



## PERCEPTIONS AND ADOPTION OF MOBILE MONEY SERVICES AMONG SELECTED UNIVERSITY STUDENT'S IN NIGERIA

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### Abstract:

Student's perceptions towards the adoption of mobile money services in Nigeria was carried out to find out why there was a low adoption of mobile money services among the students despite its huge benefits. The main objective was to examine the relationship between students' perceptions and adoption of mobile money services. The study was based on Social Cognitive Theory by Bandura, 1989. A survey method was adopted. The sampling technique was purposive sampling, the sample size of 400. Bio-data was analyzed with descriptive statistics while multiple regressions were used to test the hypotheses. The result shows that Reciprocal determinism has a positive significant relationship with the adoption of mobile money services ( $\beta=.098$ ,  $t= 2.392$ ,  $p<.354$ ). Forethought capacity had no statistically significant relationship on the adoption of mobile money services ( $\beta=.023$ ,  $t= .631$ ,  $p<.528$ ). Vicarious capacity has a positive significant relationship with the adoption of mobile money services ( $\beta=.163$ ,  $t= 5.036$ ,  $p<.000$ ). Self-reflective capacity has a positive significant relationship with the adoption of mobile money services ( $\beta=.619$ ,  $t= 12.488$ ,  $p<.000$ ). Self-regulatory capacity has a positive significant relationship with the adoption of MMS ( $\beta=.059$ ,  $t= 1.702$ ,  $p=.089$ ). Mobile money operators should endeavor to create awareness that is based on informing the students on the success and benefit of the system, the government should provide enabling the environment for mobile money services to work effectively in all the universities in Nigeria. University authorities should hence fort ensure that students pay their tuition fees and other fees through mobile money services.

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## 1. Introduction

In recent years, the adoption of e-banking began to occur quite extensively as a channel of distribution for financial services due to rapid advances in information technology and intensive competitive banking markets (Oladele and Akeke, (2012). Mobile Money Transfer Service is a wireless network infrastructure for storing and moving money thus facilitates the exchange of cash and electronic value between various economic actors including clients, businesses, the government and financial service providers (Kendall, Maurer, Machoka, and Veniard, 2011). The usage and adoption of mobile money services was enabled by the deregulation of Nigerian telecommunications sector in 2001, which allowed the country to join the rest of the world in acquiring the Global System for Mobile Communications, popularly known as GSM, with about 422,000 subscribers nobody envisaged its far-reaching benefits to the economy and people of Nigeria (GSMA, 2013).

In 2011, Central Bank of Nigeria launched mobile money services with the licensing of 16 mobile money operators to provide the Mobile Money service: 10 non-bank-led (Pagatech, Paycom, M-Kudi, Chams, Eartholeum, E-Tranzact, Parkway; Monitise, FET, and Corporate) and 6 bank-led (Stanbic IBTC Bank, Ecobank Nigeria, Fortis MFB, UBA/Afripay, GTBank/MTN, and First Bank of Nigeria). (Central Bank of Nigeria, 2011) The Central Bank of Nigeria has recently passed a policy to take effect in 2012 requiring that all cash withdrawals and deposits be set at a daily limit of a maximum of N150, 000 while pegging that of corporate entities at N1, 000,000, with penalty fees of N100 per extra N1,000 and N200 per N1,000 imposed on individual and corporate defaulters respectively (Okeke, 2013). This policy is geared towards achieving a Cashless Economy where all Nigerians (from children to the aged) can elevate from the traditional banking in the cities; taking them to the streets where Mobile money agents are on hand, ready to do the same thing a customer normally does in the banking hall (Masinge, 2012).

Perception according to (Bandura, 1986) is seen as the cognitive process by which an individual selects, organizes and gives meaning to environmental stimuli. People perceive and gain information through what they see, hear, touch, taste, and smell. Bandura (1986) agrees that perception is the complex mental function giving meaning and significance to sensations, individuals are constantly responding in some way to incoming stimuli, these stimuli can be accepted, rejected, ignored or distorted. It all depends upon whether the stimulus supports or contradicts the individual's beliefs, values and attitudes.

