, checking account statuses, transferring

money and selling stocks (Kim, Shin and Lee, 2009; Tiwari and Buse, 2007). Luo, Li, Zhang and Shim (2010), defined mobile banking as an innovative method for accessing banking services via a channel whereby the customer interacts with a bank using a mobile phone.

M-banking services created a new, convenient and fast delivery channel for customers to enjoy banking services from anywhere, anytime. The scope of offered services may include facilities to conduct bank and stock market transactions, to administer accounts and to access customized information (Ravichandran, Bandaralage and Madana, 2016). Other benefits of m-banking include: reducing operation costs, minimizing transaction errors and potential for fraud, generating additional revenue through commissions and service fees, and improving customer retention and brand loyalty (Luo, Li, Zhang and Shim, 2010). M-banking services perform various functions like mini statement, checking of account history, SMS alerts, access to card statement, balance check, mobile recharge etc. via mobile phones (Vinayagamoorthy and Sankar, 2012). Banks are constantly updating their technology so as to increase their customer base by reaching to each and every customer in respective of their geographical location. Cruz, Neto, Munoz-Gallego and Laukkanen (2010) and Dasgupta, Paul and Fuloria (2011) stated that mobile banking has great potential to provide reliable services to people living in remote areas where internet facility is limited. Mobile banking "helps banks to increase speed, shorten processing periods, improve the flexibility of business transactions and reduce costs associated with having personnel serve customers physically" (Ayo, Adewoye and Oni, 2010). The use of mobile banking offers a way of lowering the cost of moving money from place to place (Donner and Tellez, 2008; Anyasi and Otubu, 2009). Mobile banking delivered prospects for banks to enlarge market diffusion through mobile services (Lee, Lee and Kim, 2007).

Although mobile banking yields enormous benefits, numerous scholars found that mobile banking adoption still remains at infancy stage (Laukkanen, 2007; Donner and Tellez, 2008; Luarn, and Lin, 2005; Suoranta, 2003). Meanwhile, Kleijnen, Ruyter and Wetzels (2007) further indicated that the usage of mobile banking has yet to meet the industrial expectations. Despite the fact that numerous mobile banking adoption studies have been investigated by (Luarn and Lin, 2005; Zhou, Lu and Wang, 2010), regrettably, most studies were conducted in countries such as Korea (Chung and Kwon, 2009; Kim et al., 2009), Singapore (Riquelme and Rios, 2010), Brazil (Puschel, and Mazzon, 2010; Cruz et al., 2010), Taiwan (Luarn and Lin, 2005) and China (Zhou et al., 2010) with relatively little attention paid to developing countries like Nigeria. Despite its advantages and the conveniences, the use of mobile banking services is much lower than expected in both the developed and developing economies (Agwu, 2012). Akturan and Tezcan (2012) stressed that the market of mobile banking still remains very small when compared to other electronic banking counterparts such as ATM; internet banking, etc. In developing countries, such as Nigeria, mobile banking has just been embraced by the banking industry. Banks have pursued strategies to encourage their clients to engage in using mobile banking (Guriting and Ndubisi, 2006). Mobile banking is relatively new in Nigeria compared to Internet banking, thus it is important for the banks to examine the

usefulness factor affecting customers' usage of mobile banking. Therefore, the theoretical model and research findings of this study will help to examine the relationship between perceived risk (PR), relative advantage (RA), perceived trust (PT), perceived ease of use (PEOU), perceived usefulness (PU), social influence (SI), perceived compatibility (PCOM), perceived credibility (PC), self-efficacy (SE), perceived awareness (PAW) towards consumers' intention to use mobile banking services tertiary institutions in Oyo State, Nigeria.

Related Study

Different studies have been carried out on the factors that influence customers' adoption of mobile banking. For instance, Kabir (2013) investigated the factors that influence the users of banking services to use mobile banking in Bangladesh using a self-administrated questionnaire distributed among the clients of two full fledged mobile banking service providers of Bangladesh called Brac Bank Limited and Dutch Bangla Bank Limited. The influencing factors are analyzed under the four major factors Perceived Risk, Trust, Convenience, Relative Advantage under which several other factors have been explored. Factors such as performance risk, security/privacy risk, time risk, social risk and financial risk are found to be negatively related with the usages of Mobile Banking as perceived risk make the users confused about their security in using mobile banking while factors like ability, integrity, benevolence, perceived usefulness, perceived ease of use relative cost and time advantages are positively related with the intention to use mobile banking services. However, social security is the only factor found insignificant. Khraim, AL Shoubaki and Khraim (2011) investigated factors that affect mobile banking adoption in Jordan. Data for this study was collected through a questionnaire that containing 22 questions. Out of 450 questionnaires that were distributed, only 301 were returned (66.0%). The research findings suggested that all the six factors; self efficacy, trailability, compatibility, complexity, risk and relative advantage were significantly influencing mobile banking adoption. Also Kazi and Mannan (2013) examined the determinants likely to influence the adoption of mobile banking services, with a special focus on under banked/unbanked low-income population of Pakistan. The study used Technology Acceptance Model (TAM) with additional determinants of perceived risk and social influence. Data was collected by surveying 372 respondents from the two largest cities (Karachi and Hyderabad) of the province Sindh, in Pakistan using judgement sampling method. The study empirically concluded that consumers' intention to adopt mobile banking services was significantly influenced by social influence, perceived risk, perceived usefulness, and perceived ease of use. The most significant positive impact was of social influence on consumers' intention to adopt mobile banking services.

