Determinants of E-Banking Adoption in Lagos State.

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1.0. Introduction

Remarkable progress in information technology has turned the world to a global village and this has caused an unprecedented change in various spheres of life. In fact, Aboobucker (2018), Santouridis (2014) and Bradley and Stewart (2003) noted that many existing and new businesses including the banking sector have been greatly affected by recent trend in technological advancement thus, making the banking industry one of the fastest emerging sectors in the adoption of technology as a channel of service delivery (Schierholz & Laukkanen, 2007). Ahanger (2011); Shih and Fang (2006); Bhattacherjee (2001); Tan and Thompson (2000) and Daniel (1999) opined that e-banking is used synonymously with internet banking and has been conceptualized as the delivery of banking services or information through the channels of PC, Internet, ATM, POS, managed-network, and website operations between banks and their respective customers to perform financial and non-financial transactions in the virtual space.

However, Santourid and Kyritsi (2014);Hoehle et al, (2012); Amtul(2011) and Aggelis (2005) showed that the emergence of e-banking in the last three decades has resulted into a paradigm shift in the financial services industry and Heikki (2002) opined that the transformation it brings to the banking sector has been tagged a 'leap' change. The adoption of e-banking in recent times is largely motivated on one hand by the assumption that, advancement in the banking sector depends more on the use of internet banking services than traditional banking (Sinha & Mukherjee, 2016). Consequently, the developed and developing economies have all witnessed a massive adoption of e-banking by banks and other financial institutions (Ginkadi, 2010). The reasons are not far-fetched as Hoehle and Huff (2009); Lee(2009); AlRefaei and Al-Hajery (2006); Almgbil (2005) and Black (2002) identified the benefits to include; 24 hours service delivery, ease of access, self-services in terms of access to data analysis and decision-making on personal financial management, minimization of queues, maintenance and retention of customers, improvement in customer's satisfaction, cost saving, increasing profitability and enhancing banks' market share, decreasing administrative and operational cost and improving banks' competitive positions.

Despite the potential benefits that Internet banking accords the customers and financial institutions, its acceptance is still largely limited and sometimes do not often meet up with expectations (Bielski, 2003). For instance, Santouridis and Kyritsi (2014) showed that banks find it difficult to move more customers to the e-channel of services and this is particularly inherent in the developing economies where the performance has been highly disappointing (Akhisar et al, 2015; DB research, 2009).

With Nigeria at the early stage of e-banking (CBN, 2003), there exists mixed outcomes in terms of acceptance and performance from the customers and banks respectively.

For instance, while e-banking is expected to enhance a cashless economy, Joseph& Richard (2015); Odior and Banuso (2013) and Dankwambo (2009) showed that Nigeria still largely remained a cash-based economy. Similarly, since e-banking in Nigeria is newly evolving coupled with the low level of technological advancement in the country, customers' acceptance and use of the service is still limited. Though available statistics showed that total volume of transaction of all e-banking channels combine moved from about 42 million in 2012 to 64 million in 2015 and to 109 million in 2017 accounting for almost 110% increase within the last 5 years. This trend though is progressive and each available channel also experienced progressive trend over the years, there seems to be variation in the trend among the various e-banking channels usage as shown in Table 1.0.

From the literature on determinants of e-banking usage, factors such as; stringent regulations, lack of interoperability, inadequate infrastructure, lack of knowledge and trust (EfinA, 2016), system hacking and ATM imposters (Odior and Banuso, 2013), are identified as hinderances. Also, Olowookere and Olowookere (2014) showed easy accessibility as facilitating factor while high transaction costs and possibility of falling victim as discouraging factors to ATM usage, Ogedebe and Babatunde, (2012) and Atanbasi, (2010) showed lack of integrity, reliability and insecurity as challenges to e-banking usage in Nigeria. However, in a single study gauging the effect of identified factors in determining the choice or usage of all the available e-banking channels in Nigeria among customers is still a grey area especially within the context of the theory of planned behaviour. Preponderance of the extant literature mostly analyzed factors determining each one at a time. Lagos is a metropolitan city with internet infrastructure easily accessible and there is more ease of the use of the various e-banking options than any other city. Therefore, taking a cursory look at examining what determines customers' usage of available e-banking platforms is not only understandable but imperative in a single study. Hence, this present study focuses on examining the determinants of e-banking options in selected areas of Lagos State from the Theory of Planned Bahaviour which identified motivation and control as influencing factors. Consequently, the study is at variance with the previous studies by analyzing fulfilment, availability, privacy, assurance of trust in the usage and ease of contact or accessibility as motivating/controlling factors identified in the theory of Planned Behaviour.