A number of studies have focused on the adoption factors of mobile money services (Mardikyan, Beşiroğlu, & Uzmaya, 2012); (Bankole, 2011); (Oladele and Akeke, 2012). These studies have been based primarily on the Technology Acceptance Model (TAM), Theory of Planned Behavior (TPB), Unified Theory of Acceptance and Use of Technology (UTAUT). But few studies examine mobile payment user adoption from the perception perspective. This current paper proposes the application of Social Cognitive

Theory which is suitable for prediction of perception (Bandura, 1989). The social cognitive theory according to (Bandura, 1989) believes that human cognition mediates between stimulus and response, placing individual control over behavioral responses to stimuli.

Despite the huge benefits derivable from the use of Mobile Money Services and ubiquitous nature of the mobile phone, it is disheartening that students are not willing to adopt and use the system in Nigeria. According to research carried out by Enhancing Financial Innovation & Access (EFInA, (2012), only 10% of Nigerian bank customers are using Mobile Money Services; out of the 10%, 90% use it with their bank account while 10% use it without a bank account. Students' population was not represented among the users which call for a question regarding why students are not adopting and using mobile money services. Unfortunately, no or limited study has been done on this area, hence the need to fill the lacuna; considering the low adoption rate of mobile money, it is necessary to understand student's perception towards the adoption of mobile money services this will enable financial institutions to tap the abundant student market.

## **2. Statement of the Problem**

Marketing managers face the challenges of attracting more customers, improve customers' relationship, and encourage loyalty since consumer demand is the driving force behind the adoption of mobile financial services (Masinge, 2012). Despite the nationwide campaign on cashless policy, the use of mobile banking technology is still low (Bankole, 2011). This could be due to lack of technology readiness given their demographics and exposure, their awareness and adoption of mobile phones and lack of trust on technology. Furthermore, Enhancing Financial Innovation & Access (EFInA) (2013) observed that the low adoption could be attributed to the risks, trust, system breakdown, availability is still in the urban and semi-urban areas limiting the access to the rural population, limited access to network agents, users not being able to withdraw money from an agent when they wanted etc. This has in turn negatively impacted on how customers perceive the innovation, thus the low adoption and use of an innovation. Hence, this research attempts to examine the relationship between students' perceptions such as reciprocal determinism capacity, forethought capacity, vicarious capacity, self-reflective capacity, self-regulatory capacity and adoption of mobile money services in Nigeria.

### **2.1 Objectives of the Study**

The main objective of this study is to examine the relationship between students' perceptions and adoption of mobile money services in Nigeria.

The specific objectives of the study are;

- 1) To examine the relationship between reciprocal determinism and adoption of mobile money among students in Nigeria.

- 2) To examine the relationship between vicarious capacity and adoption of mobile money among students in Nigeria.
- 3) To examine the relationship between forethought capacity and adoption of mobile money among students in Nigeria.
- 4) To ascertain the relationship between self-regulatory capacity and adoption of mobile money among students in Nigeria.
- 5) To ascertain the relationship between self-reflective capacity and adoption of mobile money among students in Nigeria.

## **2.2 Research Hypotheses**

- 1) Reciprocal determinism will have a positive relationship with mobile money adoption.
- 2) Forethought capacity will have a positive relationship with mobile money adoption.
- 3) Vicarious capacity will have a positive relationship with mobile money adoption.
- 4) Self-reflective capacity will have a positive relationship with mobile money adoption.
- 5) Self-regulatory capacity will have a positive relationship with mobile money adoption.

## **2.3 Significance of the Study**

The findings of this study will help financial institutions to understand the perceptions of students towards the adoption of mobile money services. The study will assist investors or providers in establishing mobile money systems that students want to use, or help them to discover why potential users avoid using the existing system. The study will also help the government to know the extent to which mobile money services are adopted and provide necessary policies and legislation in relation to mobile money services. Again the study will be useful to scholars as it would form a source of reference materials on the further discussion on the subject matter.

## **2.4 Scope of the Study**

The study focuses on the perceptions of reciprocal determinism capacity, forethought capacity, vicarious capacity, self-reflective capacity, self-regulatory capacity thereof in SCT model which is in the domain of consumer behavior. The study also focuses on the field of mobile phone financial service, this refers to any service, financial transaction and interactive process that is initiated, authorized and executed on a mobile (smart) phone device. This study aims to find out among the undergraduate university students in Enugu and Ebonyi states the perceptions they have towards the adoption of mobile money. Therefore the study covered the registered universities in Enugu and Ebonyi states which form the population of the study.