Jeong and Yoon (2013) in their study explored factors influencing adoption of mobile banking using an extended Technology Acceptance Model (TAM) with five factors which influence consumers' behavioral intention to adopt mobile banking: perceived usefulness, perceived ease of use, perceived credibility, perceived self-efficacy, and perceived financial cost. Data was collected from 165 respondents through a survey questionnaire, and the regression was used to analyze the relationships. The findings of

the study indicated that all factors except for perceived financial cost have a significant impact on behavioral intention towards mobile banking usage. Perceived usefulness is the most influential factor explaining the adoption intention. The findings also revealed that consumers' perceptions are different between mobile banking users and non-users. For users, perceived ease of use is the important factor while perceived self-efficacy significantly influence non-users' adoption intention. Gezahegn (2016) investigated factors influencing the usage of mobile banking in Ethiopia. The study tries to build on two widely used models for technology adoption, the Technology Acceptance Model (TAM) and Innovation Diffusion Theory and to identify factors influencing customer's usage of mobile banking. A research model uses the TAM model and IDT model by integrating perceived risk, trust and awareness into the established models. This study was conducted based on the data gathered from customers of Commercial Bank of Ethiopia and United Bank in Addis Ababa, Ethiopia. Survey was conducted using questionnaire. Out of 400 questionnaires that have been distributed, 383 were usable. The analysis of the data was done with the help of the SPSS and EViews. The research results found relative advantage, compatibility, perceived trust, perceived usefulness, and perceived risk as major influencing factors for mobile banking adoption whereas perceived ease of use and awareness were found to have insignificant effect on mobile banking usage for bank customers located in Addis Ababa, Ethiopia.

Cheah et al. (2011) examined the factors that influence Malaysians' intention to adopt mobile banking by extending the renowned framework of Technology Acceptance Model (TAM). A self-administered questionnaire was developed and distributed in Malaysia. Out of the 400 questionnaires, only 175 useable questionnaires were returned, yielding a response rate of 43.75 percent. Results were subsequently analyzed by using multiple regression and factor analysis. Factors such as perceived usefulness (PU), perceived ease of use (PEOU), relative advantages (RA) and personal innovativeness (PI) were found positively related with the intention to adopt mobile banking services. However, social norms (SN) were the only factor found insignificant. As expected, perceived risks (PR) was negatively associated with the mobile banking adoption. Ravichandran, Bandaralage and Madana (2016) investigated factors affecting the mobile banking adoption in Sri Lanka. Using Diffusion of Innovation as a baseline theory, a convenient sample of 40 actual mobile banking customers was selected from four commercial banks in Kurunegala District. Data are obtained by using self-administered questionnaire and analyzed with the use of SPSS V 21. It is found that perceived usefulness, perceived risk, and compatibility have impact on M-banking adoption. Contrary to the findings in extant literature, social influences have no significant effect on adoption. The findings of this study will have practical implications for banking industry in Sri Lanka.

Peter and Rasmus (2011) investigated consumer acceptance of mobile payment services (MPS). An empirical study of factors explaining Swedish consumers' intention to use mobile payment system. Based on previous surveys and theories, the researchers developed five constructs into a research model to measured consumer acceptance; Perceived Compatibility (PC), Perceived Usefulness (PU), Perceived Ease of Use

(PEOU), Perceived Security (PS) and Subjective Norm (SN). The researchers concluded that PC and PU are the main determents for consumers' acceptance of MPS. PS is supported and important more to older than younger generations. Their model did not find PEOU and SN significant in determining the consumers' acceptance of MPS. In the end, managerial recommendations are given. Liu and Tai (2016) examined Factors Affecting the Intention to Use Mobile Payment Services in Vietnam. This study attempts to analyze the impact of various variables extracted from mobility, convenience, compatibility, M-payment knowledge, ease to use, usefulness, risk, trust, and safe to use on intention to use mobile payment. Quantitative questionnaire is used to measure responses of participants. The statistical analysis method employed in this study applies Structural Equation Modeling to test all hypotheses. The results indicate that the strong predictors of the intention to use M-payment are perceived ease of use and perceived usefulness. All respondents show that they do not care about risk when they have intention to use mobile payment services. Convenience of mobility, compatibility, and mobile payment knowledge has impacts on ease to use and usefulness. Among of them, compatibility has the most significant impact on ease to use and usefulness in the opinion of those surveyed. Specially, it proved that trust of safe to use has no significant impact on usefulness, but instead has direct impact on intension to use mobile payment services. The outcomes of this research have important connotations for the improvement and development of mobile payment services in Vietnam.