2.0 Brief Stylized Facts on E-banking in Nigeria.

One of the motivations behind the introduction of e-banking in Nigeria asides enhancing financial transactions is to reduce the proportion of the unbanked. Even though, there has been improvement over the years in the volume of transaction within the e-banking various platform, the rate of penetration and growth is still low compared to available phone lines especially with the unbanked. For instance, EFInA (2017) reported that only 1% of adults use the mobile platform of e-banking in 2016 since its introduction in 2011. Asides the low record, the use of mobile money is equally faced with continuous decline from 19.5% of users in 2014 to16.2% in 2016 and this has been attributed to lack of awareness and access to mobile money by the majority of the adult population in Nigeria (EFInA 2016). Worthy of note is the sluggish growth in the rate of unbanked adult population in the country which grew from 36.9 million

in 2008 to 40.1 million in 2016.That number represents 41.6% of the population which is high when compared to selected countries within the African region (EFInA 2016).

Table 1.0: E-Payment Systems Statistics in Nigeria

Years	ATMT	POST	WEBT	MPT	NIBBSIPT	NIBBSFTT	TOTAL
2012	37,103,463	478,137	203,651	500,980	772,690	2,772,443	41,831,364
2013	28,831,101	1,466,154	403,830	1,314,479	2,497,080	3,184,013	37,696,657
2014	39,284,012	2,636,865	590,922	2,146,670	5,076,147	3,049,143	52,783,759
2015	43,687,863	3,946,721	912,521	4,517,553	8,330,211	2,726,740	64,121,609
2016	61,958,258	8,994,764	1,798,275	4,824,604	22,740,509	3,183,318	103,499,728
2017	60,307,952	11,220,631	1,788,583	3,985,563	28,458,092	3,417,291.00	109,178,112

Note: ATMT implies Automated Teller Machine Transactions; POST implies Point of Sales Transactions; WEBT implies Web Transactions; MPT implies Mobile Payment Transactions; NIBSSIPT implies NIBSS Instant Payment Transactions; NIBSSEFTT implies NIBSS Electronic Transfer Fund Transactions. Time lags run from December through June. Source: CBN Statistical Database online. www.CBN.gov.ng

Table 1 depicts the trend in e-Payment channels in terms of volume of transactions from 2012 to 2017. From the table, it is evident that total volume of transaction of all e-banking channels combined, moved from about 42 million in 2012 to 64 million in 2015 and to 109 million in 2017 accounting for almost 110% increase within the last 5 years. This trend though is progressive and each available channel also experienced progressive trend over the years, there seems to be variation in the trend among the various e-banking channels as shown in the table. For instance, electronic payments made through the channel of Automated Teller Machine (ATM) recorded a downward trend from 2012 to 2013 and has since then maintained an upsurge with the highest recorded in 2016. A close assessment of the table also revealed that the point of sales (POS) channel of e-payment maintained a persistent increase for the study period. Similar trend is replicated on the other channels of e-payments for web, mobile and NIBSS. Comparatively, the e-channel of ATM recorded the largest volume of the total transactions with 66.28%, followed by NIBSSITP with 16.6%. On the aggregate, the total volume of transaction decreased from 41,831,364 in 2012 to 37,696,65 in 2013 and has since then maintained a persistent increase from 2014 to 2017. The decrease in 2013 might not be unconnected with the reforms in the financial system due to the 2009/2010 CBN/NDIC audit report and as well as the attribute of the early global oil price shock which hit hard on the Nigerian economy due to its heavy reliance on revenue from the oil sector. As the economy continues to gain momentum, it reflected positively on the financial sector, e-banking notwithstanding. Though, the volume of e-payment differs by channel, an overall assessment portrays a positive and prospective development of e-banking on bank patronage in Nigeria. However, what explains the choice or adoption by customers in the use of available e-banking channels is a puzzle.