### 3. Literature Review

Perception is defined as the cognitive process by which an individual selects, organizes and gives meaning to environmental stimuli (Bandura, 1986). People perceive and gain information through what they see, hear, touch, taste, and smell. Perception is the complex mental function giving meaning and significance to sensations, individuals are constantly responding in some way to incoming stimuli, these stimuli can be accepted, rejected, ignored or distorted. It all depends upon whether the stimulus supports or contradicts the individual's beliefs, values and attitudes. This forms the basis of perception, i.e. the way the individual interprets incoming information. Many authors have written severally on the perceptions of potential consumers in adopting innovation technology Aminu Hamza & Asadullah Shah (2014), Ayo & Ukpere, (2012) Thando Mbele-Sibotshiwe, (2013), Dijksterhuis, Chartrand, & Aarts, (2007). Social cognitive theory encompasses a large set of factors that operate as regulators and motivators of established cognitive, social, and behavioral skills. Social cognitive theory was adopted in this study because it captures the underpinnings of human perceptions towards intention to adopt a product.

#### 3.1 Reciprocal Determinism and Adoption of MMS

According to SCT, human behaviour is the result of a triadic, dynamic, and reciprocal interaction of environment, personal factors, and behavior Bandura argued that some sources of influence are stronger than others and the interaction between the three factors would differ based on the individual, the particular behaviour being examined and the specific situation in which the behaviour occurred. Reciprocal determinism includes; age, sex, income, occupation, education which plays a vital role in understanding the buying behavior of consumers in different segments, and when the characteristics are identified, they enable companies to develop products and services according to customers' specific requirements, tastes, and preferences. In addition, for mobile money service adoption, operators must consider a user's reciprocal determinism to offer the correct range of service products. Several studies have been conducted to profile the consumer's reciprocal determinism and the results of these studies suggest that innovators who belong to the high-income category are normally initial users of the services (Weng, 2006). Further, Sakkthivel (2006) reveals that the profile of an Internet user tends to be young, male, well educated, and earning an above-average income. According to Howcroft, Hamilton, and Hewer (2002), the reciprocal determinism that describes typical electronic banking customers includes young, affluent, and highly educated.

#### 3.2 Vicarious Capacity and Adoption of MMS

According to SCT, Humans learn from direct experience as well as from observing others. Through observational learning, individuals can develop ideas about the formation of behaviors without the need to perform them. The World Wide Web has

drastically changed human behavior and human interactions to a very large extent. Internet experience is an important factor that affects consumers' intentions to use online banking. Jiang, Hsu, Klein, and Lin (2000) agreed that the more experienced an Internet user is, the more likely they are to adopt new Internet technologies. Hoppe, Newman, and Mugera (2001) reached the same conclusion and find that users who are more experienced at using the Internet are more likely to adopt the technology than those consumers who have not had much exposure to the internet. In addition, a simple lack of experience and knowledge can hold back adoption; firms and individuals with higher usage intensity of information technology may have a higher probability to adopt Internet banking than less experienced firms (Speece, 2000). Karjuoto et al. (2002) concluded that prior computer experience, prior technology experience, and prior personal banking experience positively affect consumers' attitude and behavior towards online banking.

### **3.3 Forethought Capacity and Adoption of MMS**

SCT believed that most human behaviors are positive and regulated by anticipation, through this forethought capacity, individuals are capable of motivating themselves and guiding their actions relying on anticipation of outcomes. Forethought capacity is *"the degree of anticipation associated with the use of system"* (Bandura, 1986 p. 150). Alrawashdeh, et al., (2012) investigated the perception of entrepreneurs on information technology innovation. The study concluded that forethought capacity significantly influenced adoption. Sumak, et al., (2010) conducted a study to identify the determinants of adoption of virtual learning in Slovenia. The finding shows that student intention to adopt e-learning was not influenced by forethought capacity. Similarly, Cheng, et al., (2011) investigated mobile e-learning adoption among employees of top enterprises in Taiwan. Their findings were the same with Sumak, et al., (2010).

