Journal of Internet Banking and Commerce

An open access Internet journal (http://www.arraydev.com/commerce/jibc/)

Journal of Internet Banking and Commerce, August 2014, vol. 19, no.2
(*http://www.arraydev.com/commerce/jibc/*)

A Discrete Analysis of Demography and Electronic banking usage in Nigeria

TITUS CHUKWUEMEZIE OKEKE, PhD
Department of Marketing. Nnamdi Azikiwe University, Nigeria
Postal Address: **PMB 5025, Awka, Anambra State, Nigeria**
Email: **tc.okeke@gmail.com; tc.okeke@unizik.edu.ng**
Dr. Chukwuemezie Okeke is a Lecturer in the Department of Marketing, Nnamdi Azikiwe University, Awka. His research interests are in the areas of internet banking, consumer behaviour, services marketing, government and business, and business analysis.

CHUDI GABRIEL OKPALA, MBA
Department of Marketing. Nnamdi Azikiwe University, Nigeria
Postal Address: **PMB 5025, Awka, Anambra State, Nigeria**
Email: **cgokpa.la@gmail.com; ultimatechudi@yahoo.com**
Chudi Okpala is a Lecturer in the Department of Marketing, Nnamdi Azikiwe University, Awka. His research interests are in the areas of business policy, agricultural, relationship, services and international marketing.

Abstract

This research seeks to determine which demographic sub-group has the greatest tendency to use electronic banking since different sub-groups reflect differences in mix and types of banking services used. It was based on a discrete analysis using both Binary Logistic Regression (BLR) and Multinomial Logistic Regression (MLR). Seven demographic variables: gender, age, income, marital status, ethnicity, occupation and education were used. The results of the study show that males and graduates are more inclined to use e-banking. It also shows that traders and respondents in technical/administrative occupation are less inclined while students/apprentices and clerical workers are more inclined to use e-banking. In terms of the consumers' ethnic background in electronic banking, the study found out that the Igbo and Yoruba ethnic groups have higher and positive probability of using e-banking while the Hausa/Fulani

show less probability. With respect to marital status, this study shows that singles have the highest probability to use e-banking. Married/divorced people also show positive disposition to use e-banking. The implication of this study is that market segmentation is a key element of product management.

Keywords: **electronic banking, demographic, discrete analysis, Nigeria, Central Bank of Nigeria, product management, and segmentation.**

INTRODUCTION

Electronic banking refers to the variety of electronic banking services such as automated teller machines (ATMs), internet banking, telephone banking as well mobile banking services which are developed by banks for the banking public; and which are products of intensive use and application of ICT in the banking sector. This offers banking institutions a new frontier of opportunities and further augmenting competition in the global banking market (Suganthi and Balachandran 2001).

E-banking services enable speedy transactions, access, time and money savings through paperless and complete up to date transactions. E-banking has gained wide acceptance in the current decade. The acceptance of e-banking in recent time is predicated on its advantages over the brick and mortar system of banking. The analysis of Don and David (2002) suggests that financial institutions are vulnerable to loss of customers to rivals with extensive online services. Pikkarainen et al. (2004) maintain that internet banking is a useful tool in banking system that offers less waiting time and is more convenient than traditional branch banking. In addition, this new banking system has significantly lower cost structure than traditional delivery channels (Mirza et al., 2009). The competitive landscape for banking institutions is shifting as internet banking is not only a competitive advantage but also a competitive necessity for banks (Gan, et. al. 2006). If banks wish to enhance their competitive advantage in the financial industry, they will have to build their information technology, and in particular, their network technology in order to increase their adoption of the e-customers with the new circumstances (Shafeei and Mirani 2011).

The traditional banking business has been significantly, and inevitably, impacted by the rapid technological development of non-banking high tech industries. In an increasingly globalising world, electronic banking services have been gaining ground. Banking is undergoing a rapid change as the international economy expands and advances towards institutional and market competence occasioned by the changing dictates of information and communication technology (ICT) (Zheng and Zhong, 2005).

The Central Bank of Nigeria (CBN) in year 2003 released comprehensive guidelines on the operation of electronic banking for Nigerian banks, while switching companies and interoperability of shared Automated Teller Machine/Point of Sale (ATM/POS) were established in 2004. Also the apex bank in 2010 published guidelines on ATM operations. The aims of these are to make the Nigeria payments system effective, efficient; technology driven and in line with emerging global trends.