Phonthanukitithaworn, Sellitto and Fong (2016) investigated the factors that influence an individual's intention to use m-payment services and compares groups of current users (adopters) with potential users (non-adopters). The study developed a research model that reflects the behavioral intention to use m-payment services is developed and empirically tested using structural equation modeling on a data set consisting of 529 potential users and 256 current users of m-payment services in Thailand. The results show that the factors that influence current users' intentions to use m-payment services are compatibility, subjective norms, perceived trust, and perceived cost. Subjective norms, compatibility, ease of use, and perceived risk influenced potential users' intentions to use m-payment. Subjective norms and perceived risk had a stronger influence on potential users, while perceived cost had a stronger influence on current users, in terms of their intentions to use m-payment services. Odumeru (2012) studied a cross sectional analysis of determinants of acceptance of e-banking in Nigeria using a modified Technology Acceptance Model (TAM) as research framework. Four hundred questionnaires were distributed to customers of different banks to elicit relevant data out of which two hundred and forty nine (249) were found to be useful. These questionnaires were designed using the 5- point Likert scale and the Cronbach Coefficient Alpha was used to test for reliability and consistency of research instrument. Linear Multiple Regression Analysis was employed to determine the effect of Age (A), Educational Background (PB), Income (Y), Perceived Benefits (PB), Perceived Ease of Use (PEOU), Perceived Risk (PR) and Perceived Enjoyment (PE) on Acceptance of E-banking (AI).The Statistical Package for Social Sciences (SPSS) was used for computation. The result shows that acceptance of e-

banking in Nigeria is significantly influenced by Age, Educational Background, Income, Perceived Benefits, Perceived Ease of Use, Perceived Risk and Perceived Enjoyment.

Makongoro (2014) conducted a study to analyze the factors that influence consumer adoption of mobile banking in Tanzania. A questionnaire was developed and then distributed to customers of major mobile banking service providers in Tanzania. Using primary data collection method, from the 150 questionnaires that were distributed 105 questionnaires was successfully returned but only 95 were useable for analysis yielding a 62.7% response rate. The results of the study suggested that perceived risk, relative advantage and convenience are the determinant factors in influencing consumers' adoption decisions. Ayoade (2016) examined factors influencing the usage of e-government services in Nigeria using three local government areas in Oyo Township (i.e. Atiba, Oyo West and Oyo East). A conceptual model was constructed based on extended TAM theoretical model with the inclusion of perceived credibility and perceived compatibility and moderated variables (e.g. gender, age, income, educational level, trust in the internet and trust in government agencies). The results of the study show that perceived usefulness, perceived credibility and computer self-efficacy had significant effects on the behavioural intention to use e-government services, and these effects increases for users' with high educational level (graduate or postgraduate). However, the findings of this study showed that perceived ease of use and perceived compatibility have insignificant effect on the behavioural intention to use the e-government services and age and income does not moderated significant influence on the relationship between the independent variables and dependent variable. Also, behavioural intention has a significant effect on the use behaviour of e-government services and that effect increases as trust in the internet and trust in government agencies increases. Also facilitating conditions has significant effect on the use behaviour of e-government services and that effect increases for men and users' with high educational level.

Statement of the Problem
Mobile banking has been in use since early 2000s in many parts of the world. Indeed, European banks started using the service in 1999 upon the launch of smart phones. In Nigeria, almost all commercial banks have embraced the service. It is documented that mobile banking is associated with many benefits which include reduced time of transaction and the need for physical bank branches. Against this backdrop, however, it is observed that, there have been conspicuous barriers that have limited the adoption and use of the mobile banking in Nigeria. This is evidenced by the fact that the use of mobile banking services is much lower than initially anticipated and still underused, and the mobile banking market still remains very small when compared to the entire banking transactions. It is further observed that the widespread adoption and large usage of cellular phones in Nigeria did not translate to adoption and usage of mobile banking. Therefore, this study sought to find out from the consumer perspective, the factors that influence consumers' usage of mobile banking services in tertiary institutions in Oyo State, Nigeria with special reference to perceived risk, relative advantage, perceived trust,

perceived ease of use, perceived usefulness, social influence, perceived compatibility, perceived credibility, perceived self-efficacy and perceived awareness.

Objectives of the Study

The main objective of this study is to examine factors influencing customers' intention to use mobile banking services in tertiary institutions in Oyo State, Nigeria. Specifically, the objectives of the study include:

(i) To examine the relationship between perceived risk (PR) and customers' usage of mobile banking services in tertiary institutions in Oyo State, Nigeria (CUM).

(ii) To examine the relationship between relative advantage (RA) and customers' usage of mobile banking services in tertiary institutions in Oyo State, Nigeria (CUM).

(iii) To examine the relationship between perceived trust (PT) and customers' usage of mobile banking services in tertiary institutions in Oyo State, Nigeria (CUM).

(iv) To examine the relationship between perceived ease of use (PEOU) and customers' usage of mobile banking services in tertiary institutions in Oyo State, Nigeria (CUM).

(v) To examine the relationship between perceived usefulness (PU) and customers' usage of mobile banking services in tertiary institutions in Oyo State, Nigeria (CUM).

(vi) To examine the relationship between social influence (SI) and customers' usage of mobile banking services in tertiary institutions in Oyo State, Nigeria (CUM).

(vii) To examine the relationship between perceived compatibility (PCOM) and customers' usage of mobile banking services in tertiary institutions in Oyo State, Nigeria (CUM).