### **3.4 Self-Regulatory Capability and Adoption of MMS**

SCT proposes that people have control over their own thoughts, feelings, motivations, and actions. Self-regulatory capability assesses the degree to which people perceive that they actually have control over enacting the behavior of interest. It is suggested that individuals are more likely to engage in behaviors they feel to have control over and are prevented from carrying out behaviors over which they feel to have no control (George, 2002). As a result, a person who does believe himself capable of certain behavior will exhibit correspondingly a behavioral intention to exhibit a particular behavior. Most empirical applications of the SCT try to explain or predict newly introduced behavior (Armitage and Connor, 2001). Similarly, previous research in online technology adoption suggested Self-regulatory capability as a good predictor of usage intention (Choi and Geistfeld, 2004; George, 2002; Klein and Ford, 2003). A user who does believe him/herself capable of using mobile payment application will exhibit correspondingly a

behavioral intention to use that application. In addition, Puschel et al. (2010) concluded that Self-regulatory capability significantly affects intention to adopt mobile banking.

### **3.5 Self-Reflective Capability and Adoption of MMS:**

Self-reflection is a distinctively human characteristic that enables people to analyze their experiences and scrutinizes their thought processes and modifies their thinking (Bandura, 1986). In the context of mobile money, Self-reflection capacity is seen as the "*judgment of one's ability to use mobile banking*" (Venkatesh, 2000). Agarwal et al., (2000) state that there is empirical evidence to support the causal relationship between Self-reflection capacity and adoption. Luarn and Lin (2005) found that Self-reflection capacity has a significantly positive impact on adoption to use IS. Studies in the field of M-banking support Self-reflection capacity as an important determinant that influences consumers' decisions of whether or not to use M-banking (Dasgupta et al., 2011; Sripalawat et al., 2011; Luarn and Lin 2005). When consumers possess the personal ability to perform a task, they are most likely inclined to accept and use it. In other words, a consumer will be more inclined to use Mobile money if he or she possesses the ability to perform it.

### **3.6 Summary of Literature Reviewed**

Few studies have examined mobile money adoption factors in Nigeria. For instance, Bankole, (2011) showed that perceived usefulness, perceived ease of use and culture influence attitude toward using m-payment. Another study by Adebisi, Alabi, Ayo, and Adebisi (2013) examined the factors influencing the level of adoption of m-payment in Nigeria. The results show that benefits such as Convenience, Ease of Use, Ease of Access, Reduced time of transaction influence intention to adopt. However, these two studies are different from the current study as it focused on perception towards mobile money adoption among students in Nigeria. Hence this current study adopted Social Cognitive Theory proposed by Bandura (1989), it is an upshot of Social Learning Theory. The model states the variables that influence consumer adoption. The model is relevant to the current study because it operationalizes students' perceptions of new technology.

## **4. Material and Methods**

The research design adopted for this study was survey design to assess the perceptions of students on adoption of mobile money services. According to Cohen, Manion, and Morrison, (2008), survey is useful in that it usually: represents a wide target population, generates numerical data, provides descriptive, inferential and explanatory information, manipulates key factors and variables to derive frequencies, gathers standardized information (i.e. using the same instruments and questions for all participants), and others. The primary source of data was generated through the administration of the questionnaire on the respondents who are the undergraduate