3.0 Literature Review

3.1 Theoretical Review

Several theoretical models have been adopted to examine the factors influencing e-banking acceptance among banking customers (Nasri and Charfeddine, 2012). The prominent theoretical models which explicate the interconnection of user beliefs, attitudes, and intentions exposited in Technology Acceptance Model (TAM), and Theory of Planned Behaviour which started as the Theory of Reasoned Action (TRA) in 1980.

TRA opined that perceived ease of use and that of usefulness of a technology influences customers' attitude in using the technology (Davis, 1989). TRA has a wide application according to Korpelainen (2011), in studies relating to consumer behavior, women's occupational orientations, or family planning behaviors. However, in terms of perceived usefulness and ease of operation, TAM has gained wide recognition as an influential theoretical model in explicating IT adoption by users (Davis, 1989). TAM has been widely used to scrutinize individual technology acceptance behavior in various types of information systems. Studies have adopted TAM in examining the individual technology acceptance behavior in different information systems constructs and has thus received considerable attention of researchers in the information system field over the past decade (Chen, Li & Li, 2011). For instance, past research applied the theory in different countries' context like Sri Lanka (Aboobucker et al, 2018), India (Sinha and Mukherjee, 2016), Tunisia (Nasri&Charfeddine, 2012), Malay and Chinese ethnic group (Khalil, Sutanonpaiboon, and HamimahMastor, 2010) and Taiwan (Lee, 2009), to forecast the adoption of Internet banking.

The adequate explanatory power, and possibility of further improvement (Sun & Zhang, 2006), accorded TAM the prevalence of being one of the most cited models that researchers used to study underlying factors that motivate user's acceptance and adoption of a new information system (Al Shibly, 2011). The Theory of Planned Behaviour (TPB) opined that customers behavioural achievements are dependent upon both motivation and ability for control. Hence, factors such as fulfilment, availability, privacy, and assurance of quality in the usage are identified as drivers of motivation in technological adoption were critical in influencing customers' behavior and control (Ajzen and Fishbein, 1977).

3.2 Empirical Review

A Plethora of studies have been carried out on factors influencing the adoption of e-banking system in different jurisdictions but the results had been inconclusive on the main factors driving the adoption. For instance, Aboobucker et al (2018) examined factors obstructing the acceptance of internet banking for 186 customers in Sri Lanka. The study adopted the structural modeling approach and selected hypothetical statements which were applied on Partial Least Square Regression (PLS regression). Findings from the study revealed that, trust and website usability constituted the major obstructing factors of concern to internet banking customers while the concerns about insecurity and lack of privacy, and perceived risk are seen as insignificant and thus

negligible. Akhisar et al (2015) investigated the impacts of electronic services on bank's profitability performance for 23 developed and developing countries' electronic banking between 2005 and 2013. Results showed that, electronic banking services such as ATM and others exert significant impacts on aggregate performance of the bank and such has influenced the high rate of investment on e-banking by commercial banks and regulators in the industry.

Olowookere and Olowookere (2014) analyzed the determinants of ATM usage among students of University of Ibadan using a survey approach in a cross section of students. The study employed both descriptive and inferential analyses and found a 93% usage of ATM among the students but revealed further that the frequency of usage varies and this is alluded to ease of accessibility to ATM services but high transaction cost, ATM fraud and wrong debiting were identified as discouraging factors. Okpara and Onuoha (2013) on the other hand examined the determinants of the choice of banks by students of Michael Okpara University, Umuidike and data collection was based on a survey method using 250 final year students across the university. The study employed principal component and descriptive analyses and the results showed that service, proximity, attractiveness, referral and marketing were main drivers of bank choice among the students. Focusing on the adoption of e-banking and customer's satisfaction, Oyewole, El-Maude, Gambo, &Abam,(2013), examined the impact of internet banking on customer satisfaction in Nigeria and found that internet banking as well as quality service significantly and positively affects customer satisfaction in the banking sector. And in line with this, Onyedimekwu, Oruan, and Omoku (2013), posited that most bank customers will use e-banking systems more often if the system quality, information quality and service quality is improved.