(viii) To examine the relationship between perceived credibility (PC) and customers' usage of mobile banking services in tertiary institutions in Oyo State, Nigeria (CUM).

(ix) To examine the relationship between perceived self-efficacy (PSE) and customers' usage of mobile banking services in tertiary institutions in Oyo State, Nigeria (CUM).

(x) To examine the relationship between perceived awareness (PAW) and customers' usage of mobile banking services in tertiary institutions in Oyo State, Nigeria (CUM).

Conceptual Model and Research Hypotheses

The conceptual framework in this study shows the relationship between independent variables (Perceived Risk, Relative Advantage, Perceived Trust, Perceived Ease of Use, Perceived Usefulness, Social Influence, Perceived Compatibility, Perceived Credibility, Perceived Self-Efficacy, Perceived Awareness and dependent variable (Customers' Intention to Use Mobile Banking Services in Tertiary Institutions in Oyo State, Nigeria).
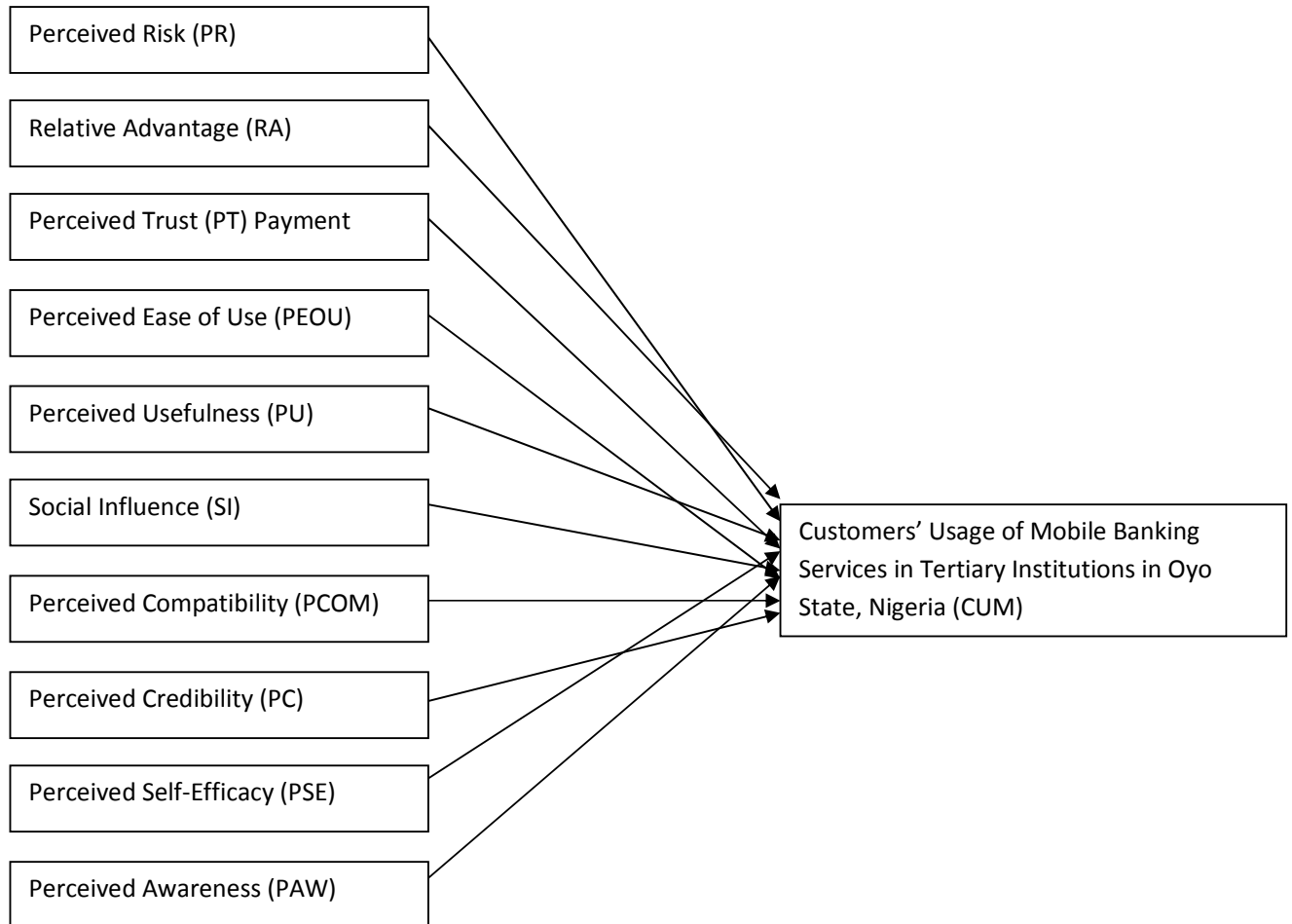
Figure 1: Conceptual Research Model of the Study (Adapted from Gezahegn, 2016; Ayoade, 2016; Phonthanukitithaworn et al., 2016)

Research Hypotheses

The following research hypotheses were formulated based on the conceptual research model of the study:

(i) There is no significant relationship between perceived risk (PR) and customers' usage of mobile banking services in tertiary institutions in Oyo State, Nigeria (CUM).