university students in Enugu and Ebonyi. The secondary source of data involves the use of existing but related literature, which was produced by earlier researchers (Ekong, 2010). Secondary data was collected from review of publications, books, internet, unpublished materials (theses and dissertation), and journals. The websites of National University Commission (NUC) was also visited for relevant information. The population of the study comprises all the registered university undergraduate students in Enugu and Ebonyi States. According to National University Commission website (2014), the registered Universities and their undergraduate student population in the two states were 90,611. Purposive sampling technique as a non-probability sampling was used as the technique for the research. This method was selected to enable the researchers to target students who were in the position to provide the information needed for the study. In calculating the sample size, the researchers applied the statistical formula for selecting from a finite population as formulated by Taro Yamane (1994). The sample size was 400, the Bowley's proportionate allocation formula was used to apportion the sample size per university. To ensure the reliability of the instrument, the test-retest method of reliability was applied. The test-retest was carried out using 26 copies of the questionnaire prepared and administered to students (respondents) of the selected universities in Enugu and Ebonyi states. The selection of respondents was determined using systematic random sampling technique. After fourteen days, 26 copies of the instrument were administered to the same respondents for the second time. The first and second sets of scores were correlated using Pearson product moment correlation coefficient as the statistical tool, the result gave reliability index of (0.96) indicating a high degree of consistency. In this study, descriptive statistics such as frequency counts with simple percentage was used to analyze bio-data of the respondents and the research questions, factor analysis, and multiple linear regressions were used to test hypotheses. All analyses were done through the application of Statistical Package for Social Science (SPSS). The total number of four hundred (400) copies of the questionnaire were administered by the researcher through handy. Out of the 400 copies of the questionnaire sent out three hundred and ninety were returned, giving a response rate of 97.5%; 10 out of the 400 copies of the questionnaire administered were not returned, thus, giving a non-response rate of 2.5%.

## 5. Results and Discussion

**Table 4.1:** Demographic Characteristics of Respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Gender	Male	181	46.4	46.4	46.4
	Female	209	53.6	53.6	100.0
	Total	390	100.0	100.0	
Age	16-19 years	164	42.1	42.1	42.1
	20-22 years	76	19.5	19.5	61.5
	23-25 years	70	17.9	17.9	79.5
	26 and above	80	20.5	20.5	100.0
	Total	390	100.0	100.0	



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Level	100 level	93	23.8	23.8	23.8
	200 level	95	24.4	24.4	48.2
	300 level	110	28.2	28.2	76.4
	400 level and above	92	23.6	23.6	100.0
	Total	390	100.0	100.0	
Sponsorship	Scholarship	22	5.6	5.6	5.6
	Self	32	8.2	8.2	13.8
	Uncle	110	28.2	28.2	42.1
	Parents	226	57.9	57.9	100.0
	Total	390	100.0	100.0	

Source: Field Survey.

**Table 4.2: Descriptive Statistics**

	N	Mean	Std. Deviation
Reciprocal determinism 1	390	3.17	1.244
Reciprocal determinism 2	390	2.87	1.232
Reciprocal determinism 3	390	3.97	1.171
Reciprocal determinism 4	390	3.47	1.203
Vicarious capacity 1	390	3.20	1.138
Vicarious capacity 2	390	2.90	1.111
Vicarious capacity 3	390	2.83	1.348
Vicarious capacity 4	390	2.70	1.371
Forethought capacity 1	390	3.49	1.288
Forethought capacity 2	390	2.77	1.478
Forethought capacity 3	390	2.96	1.496
Forethought capacity 4	390	3.36	1.226
Self-regulatory capacity 1	390	3.70	.901
Self-regulatory capacity 2	390	3.93	.965
Self-regulatory capacity 3	390	3.90	.980
Self-regulatory capacity 4	390	3.67	1.191
Self-reflective 1	390	3.89	1.141
Self-reflective 2	390	4.13	1.089
Self-reflective 3	390	3.76	.991
Self-reflective 4	390	3.87	.992
Adoption1	390	3.83	1.005
Adoption 2	390	3.97	1.141
Adoption 3	390	4.00	1.001
Adoption 4	390	3.90	1.078
Valid N (listwise)	390		

**Table 4.3: Commonalities**

	Initial	Extraction
Reciprocal determinism 1	1.000	.692
Reciprocal determinism 2	1.000	.746
Reciprocal determinism 3	1.000	.764
Reciprocal determinism 4	1.000	.622
Vicarious capacity 1	1.000	.833
Vicarious capacity 2	1.000	.907
Vicarious capacity 3	1.000	.847

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Vicarious capacity 4	1.000	.713
Forethought capacity 1	1.000	.730
Forethought capacity 2	1.000	.715
Forethought capacity 3	1.000	.800
Forethought capacity 4	1.000	.829
Self-regulatory capacity 1	1.000	.817
Self-regulatory capacity 2	1.000	.825
Self-regulatory capacity 3	1.000	.810
Self-regulatory capacity 4	1.000	.699
Self-reflective 1	1.000	.834
Self-reflective 2	1.000	.848
Self-reflective 3	1.000	.714
Self-reflective 4	1.000	.746
Adoption 1	1.000	.860
Adoption 2	1.000	.865
Adoption 3	1.000	.798
Adoption 4	1.000	.745
Extraction Method: Principal Component Analysis.		