Ojo, Ayodele and Omah (2012) conducted a study on the adoption of e-banking in Nigeria. The result of their survey indicated a high adoption level of E-Banking in Nigeria. According to their findings, the ATM technology is widely used, the internet Banking is gradually being patronized and there is an increasing awareness of internet Banking. However, cost relating to data bundle remained a major impediment to its usage in Nigeria. Manoranja et al. (2012) analyzed the customer's risk in internet banking using a systematic sampling technique which selected 260 bank customers. The factor analysis and analysis of variance approaches were used for the analysis and the results identified risk as a barrier in the use of internet banking among the respondents.

In terms of factors influencing customers' choice of bank patronage, the study by Aregbeyen (2011), found that customers' choice of bank patronage is influenced by factors such as bank reputations, prompt service delivery, dependability, good complaint handling, safety of funds, minimum waiting time, and branch networking, reasonable service charges, innovative products and services, and friendliness of staff. A related study conducted in Nigeria by Maiyaki (2011) on a sample of 417 bank customers employing multi-stage sampling concluded that, size of bank total asset, has a major effect on customer choice of banks patronage, and in addition, and also, reputation of the bank, availability of large branch network across the country, convenient access to bank location and personal safety and security of customer.

Abduwahab (2010) examined the attitude of customers in the use of ATM in North-West of Nigeria using a cross sectional survey approach and the analysis was done through descriptive analysis. The result showed that the level of adoption of ATM is higher among middle aged than the aged ones and that convenience and easy accessibility were the main drivers of ATM usage.

Kamakodi and Khan (2008) in a qualitative study on the factors which influence customers' decisions to patronize banks found that customers consider ten major factors in making the decision to patronize a bank. These factors were highlighted as security of ATMs, proximity to work place, the safety of funds, confidentiality, bank reputation, pleasing manners, accessibility to ATMs, personal attention, friendliness of staff and timely delivery of service. Safkli (2007) investigated factors motivating consumers' bank selection and patronization in Northern Cyprus. The study laid credence on confidence in bank management as the most pertinent determinants of bank patronage in addition to service quality and efficiency.

From the literature, it could be deduced that stringent regulations, lack of interoperability, inadequate infrastructure, lack of knowledge and trust (EFInA 2016), system hacking and ATM imposters (Odior and Banuso, 2013), easy accessibility as facilitating factor while high transaction costs and possibility of falling victim as discouraging factors to ATM usage were also identified (Olowookere and Olowookere 2014), lack of integrity and reliability (Ogedebe and Babatunde, (2012), insecurity (Atanbasi, 2010), are factors militating against the progress of e-banking in Nigeria. Despite these hurdles, e-banking services have witnessed persistent progress in the last six years (2012-2017), however, there has been dearth of study in analyzing factors like fulfilment, availability, privacy, assurance of trust in the usage of technology as motivating and behavioural controlling factors as opined by the theory of planned behaviour within the Nigeria case in determining each of the available e-banking channels in a single study to gauge their effects differently. This is the crux of this current study.

4.0 Data and Methodology

4.1 Survey Method and Sampling Strategy

The study adopted the cross-sectional research design using systematic sampling technique to selected the respondents. However, for the purpose of precision, a sample of 300 bank customers were drawn in selected metropolitan areas like Surulere, Lagos Island, Oshodi-Isolo, and Ikeja. The method for collecting empirical data for the statistical analysis was through structured interview and questionnaires purposefully administered to respondents selected from the respective banking halls in these areas.