(ii) There is no significant relationship between relative advantage (RA) and customers' usage of mobile banking services in tertiary institutions in Oyo State, Nigeria (CUM).

(iii) There is no significant relationship between perceived trust (PT) and customers' usage of mobile banking services in tertiary institutions in Oyo State, Nigeria (CUM).

(iv) There is no significant relationship between perceived ease of use (PEOU) and customers' usage of mobile banking services in tertiary institutions in Oyo State, Nigeria (CUM).

(v) There is no significant relationship between perceived usefulness (PU) and customers' usage of mobile banking services in tertiary institutions in Oyo State, Nigeria (CUM).

(vi) There is no significant relationship between social influence (SI) and customers' usage of mobile banking services in tertiary institutions in Oyo State, Nigeria (CUM).

(vii) There is no significant relationship between perceived compatibility (PCOM) and customers' usage of mobile banking services in tertiary institutions in Oyo State, Nigeria (CUM).

(viii) There is no significant relationship between perceived credibility (PC) and customers' usage of mobile banking services in tertiary institutions in Oyo State, Nigeria (CUM).

(ix) There is no significant relationship between perceived self-efficacy (PSE) and customers' usage of mobile banking services in tertiary institutions in Oyo State, Nigeria (CUM).

(x) There is no significant relationship between perceived awareness (PAW) and customers' usage of mobile banking services in tertiary institutions in Oyo State, Nigeria (CUM).

METHODOLOGY

Research Design

The descriptive research design of the survey type was employed in the study.,

Population of the study

The population of the study consists of both staff and students of Emmanuel Alayande College of Education, Oyo, Federal College of Education (Special), Oyo, College of Education, Lanlate, The Polytechnic Ibadan, Ibadan and Federal School of Surveying, Oyo.

Sample and Sampling Techniques

An incidental random sampling technique was utilized to select 1600 respondents from the population of the study.

Research Instrument

Structured questionnaire which was made of three sections was used as an instrument for data collection. The first section sought information on demographic information of the respondent, the second section consists of 30 items measuring ten potential determinants and the third section consists of 3 measure items for customers' Usage of mobile banking services. All these measurement items were adapted from the previous questionnaires used by the following researchers in their study (Gezahegn, 2016; Ayoade, 2016; Phonthanukitithaworn et al., 2016) and analyzed by five-point Likert-type scales anchored at 1 for "strongly disagree" and 5 for "strongly agree". Since the items were adapted from previous questionnaires used in related studies, it is believed that such might have undergone validation process. This in part justifies the validity of the questionnaire.

Validity and Reliability of the Instrument

The face and content validity of the questionnaire was ascertained through the consultation of experts in Test and Measurement. A sample of twenty respondents was

selected apart from the selected sample and the questionnaire was administered on them. A test-retest reliability method of two weeks interval was embarked upon. Data collected was subjected to Cronbach Alpha and the reliability coefficient returned α= 0.98 for the overall questionnaire while the reliability coefficient of the sub-scale was analyzed using Pearson Product Moment Correlation (PPMC) and returned the following: Perceived Risk r = 0.72; Relative Advantage r = 0.81; Perceived Trust r = 0.79; Perceived Ease of Use r = 0.76; Perceived Usefulness r =0.82; Social Influence r = 0.74; Perceived Compatibility r = 0.71; Perceived Credibility r = 0.89; Perceived Self-Efficacy r = 0.84; Perceived Awareness r = 0.88 and the Customer Usage of Mobile Banking r = 0.91.

Method of Administration of the Instrument

The instrument was administered personally by the researcher on the sample respondents through the help of head of departments/units in the five institutions sampled. Only 1500 copies of the completed questionnaire were retrieved from the sample respondents to give 93.8 return rates. Therefore, one thousand, five hundred (1500) questionnaires were used for the study.

Method of Analysis of the Data

Statistical Package for Social Sciences (SPSS) package 17.0 was used to analyze the data collected from the respondents. The statistical techniques adopted are simple percentage, frequency count and regression analysis test at 0.05 level of significant.

Results

Table 1: Demographic data of the respondents (N=1,500)

Demographic	Frequency	Percentage
Age		
Less than 25 Years old	154	10.3
25-34 Years old	289	19.3
35-44 Years old	633	42.2
Above 44 Years old	424	28.2
Gender		
Male	792	52.8
Female	708	47.2

Source: Survey, 2018

Table 1 showed the demographic information of the participants. The table indicates that older participants were more represented than the younger ones (i.e. 42.2% and 28.2%) is more than (10.3% and 19.3%). In terms of gender, 52.8% were male and 47.2% were female; this shows that male was more represented than female participants.