Descriptive statistics analysis show that majority of the variables have mean above 3 which show positive response and agreement with the dimensions of the research model. Many of the items, however, have standard deviations above one which is an indication of variation in the opinions of the respondents. Factor Analysis was used to check the loadings of the various items. The result of the Factor analysis shows that Kaiser-Meyer-Olkin Measure of Sampling Adequacy is .504 which is slightly above the .5 benchmark and this confirms the adequacy of the sample used in the study. Also, Bartlett's Test of Sphericity has an approximate Chi-Square value of 13180.061 and is highly statistically significant at .000 above the .01 margin of error. This means the Factor Analysis is reliable and dependable. Total variance explained is 70.175% which is quite appreciable. For the factor loadings (commonalities), all the items loaded are very high above the .4 benchmark which is an indication that none of the items need be eliminated in the final analysis. The next stage of the analysis is the multiple linear regression (MLR) analysis and the results are shown below.

**Table 4.4: Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.879 <sup>a</sup>	.773	.770	1.72620

The first information from the MLR analysis is the model summary and from this, the coefficient of multiple correlation R is .879. The coefficient of multiple determination R<sup>2</sup> is .773 while the adjusted R<sup>2</sup> which adjusts the R<sup>2</sup> downwards taking care of error is .770. This means that between 77% and 77.3% of variations in the dependent variable, adoption is accounted for by the five independent variables.

### ANOVA

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	3906.455	5	781.291	262.198	.000 <sup>b</sup>
	Residual	1144.235	384	2.980		
	Total	5050.690	389			

a. Dependent Variable: Adoption  
 b. Predictors: (Constant), Forethought capacity, Self-Reflective, Vicarious capacity, Reciprocal determinism, Self-regulatory capacity

The next information from the MLR is the regression analysis of variance ANOVA which has a value of 262.198 and is highly statistically significant at .000 below the .01 margin of error. This means that the model was a good fit and that the coefficient of multiple correlations R is significantly different from zero. The next information is the coefficients.

### Coefficients<sup>a</sup>

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.473	.414		3.553	.000		
	Reciprocal determinism	.090	.038	.098	2.392	.017	.354	2.825
	Vicarious capacity	.142	.028	.163	5.035	.000	.560	1.786
	Self-regulatory capacity	.107	.058	.101	1.863	.063	.203	4.938
	Self-Reflective	.606	.049	.619	12.488	.000	.240	4.168
	Forethought capacity	.018	.029	.023	.631	.528	.452	2.212

a. Dependent Variable: Adoption

The coefficients show that 4 out of the 5 variables are significant and the hypotheses should be accepted in the alternate form. Forethought capacity is not significant hence the hypothesis on that should be accepted in null form. Tolerance and variance inflation factor (VIF) measure collinearity. For Tolerance, the closer to .1 the below while for VIF 5 is the threshold. The values of both the tolerance and VIF are within acceptable range as they did not show any problem of collinearity. This implies that students' adoption of mobile money services depends on reciprocal determinism, vicarious capacity, self-regulatory capacity, self-reflective and forethought capacity ( $\beta=.098, .163, .101, .619, .023$ ) respectively. Self-reflective capacity has a highly significant influence on adoption of mobile money services with ( $\beta= .619; t =12.488; P<.000$ ) which imply that students believe in themselves that they can use the mobile money if all things being equal. Forethought capacity was found to have no significance on adoption of mobile money services ( $\beta= .023; t = .631; P<.528$ ) this imply that students are not after what they will encounter while using mobile money. Reciprocal determinism, vicarious capacity, and

self-regulatory capacity were also found to significantly impact on the adoption of mobile money services.

## 6. Recommendations

Base on the findings and the conclusion of this study, we make the following recommendations which will be relevant, not only to the mobile money operators but to the policymakers and regulators.