The questionnaire consisted of three sections which sought relevant information on E-banking adoption and Bank Patronage in Nigeria. Section one sought information on demographic data of bank customers (age, gender, education attainment, marital status, years of service, type of account, name of bank etc.), section two focused on information relating to e-banking adoption and section three dwelt more on bank

patronage. At the end of administering the questions, we were able to retrieve 200 questionnaires and this was deemed as sufficient for the analysis.

To examine the level of validity and reliability of the instrument, the questionnaire was subjected to a two-phase pre-test process. In the first pre-test stage, the questionnaire was administered to selected customers with banks mobile Apps. The elicited responses were correlated appropriately with Test-Retest Reliability that gave an approximated value of 0.85 as correlation coefficient which was assumed to be high enough to enhance reliability of the research instrument. The content validity was used as the questionnaire with the objectives of the study were given to an expert to peruse to ascertain if the content of the test matched with the objectives.

4.2 Estimation Techniques and Model Specification.

The completed copies of the questionnaire retrieved were coded and analyzed. Frequency counts and percentages were used to analyze the demographic data of the customers while Logistic Regression approach was used to test the formulated hypotheses at 0.05 level of significance. The benefit in using logit model lies in the fact that, it does not presuppose any strict adherence to the assumptions of normality, linearity, equal variance and covariance of error terms as prominent in the quantitative analysis. Hence, the logistic regression model relies heavily on the assumptions about the features of the choice probabilities, tagged the independence from irrelevant alternatives property. According to this property, for any two alternatives i and k, the ratio of the logistic probabilities does not hinge on any alternatives other than i and k.

Drawing from Thomson (2015), the model is specified as thus;

Let $p(X)$ denote the probability that Y equals one when independent variables assume the values of X then

$$p(X) = p(Y = 1) \quad \text{..... (3.1)}$$

And

$$1 - p(X) = p(Y = 0) \quad \text{..... (3.2)}$$

The odds ratio is defined as

$p(X)/1 - p(X)$ and the log odds ratio is given as

$$R = \ln\{ p(X)/[1 - p(X)] \quad \text{..... (3.3)}$$

As noted above, the logistic model assumes log-odds which can be expressed as a linear combination of values of independent variables:

$X = (X_1, X_2, \ldots\ldots\ldots\ldots X_k)$ that is, R= $\sum_l^k X_i \beta_i = X\beta$ ..... (3.4)

where k is the number of independent variables such as e-banking and its associated components and b is the regression coefficients. The parameters which denote the contribution of the *ith* electronic banking of the logarithm odds ratio will be estimated. In determining the probability of the levels of each independent variable and its impact on the bank patronage, let $A = (a_1, a_2, \ldots\ldots\ldots\ldots a_p)$ be the vector corresponding to the respondents. Substituting $X = A$ in equation 3 gives

$$A = \exp(A)/[1+\exp(A)] \text{ ..... } (3.5)$$

Y_i=f (ful_i, Ava_i, pvy_i, ass_i, rep_i, Con_i).....(3.6)
Where, the dependent variable (Y) is e-banking options such as internet, mobile, ATM and others like POS while the independent variables are Ful=fulfilment, Ava=availability, PVY=privacy, ass=assurance of trust in the usage, rep=responsiveness and Con=ease of contact or accessibility.

4.0 Empirical Analysis

This section presents a quantitative analysis and interpretation of data collected in the course of the study.

Table 4.1 Respondents' Biographic Data

	Characteristics	Freq.	Percent	Cum.
Gender Distribution	Male	109	54.50	54.50
	Female	91	45.50	100
Marital Status	Single	140	70.00	70.00
	Married	48	24.00	94.00
	Divorced	5	2.50	96.50
	Separated	7	3.50	100.00
Educational Status	No formal Edu	15	7.50	7.50
	Primary	9	4.50	12.00
	Secondary	88	44.00	56.00
	Tertiary	88	44.00	100.00
Employment status	Employed	108	54.00	54.00
	Unemployed	92	46.00	100.00

Source: Field Survey, 2018

Analysis as presented in table 4.1 showed that 109(54.5%) of the respondents were male while 91(45.5%) were female. Hence, majority of the respondents were male which could suggest that males are more financially inclusive than female. Also, the analysis revealed that 140(70%) of the respondents are single; 48(24%) are married; 5(2.5%) are divorced and 7(3.5%) were separated. In terms of educational attainment, the table revealed that 15 (7.5%) of the respondents have no formal education; 9(4.5%) have primary education; 88 (44%) have secondary education and 88(44%) have tertiary education. Hence, majority of the respondents had secondary and tertiary education. The employment distribution of the respondents revealed that 108 (54%) of them are employed while 92(46%) are unemployed.