Table 2: Summary of Survey Findings for Customers' Usage of Mobile Banking Services Factors (N=1500)

	Statement to evaluate	Rating point					Remark

Perceived Risk (PR)								
PR1	Mobile banking services may not perform well and may process payments incorrectly because of network problems	4.8%	11.3%	4.7%	52.9%	26.3%	Agree
PR2	When and if transaction errors occur, I will get compensation from banks.	48.9%	16.3%	3.9%	15.0%	15.9%	Strongly Disagree
PR3	I'm worried about using mobile banking because other people may be able to access my account.	12.8%	52.5%	2.9%	13.7%	18.1%	Disagree
PR4	I'm sure that if I decided to use mobile banking and something went wrong with the transactions, my friends, family and colleagues would think less of me.	4.8%	13.1%	6.3%	47.1%	28.7%	Agree
PR5	It would take me lots of time to learn how to use mobile banking services.	5.6%	11.2%	52.3%	4.2%	26.7%	Neutral
Relative Advantage (RA)								
RA1	Mobile banking is faster than visiting a bank or using phone banking	5.7%	12.9%	6.4%	24.7%	50.2%	Strongly Agree
RA2	Mobile banking is more accessible than other banking (e.g.: visiting a bank or using phone banking)	6.1%	14.7%	7.3%	22.2%	49.7%	Strongly Agree
Perceived Trust (PT)								
PT1	I believe mobile network service providers and banks are trustworthy.	14.1%	51.2%	2.9%	13.7%	18.1%	Disagree
PT2	I trust the use of mobile banking	13.3%	49.2%	4.2%	14.3%	19.0%	Disagree

Perceived Ease of Use (PEOU)							
PEOU1	I think that learning to use mobile banking would be easy	6.9%	13.6%	6.6%	22.4%	50.5%	Strongly Agree
PEOU2	I think that it is easy to use mobile banking to accomplish my banking tasks.	5.9%	13.2%	48.7%	5.1%	27.1%	Neutral
PEOU3	It would take me lots of time to learn how to use mobile banking services.	50.6%	5.5%	7.1%	13.1%	23.7%	Strongly Disagree

Perceived Usefulness (PU)							
PU1	I think that using mobile banking would enable me to complete banking activities more quickly and easily	4.9%	7.7%	10.1%	20.7%	56.6%	Strongly Agree
PU2	I find Mobile banking useful for my banking needs.	6.5%	13.7%	6.9%	22.8%	50.1%	Strongly Agree
PU3	There is no time limit to access my bank account and information	6.2%	10.2%	22.4%	7.1%	54.1%	Strongly Agree
Social Influence (SI)							
SI1	People who are important to me think that I should use mobile banking.	6.3%	10.1%	53.7%	7.2%	22.7%	Neutral
SI2	People whose opinions I value will prefer me to use mobile banking.	5.5%	13.8%	6.3%	47.3%	27.1%	Agree
SI3	People who are important to me will support my use of mobile banking.	14.8%	48.2%	4.1%	14.4%	18.5%	Disagree
Perceived Compatibility (PCOM)							
PCOM1	Using mobile banking fits well with the way I like to control and manage my banking transactions.	6.0%	15.2%	7.0%	49.4%	22.4%	Agree

PCOM 2	I use the current banking service (e.g. phone banking, and internet banking) now because these are already a part of my daily life.	7.6%	14.2%	8.0%	46.3%	23.9%	Agree
Perceived Credibility (PC)							
PC1	Using mobile banking services will not divulge my privacy.	6.8%	15.0%	8.1%	46.6%	23.5%	Agree
PC2	Mobile banking platform are more credible.	7.5%	15.1%	7.9%	45.9%	23.6%	Agree
PC3	I would find mobile banking services reliable in conducting bank transactions.	6.9%	14.7%	7.8%	47.6%	23.0%	Agree
PC4	I would find mobile banking services keeping my information confidentially.	7.1%	14.6%	8.3%	46.2%	23.8%	Agree
Perceived Self-Efficacy (PSE)							
PSE1	I am confident of using mobile banking services if I have only the online instruction for reference.	7.2%	15.4%	7.3%	45.6%	24.5%	Agree
PSE2	I am confident of using mobile banking services even if there is no one around to show me how to do it.	7.0%	15.3%	6.1%	48.3%	23.3%	Agree
PSE3	I am confident of using mobile banking services even if I have never used such a system before.	7.4%	14.8%	8.5%	46.1%	23.2%	Agree
PSE4	I believe I have the ability to install and configure the software to access mobile banking services on my mobile phone.	15.2%	46.0%	4.8%	15.2%	18.8%	Disagree
Perceived Awareness (PAW)							
PAW1	I am aware that my bank offers mobile banking services	5.1%	17.0%	4.4%	49.9%	23.6%	Agree
PAW2	I am aware of all the various available services on mobile banking	5.2%	13.0%	12.1%	56.2%	13.5%	Agree
Customers' Usage of Mobile Banking Services (CUM)							
CUM1	I would use mobile banking services to transfer money from my bank account to another	7.8%	15.3%	7.0%	47.5%	22.5%	Agree

	account.						
CUM2	Using mobile banking services for handling related banking transactions is something I would do.	6.2%	13.7%	7.4%	50.0%	22.7%	Agree
CUM3	I would see my self using mobile banking services to pay for bills, checking status of my accounts and other related banking transactions.	4.2%	17.3%	6.1%	53.3%	19.1%	19.1%

Source: Survey, 2018

According to (Kabir 2013), perceived risk may be seen from various perspectives such as privacy risk, financial risk, system risk and physical security risk. The respondents were asked mobile banking services may not perform well and may process payments incorrectly because of network problems which is system risk 52.9% agreed and 48.9% disagreed when asked if they believe that they can get compensation from banks when and if transaction errors occur. As for the privacy concerns of the respondents when asked if they are concerned about other people accessing their account when using mobile banking 52.5% of them disagreed. And 47.1% customers agreed that if they decided to use mobile banking and something went wrong with the transactions, my friends, family and colleagues would think less of me which indicates their fear over the social risk. Finally respondents were neutral when asked if they think that it take them lots of time to learn how to use mobile banking services.