- 1) Mobile money operators should consider the students' demographic factors such as age, sex, level of income, the source of income etc while offering mobile money services. Mobile money operators should endeavour to create awareness that is based on informing the students of the success of the system. This will enable the students to adopt the system since it is working for others.
- 2) Students population is a huge market therefore, mobile money operators should provide the adequate promotional programme to ensure that students adopt the system.
- 3) The government should ensure that they provide enabling environment for mobile money services to work effectively in all the universities in Nigeria.
- 4) Mobile money operators and new investors should provide adequate agents that will be closer to students. This will enable the students to adopt the system because of its closeness.

## 7. Conclusions

The study determined the influential variables that significantly influence mobile money adoption among Nigerian students. Social Cognitive Theory served as the theoretical guide for the study. As such, the study contributed to the body of knowledge of SCT and the ongoing discussions and debates about it and proved that SCT is applicable to the context of Nigeria. Besides, the study contributed to the context of MMS adoption in Nigeria and Africa in general. It has given support to the continuous improvements of the model and its major predictors. However, the study is limited by several factors including its focus on students. Thus, future studies should expand the scope to other consumers such as businessmen, working adults, and entrepreneurs. In addition, the study focused on only one mobile banking service, (Mobile Money) and it is recommended that future studies should examine the adoption of other mobile banking services such as ATM, POS, Internet banking. It is also suggested to compare among these services with regard to different demographics such as gender, age, education, and regional location. Finally, the study suggests looking at other constructs that may contribute to the adoption of the services such as social influence, cultural influence, self-efficacy, and perceived satisfaction with the services, among others.

## References

- Agarwal and Karahanna. (2006). An investigation of consumer acceptance of M-banking. *International Journal of Bank Marketing*, 28(7), 547-568.
- Alrawashdeh, T. A., Muhairat, M. I., & Alqatawnah, S. M. (2012). Factors affecting acceptance of web-based training system: Using extended UTAUT and structural equation modeling. <https://arxiv.org/abs/1205.1904>
- Armitage, C. and Conner, M. (2001) Efficacy of the theory of planned behavior: A meta-analytic review. *British Journal of Social Psychology*, 40 (4) 471- 499.
- Ayo, C. K., & Ukpere, W. I. (2012). Further Development of a Secured Unified E-Payment System in Nigeria: A Critical Viewpoint. *E-Business–Applications and Global Acceptance*, 41. <https://ideas.repec.org/h/ito/pchaps/64143.html>
- Bandura, A. (1989) Social Cognitive Theory. In: R. Vasta [ed.] *Annals of child development*. Vol. 6, Six theories of child development, Greenwich, CT: JAI Press, 1-60.
- Bankole, F. O., Bankole, O. O. and Brown, I. (2011). Mobile banking adoption in Nigeria. *The Electronic Journal of Information Systems in Developing Countries*, 47(2), 1-23.
- CBN (2013), *Regulatory Framework for Mobile Payment Services in Nigeria*. Commerce Research and Applications, viewed 20 February 2013,
- Chartrand, T. L., & Bargh, J. A. (1999). The chameleon effect: The perception-behavior link and social interaction. *Journal of Personality and Social Psychology*, 76, 893–910.
- Cheng, Y.-S., Yu, T.-F., Huang, C.-F., Yu, C., & Yu, C.-C. (2011). The Comparison of Three Major Occupations for User Acceptance of Information Technology: Applying the UTAUT Model. *iBusiness*, 3(2), 147-158.
- Dasgupta, S., Paul, R. & Fuloria, S. (2011). Factors affecting behavioral intentions towards mobile banking usage: empirical evidence from India. *Romanian journal of marketing*, 3(1), 6-28.
- Dijksterhuis, A., Chartrand, T. L., & Aarts, H. (2007). Effects of priming and perception on social behavior and goal pursuit. In J. A. Bargh (Ed.), *Social psychology and the unconscious: The automaticity of higher mental processes* (pp. 51–131). New York: Psychology Press.
- Echchabi, A. and Olaniyi, O. N. (2012). Using Theory of Reasoned Action to Model the Patronisation Behaviour of Islamic Banks' Customers in Malaysia. *Research Journal of Business Management*, 6(3), 70-82.
- Ekong, H. (2010) *Research Design and Methods; A Process Approach*, McGraw- Hill Companies electronic banking in New Zealand. *Information Journal of Bank Marketing*,
- GSMA. (2013). *Unlocking the Potential: Women and Mobile Financial Services in Emerging Markets* [online]. Available:

- <https://www.gsma.com/mobilefordevelopment/resources/unlocking-the-potential>; (12 September 2013).
- Howcroft, B., and Hamilton, R., and Hewan, P. (2002), Consumer attitude and the usage and adoption of home-banking in the United Kingdom. *International Journal of Bank Marketing*, 20 (3), pp. 111-121.  
<https://www.emeraldinsight.com/doi/abs/10.1108/02652320210424205>
- Kotler, P. (1982). *Marketing for non-profit organizations*. 2nd Edition: N.J: Prentice-Hall Inc: Englewood Cliffs
- Luarn, P, and Lin, H.-H. (2005). Toward an understanding of the behavioral intention to use mobile banking. Elsevier.
- Machogu, A.M (2012) The perception of bank employees towards cost of adoption, risk of innovation and staff training's influence on the adoption of Information and Communication Technology in the Rwandan Commercial Banks, August 2012, *Journal of Internet Banking and Commerce*, 17(2)
- Mardikyan, S., Beşiroğlu, B., & Uzmay, G. (2012). Behavioral Intention towards the Use of 3G Technology. *Communications*, 2012.
- Masinge, K. (2012) Factors influencing the adoption of mobile banking services at the bottom of the pyramid in South Africa, Gordon Institute of Business Science, University of Pretoria, Pretoria.
- Okeke, T. C., (2013). Perceived Risk/Security and Consumer Involvement with Electronic Payments in Nigeria: A Discriminant Analysis. *IOSR Journal of Business and Management*, Volume 14, Issue 6  
<http://www.iosrjournals.org/iosr-jbm/papers/Vol14-issue6/I01465767.pdf?id=7380>
- Oladele, P. O. and Akeke, N. I. (2012). Effect of customer satisfaction on customer loyalty among selected bank customers in Ado-Ekiti Metropolis, Nigeria. *Interdisciplinary Journal of Contemporary Research in Business*, 3(11), 228-236.  
<http://connection.ebscohost.com/c/articles/77243858/effect-customer-satisfaction-customer-loyalty-among-selected-bank-customers-ado-ekiti-metropolis-nigeria>
- Philip Consulting (2012) *Research Methods Knowledge Base*, 8 August 2012, <http://www.socialresearchmethods.net/kb/relytypes.php>
- Puschel, J. Mazzon, A & Hernandez, M (2010). Mobile banking: Proposition of an integrated adoption intention framework, *International Journal of Bank Marketing*, vol. 28(5), 2010, pp. 389-409.
- Sayid, O., Echchabi, A., & Abd. Aziz, H. (2012). Investigating Mobile Money Acceptance in Somalia: An Empirical Study. *Pakistan Journal of Commerce & Social Sciences*; 6(2), 269-281. Accessed May 21, 2013, from <http://www.jespk.net/publications/87.pdf>
- Sibotshiwe, T. M. (2013) A Study of the Perceptions and Adoption of Mobile Payment Platforms by Entrepreneurs in Zimbabwe's Informal Economy.
- Sripalawat, J., Thongmak, M., & Ngramyarn, A. (2011). M-banking in metropolitan Bangkok and a Stocking. *Contemporary Management Research*, 1(1) 69-82

- Sumak, B., Polancic, G., & Hericko, M. (2010). An empirical study of virtual learning environment adoption using UTAUT. Paper presented at the 2010 Second International Conference on Mobile, Hybrid, and On-Line Learning.
- Venkatesh, V., Morris, M. G., Davis, G. B. and Davis, F. D. (2003). User acceptance of Information technology: Toward a unified view. *MIS Quarterly*, 27(3), 425-478.
- Wang, C., Lo, S., & Fang, W. (2008). Extending the technology acceptance model to mobile telecommunication innovation: The existence of network externalities. *Journal of Consumer Behavior*, 7(2), 101–110. doi: doi.org/10.1002/cb.240.
- Yamane, T. (1964) *Statistics: An Introductory Analysis*, New York: Harper and Row
- International Journal of Business and Management*, 6(3), 12-36.

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