Table 4.2. Descriptive Analysis of Customers' Usage of E-Banking Options.

	Characteristics	Freq.	Percent.	Cum.
Account type	Current	35	17.50	17.50
	Savings	156	78.00	95.50
	Others	9	4.50	100
Years of Patronage	0-2	46	23.00	23.00
	3-5	60	30.00	53.00
	6-8	29	14.50	67.50
	9 and above	65	32.50	100
Familiarity with E-Banking	No	60	27	27.00
	Yes	140	73	100.00
Comfortability with E-Banking	Yes	54	27.00	27.00
	No	146	73.00	100.00
Travel Cost to Bank Branch	Yes	87	43.50	43.50
	No	113	56.50	100.00
Types of E-Banking	Internet	27	13.50	13.50
	Mobile	37	18.50	32.00
	ATM	94	47.00	79.00
	Others	26	13.00	92.00
	Non-User	16	8.00	100.00
Frequency of Usage	Very often	44	22.00	22.00
	Often	69	34.50	56.50
	Undecided	13	6.50	63.50
	Rare	35	17.50	80.00
	Never	39	19.50	100

Source: Field Survey, 2018

Table 4.2 revealed that 35(17.5%) of the respondents are current account holders; 156(78%) of the respondents are savings account holders and 9(4.5%) are holders of other types of bank accounts. Similarly, the analysis revealed that 46(23%) of the respondents have 0-2 years of patronage; 60(30%) of the respondents have 3-5 years of patronage; 29(14.5%) of the respondents have 6-8 years of patronage and 65(32.5%) of the respondents have 9 and above years of patronage. Hence, majority of the respondents have been patronizing their banks for more than 9 years.

To examine the level of interaction with e-banking, analysis from table 4.2 equally showed that 60(30%) of the respondents are not familiar with e-banking while 140(70%) are familiar with e-banking which implied that, majority of the respondents are familiar with e-banking options. Additionally, while 54(27%) of the respondents are not comfortable with e-banking,146(73%) of them are comfortable with e-banking bringing us to the conclusion that, majority of the respondents were comfortable with e-banking. One of the motivating factors for the adoption of e-banking can be attributed to the cost of travelling to bank branch as 87(43.5%) of the respondents believed that going to a bank branch does not involve travel cost while 113(56.5%) of the respondent believed that going to a bank branch involves costs. Hence, majority of the respondents believed that going to a bank branch involves travel cost and hence, prefer to transact electronically.

Furthermore, the table reveals that 27(13.5%) of the respondents used internet banking; 37(18.5%) of the respondent use mobile banking; 94 (46%) of respondents use Automated Teller Machine (ATM); 26(13%) of the respondent use other e-banking services while 16(8%) of the respondents are non-users of e-banking. In addition, 44(22%) of the respondents use e-banking very often; 69(34%) of the use e-banking often; 13(6.5%) of respondents were undecided on their usage of e-banking; 35(17%) of the respondents rarely use e-banking and 39(19%) of the respondent did not use e-banking.

The analysis as presented in table 4.3 below contains information on the discrete analysis, Logistic Regression results. The likelihood ratio of 53.88 with a p-value of 0.0216 means that the model is a good fit and as such is statistically significant. This implies that all the coefficients in the model are different from zero, and that, it fitted significantly better than a model with no predictors.

Table 4.3. Determinant of E-Banking Adoption in Lagos State.