Out of the total respondents 50.2% strongly agreed that mobile banking is faster than visiting a bank or using phone banking and 49.7% responded by strongly agreeing to the inquiry if they find mobile banking more accessible than other banking (For example:- visiting a bank or using phone banking). This indicated that majority of the customers found mobile banking to have a relative advantage over other banking options. This showed that mobile banking has relative advantages compared to other traditional banking services which may attract customers towards using it.

The respondents were asked if they believe mobile network service providers and banks are trustworthy 51.2% disagree and also 49.2% disagreed when asked if they trust the use of mobile banking and This indicates that customers are yet to embrace and fully trust the mobile banking services and the network providers. Therefore, as long as customers trust the overall mobile banking technology their adoption rate will remain at low level.

When asked if they agree that learning to use mobile banking would be easy 50.5% of the respondents strongly agreed and when asked if mobile banking would make it easier for them to carry out their tasks 48.7% were neutral. In addition when they were further asked if they think it will take them lots of time to learn how to use mobile banking services

50.6% of the respondents strongly disagreed. Therefore; from the above responses it can be seen that customers perceive mobile banking to have ease of use and to be.

As it is shown on table below 56.6% of the respondents strongly agreed that using mobile banking would enable them to complete banking activities more quickly and easily and when asked if they found mobile banking useful for their banking needs 50.1% of the respondents strongly agreed. Respondents were also asked whether there is no time limit to access their bank account and information and 54.1% strongly agreed. These result implies, that using mobile banking system helps to perform banking activities within a short period of time and also customers can access their account any time with no time limit.

When asked if people who are important to them think that they should use mobile banking 53.7% of the respondents were neutral and when asked if people whose opinions they value will prefer them to use mobile banking 47.3% of the respondents were agreed. In addition when they were further asked if people who are important to them will support them to use mobile banking 48.2% of the respondents disagreed. Therefore, as long as customers do not get full support from their social norms the usage of mobile banking will remain low.

As it is shown in the table below regarding the compatibility of mobile banking with the way customers like to control and manage their banking transactions 49.4% agreed and 46.3% agreed to the statement I use the current banking service (For Example:- phone banking, and internet banking) now because these are already a part of my daily life. This implies that when customers feel mobile banking being consistent with their existing life style and trend then its adoption will eventually increase.

Also shown in the table below regarding that mobile banking services will not divulge the privacy 46.6% agreed and 45.9% agreed with the statement that mobile banking platforms are more reliable. Likewise 47.6% agreed with the statement mobile banking services reliable in conducting bank transactions and finally 46.2% agreed that mobile banking services keeping the information confidentially. This implies that when customers feel using the mobile banking services as long as it maintain its credibility.

It was shown in the table below that 45.6% of the respondents agreed that they were confident of using mobile banking services suppose they were given online instruction reference. Also 48.3% agreed that they were confident of using mobile banking services even if no one is around to show them how to do it while 46.1% agreed that they were confident of using mobile banking services even if they have never used such system before and lastly 46.0% disagreed with the statement I believe I have the ability to install and configure the software to access mobile banking services on my mobile phone. This implies that customers are likely to use mobile banking services if they believe themselves.

To determine the level of awareness of the respondents about mobile banking two statements were stated and respondents were asked to state their level of agreement and 49.9% agreed to the statements I am aware that my bank offers mobile banking services and 56.2% of the respondents agreed that they are aware of all the various available services on mobile banking. This result indicates that customers are aware about availability of mobile banking and its advantage and disadvantage.

Table 3: Multiple Regression Analysis of Factors influencing Customers' Usage of Mobile Banking Services (N=1500)

Model	R	R²	Adjusted R²	Standard Error of the Estimate
1	0.986	0.972	0.971	0.183

Analysis of Variance

Model	Sum of Squares	DF	Mean Square	F	Sig.
Regression	1706.752	10	170.675	50.093	0.000
Residual	50.032	1488	0.034		

Coefficient of the Prediction (N=1500) ** Significant at 0.05

Model	Unstandardized Coefficient		Standardized Coefficient			
	B	Std. Error	Beta	t	Sig.	
PR	0.204	0.007	0.596	8.735	0.000**	
RA	0.416	0.006	0.858	4.649	0.000**	
PT	0.189	0.009	0.471	2.684	0.000**	
PEOU	0.355	0.010	0.660	3.983	0.000**	
PU	0.273	0.004	0.850	2.482	0.000**	
SI	0.349	0.010	0.669	4.867	0.000**	
PCOM	0.380	0.007	0.816	4.619	0.000**	
PC	0.192	0.003	0.820	5.523	0.000**	
PSE	0.217	0.006	0.665	4.463	0.000**	
PAW	0.375	0.007	0.810	3.440	0.000**	
CONSTANT (CUM)	12.342	0.276		17.293	0.000**	

Source: Survey, 2018

The coefficient of determination R^2 and adjusted R^2 are 0.972 and 0.971 respectively meaning that 97.1% of the variation of customers' usage of mobile banking services in tertiary institutions in Oyo State, Nigeria was explained by the ten independent variables shown in table 3 below. R^2 value ranges from zero and one, the closer the value is to one, the better "fit" the model is.