	Efficiency	**Fulfillment**	**System Availability**	**Privacy**	**Assurance**	**Response**	**Contacts**	**Constant**
Internet	**0.33 (0.07)****	**0.16 (0.09)***	**0.06 (0.23)****	**0.28 (0.16)***	0.28 (0.20)	0.05 (0.18)	**0.15 (0.18)***	**-4.66 (-1.79)****
Mobile	**0.04 (0.05)***	**-1.04 (0.09)****	**0.05 (1.18)****	**-0.20 (0.15)***	-1.13 (1.14)	**-0.12 (0.15)***	**0.05 (0.14)***	1.76 (1.25)
ATM	**0.14 (0.07)***	**0.06 (0.09)*****	**0.10 (0.22)***	**0.22 (0.19)***	0.02 (0.23)	**0.03 (0.23)****	**0.12 (0.19)****	0.90 (1.92)
Others	**0.34 (0.61)***	**0.67 (0.10)***	0.08 (0.22)	-0.09 (0.16)	-1.16 (1.16)	-1.14 (0.17)	**0.10 (0.16)***	0.28 (1.43)
Number of obs = 200				***LR Chi2 = 53.88***				
Pseudo R^2 = 0.083				***Prob > chi2 = 0.0216***				

Source: Field Survey, 2018. **Note:** Standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.10the bolded values signify significance of estimated parameters and F-statistics.

Table 4.3 analysed the impacts of factors such as efficiency, fulfillment, system availability, privacy, assurance, responsiveness and contact on e-banking usage. This is necessary going by respective role each of the factors play in enhancing e-banking adoption. On a lighter mode, efficiency factor implies the extent to which e-banking

met the desire of users with little efforts and minimized costs. The fulfillment factor indicated the extent to which customers' expectations are met upon the adoption of e-banking. System availability denoted the rate of access to e-banking network at the point of usage. Availability of network is very crucial factor for users as embarking on e-banking is an alternative option to physical appearance at the banking hall, in a situation where such is not accessible, customers will be left without option than to visit the bank which will cost them time, energy and money. Privacy is the extent to which users' personal data and details of financial transactions are not exposed to third party. Assurance factor implies the extent to which users have developed confidence in e-banking usage based on previous experiences. The contact and response factors denote the ease of access to the customer care services and the extent to which feedbacks meet users' enquiries.

The results from table 4.3 showed that on the average, factors such as efficiency, fulfillment, system availability, privacy and responsiveness positively and statistically influenced the adoption of e-banking particularly through the internet, mobile and ATM channels. The economic intuition derivable from the relationship is that, a percentage change in the efficiency of e-banking will increase users' adoption by 7%, 5%, 7% and 61% through the option of internet, mobile apps, ATM and other channels respectively. The low values of the respective standard errors are consistent with the sluggish growth in the adult rate of e-banking adoption as alluded by (EFInA 2016). A similar intuition is analogous to other determinants in terms of increasing the numbers of e-banking users on the average. Among these factors, system availability exerts the highest impact which draws attention to the point that, greater investments on this determinant holds the possibilities to drive users' interests towards e-banking adoption. The submission is supported by Maiyaki (2011) who identified availability of large branch network across the country as one the eminent drivers of e-banking usage

On the contrary, the case of assurance as a factor remained largely insignificant going by challenges which still embattle the various banks in terms of providing 24/7 e-banking services to customers. Hence, despite the huge adoption, customers still find assurance of quality services a major obstacle to getting the maximum satisfaction from e-banking.This result corroborates the study by Onyedimekwu, Oruan, &Omoku (2013), which concluded that most bank customers will use e-banking systems more often if the system quality, information quality and service quality are improved.

5.0 Conclusion

The study examined the determinants of e-Banking adoption in Lagos State. A survey was used to obtain both descriptive and inferential statistics from frequency tables, percentages and Logistic Regression Model for the analysis. Analysis from the descriptive statistics revealed that majority of the respondents are familiar and comfortable with e-banking and agreed that going to a bank branch involved travel cost which informed their acceptance of the e-banking option. However, the Logistic Regression Analysis showed efficiency, fulfillment, system availability, privacy, responsiveness and ease of contact having high influence on the adoption of e-banking by customers while assurance of trust remained a major impediment.