The results of the significant test of regression model F value of 50.093 and sig. f is 0.000 indicates that the model has a significant statistic and it indicates the "goodness" of fit of the model.

In addition, perceived risky (β =0.596, $t(1488)$ = 8.735, $p<$ 0.05), relative advantage (β =0.858, $t(1488)$ = 4.649, $p<$ 0.05), perceived trust (β =0.471, $t(1488)$ = 2.684, $p<$ 0.05), perceived ease of use (β =0.660, $t(1488)$ = 3.983, $p<$ 0.05), perceived usefulness (β =0.850, $t(1488)$ = 2.482, $p<$ 0.05), social influence (β =0.669, $t(1488)$ = 4.867, $p<$ 0.05), perceived compatibility (β =0.816, $t(1488)$ = 4.619, $p<$ 0.05), perceived credibility (β =0.820, $t(1488)$ = 5.523, $p<$ 0.05), perceived self-efficacy (β =0.665, $t(1488)$ = 4.463, $p<$ 0.05), perceived awareness (β =0.810, $t(1488)$ = 3.440, $p<$ 0.05) contributed significantly to the regression model. That is, customers' intention to use mobile banking were facilitated by their perceptions of risk, relative advantage, trust, ease of use, usefulness, social influence, compatibility, credibility, self-efficacy and awareness. Also, by examining the standardized regression coefficients, relative advantage (β = 0.858) appeared to be the strongest factor that contributed to the variance in customers' intention to use mobile banking services, followed by perceived usefulness (β = 0.850), perceived credibility (β = 0.820), perceived compatibility (β = 0.816) and perceived awareness (β = 0.810) respectively.

Discussion of the Findings

The results from table 3 indicated that there is significant relationship between the perceived risk (PR), perceived usefulness (PU), perceived ease of use (PEOU), perceived trust (PT), perceived credibility (PC), perceived compatibility (PCOM), perceived self-efficacy (PSE) and customers' usage of mobile banking (CUM). This finding corroborates the findings of the previous studies (Kabir, 2013; Jeong and Yoon, 2013; Gezahegn, 2016; Ayoade, 2016; Liu and Tai, 2016; Ravichandran, Bandaralage and Madana, 2016; Peter and Rasmus, 2011). For instance, Kabir (2013) founds that PU, PEOU, PR and PT were factors that significantly influence the usage of mobile banking in Bangladesh. Jeong and Yoon (2013) founds that PU, PEOU, PC and PSE have significant impact on the bahavioural intention towards mobile banking usage in Singapore.

Also, the results from table 3 showed that there is significant relationship between relative advantage (RA) and customers' usage of mobile banking (CUM). This finding is in consistent with the findings of the previous studies (Gezahegn, 2016; Makongoro, 2014; Khraim et al., 2011; Cheah et al., 2011). For instance, Gezahegn (2016) founds that RA is one of the significant factors that influence mobile banking adoption in Ethiopia while Khraim et al. (2011) founds that RA significantly influence mobile banking adoption in Jordan.

Moreover, the results from table 3 showed that there is significant relationship between social influence (SI) and customers' usage of mobile banking (CUM). This finding is

similar with the findings of both Phonthanukitithaworn et al. (2016) and Kazi and Mannan (2013). Phonthanukitithaworn et al. (2016) founds that social influence is one of the significant factors that influenced users intentions to use m-payment in Thailand while Kazi and Mannan (2013) founds that social influence significantly influence consumers' intention to adopt mobile banking in Pakistan.

Finally, the results from table 3 revealed that there is significant relationship between perceived awareness (PAW) and customers' usage of mobile banking (CUM). This finding contradict the findings of Gezahegn (2016) that founds that perceived awareness is insignificantly has effect on mobile banking usage in Ethiopia.

CONCLUSION AND RECOMMENDATIONS

This study examines factors influencing the consumers' usage of mobile banking services in tertiary institutions in Oyo State, Nigeria. A conceptual framework model of ten independent variables (PR, RA, PT, PEOU, PU, SI, PCOM, PC, PSE and PAW) and one dependent variable (CUM) was developed. It was found that all the factors (i.e. PR, RA, PT, PEOU, PU, SI, PCOM, PC, PSE and PAW) significantly influence the consumers' usage of mobile banking services in tertiary institutions in Oyo State, Nigeria (CUM). Conclusively, the results of this study suggests that for mobile banking technology to be accepted and used by users, they should perceive it as a useful and quicker way of doing banking transactions compared with the traditional banking system. Also mobile banking services should be found compatible when matching it with the existing values, past experiences, and needs of the potential users. Mobile banking services should has a relative advantage over branch banking in accessing accounts from any location and at any time, and provides greater control and flexibility in managing the customers' accounts. In addition, banks and service providers should project higher security when providing mobile banking services and also developed a trustworthy system so as to yield higher consumer's acceptance and usage.

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