The policy suggestions derivable from the findings advance that, management of Nigerian banks should not just maintain the giant stride they have achieved in the past one decade, but should strive to improve on its services to measure up to the international standards. Regulatory Agencies should also consolidate on their achievements by adopting more beneficial policies that will facilitates effective financial service delivery, improve assurance, and further mitigate risk associated with the use of e-banking. In particular, investment directives should be tailored towards the factors that have the potentials and opportunities to drive users' adoption of e-banking in greater details. This is the case with system availability as explicated from the results in table 4.3 which is equally in agreement with Maiyaki (2011) who identified availability of large branch network across the country, as one of the prominent drivers of e-banking usage in Nigeria.

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QUESTIONNAIRE

Dear Sir/Madam,

This questionnaire aims at gathering useful information conducting a study on "*Determinants of E-Banking Adoption in Lagos State.*" The questions you are about to answer are strictly for academic research purpose. Please, be sincere and objective in your answers. All information will be treated with utmost confidence.

Section A: Personal Information

1. Gender a. a. Male ( ) b. Female ( )
2. Marital Status a. Single ( ) b. Married ( ) c. Divorced ( ) d. Separated ( )
3. Educational Status a. No formal education ( ) b. Primary ( ) c. Secondary ( ) d. Tertiary education ( )
4. Religion a. Christianity ( ) b. Islam ( ) c. Traditional ( ) d. Others specify ( )
5. Employment status a. Employed ( ) b. Unemployed ( )
6. Which of these banks do you have an account with?
   a. GTB ( ) b. First Bank Ltd. ( ) c. UBA ( ) d. Others please specify _____
7. Duration of Patronage: a. 0-2 years ( ) b. 3-5 years ( ) c. 6-8 years ( ) d. 9 and above ( )
8. Type of account a. Current ( ) b. Savings ( ) c. Others specify ( )

Section B: E-Banking

1. I am familiar with e-banking a. Yes ( ) b. No ( )
2. I am comfortable with e-banking a. Yes ( ) b. No ( )
3. Going to a bank branch involves travel costs a. Yes ( ) b. No ( )
4. Which of these e-banking services do you use?
a. Web (Internet) Payment ( ) b. Mobile payment ( ) c. Point of Sale (PoS) ( ) d. ATM use ( ) e. Others please specify _____ f. I don't use e-banking ( )
5. How often do you use the above e-banking services?
a. Very often ( ) b. Often ( ) c. Undecided ( ) d. Rarely ( ) e. I don't use it ( )
6. Kindly indicate the extent to which you agree on the following e-banking services.

Note: 1- Strongly Agree; 2- Agree; 3 - Undecided 4 – Disagree 5 – Strongly disagree

	Question	Web (Internet) Payment	Mobile payment	Point of Sale (PoS)	ATM use
Efficiency	It is easy to get on the site quickly				
	People find what they need using e-banking				
	It is quick to complete a transaction				
	Using e-banking does not require a lot of effort				
	The organization and structure of online e-banking contents are easy to follow				
Fulfillment	e-banking transactions with my bank are always accurate				
	The service delivered through e-banking is quick				
System Availability	e-banking is always available for business				
Privacy	The bank does not misuse my personal information				
	I feel safe in my transactions with the bank				
Assurance/Trust	I have confidence in the bank's service				
	The bank's name is well-known and has good reputation				
Responsiveness	The bank gives prompt responses to my requests by e-mail or other means				
	The bank quickly resolves problems I encounter with my online transactions				
Contact	The bank is easily accessible by telephone				
	The site has customer service representatives available online				

Section C: Bank Patronage

How often do you do the following?

	Before the adoption of e-banking					After the adoption of e-banking				
	Very often	Often	Undecided	Rarely	Never	Very often	Often	Undecided	Rarely	N
Fund transfer										
Credit card customers										
Pay for bills and shopping										
Investing through Internet banking			`							
Recharging your prepaid phone										