The CBN is also experimenting with its cashless policy that daily cumulative free cash withdrawals and lodgments by individuals and corporate customers do not exceed a maximum ceiling of ₦500,000 and ₦3,000,000 respectively; and which is expected to go round the country by 2014. Nigeria has an estimated population of 170 million; and the people are the thrust of government/business policies hence the success of these programmes depends on the demographic variables and how they impinge on the acceptance of this new phenomenon.

This implies a potentially large market for e-banking/e-payments market. KPMG Audit (2012) maintain that as technology continues to redefine how customers interact with each other and their financial service providers, alternate channels will gain traction as they offer exciting and promising opportunities for both banks and their customers. They emphasised the need for seamless multichannel delivery of banking services. The Nigerian financial sector is investing substantially in e-banking infrastructure and the Nigeria banking public is patronizing them; even as some e-payments products remain largely underutilized. Below is a table showing the value and volume of e-payments in Nigeria 2008-2012, which shows that ATM dominates the e-payments segment of the payments system.

Table 1: Market Share in the Electronic Payment in Nigeria 2008-2012

E-payment segment	**Volume (Millions) (Nos. in Brackets are Percentages)**					**Value in (₦B) (Nos. in Brackets are Percentages)**				
	2008	2009	2010	2011	2012	2008	2009	2010	2011	2012
ATM	60.1 (91.0)	109.6 (95.3)	186.2 (95.2)	347.6 (97.9)	375.5 (98.1)	399.7 (90.5)	548.6 (85.1)	954.0 (88.9)	1561.8 (93.4)	1984.7 (94.7)
Web (internet)	1.6 (2.4)	2.7 (2.3)	7.2 (3.7)	3.6 (1.0)	2.3 (0.6)	25.1 (5.7)	84.2 (13.0)	99.5 (9.3)	58.0 (3.5)	31.5 (1.5)
POS	1.2 (1.8)	0.9 (0.8)	1.1 (0.5)	2.1 (0.6)	2.6 (0.7)	16.1 (3.7)	11.0 (1.7)	12.7 (1.2)	31.0 (1.9)	48.0 (2.3)
Mobile	3.2 (4.8)	1.8 (1.6)	1.2 (0.6)	1.2 (0.6)	1.5 (0.6)	0.7 (0.1)	1.3 (0.2)	6.7 (0.6)	20.5 (1.2)	31.5 (1.5)

NB: Figures in Brackets are percentage share of total.
Source: CBN (2012) Annual Report and Statement of Accounts.

Studies have been conducted on the use of e-banking with more emphasis on the impulsive factors. Demographic variables included in consumer studies on e-banking services have produced differing results with respect to significant relationships to adoption of e-banking products and this Kolodinsky et. al. (2004) argue relate to the sets of variables included in analysis. Khan (2010) however argues that demographic variables are dynamic and require continuous studies. The demographic variables influencing consumers' usage of this innovation have rather attracted limited attention of researchers; and the limited studies in this area (cf. Izogo et. al. 2012) were not based on discrete analysis. The present study seeks to fill this gap. This research seeks to determine which age group has the greatest tendency to use electronic banking since different age groups reflect differences in mix and types of banking services used.

The research also set out to determine if gender plays a part in differentiating respondents who are electronic banking users and those who are not. It also set out to determine whether more educated respondents would likely be electronic banking users. It was also initiated to ascertain which occupation favours the use of e-banking more. Nigeria is a country of diverse ethnics hence the study also set out to determine which ethnic group is more positively disposed to use e-banking. The research aims at finding out which marital status group impact e-banking. Lastly, it seeks to determine which income group would be most likely to be electronic banking users. The significance of this study is that it offers the necessary insights on the demographic variables that influence consumers' adoption of e-banking which players in the Nigerian banking industry can tap from to better target the right audience for their e-banking services and equally give focus for further research.

LITERATURE REVIEW

Consumer behaviour literature is replete with demographic variables that effect consumer decisions. Such demographic variables like income, education, occupation, gender and age have impact on consumer buying decisions. Empirical investigations have established the impact of these variables on consumer patronage of online banking products (Suganthi and Balachandran 2001; Gan et. al. 2005, 2006; Howcroft et. al 2007; Safeena et al 2010; and Izogo et. al. 2012). Electronic banking in Nigeria is relatively new given that CBN issued guidelines for its operation in 2003 while switching companies were established in 2004. Diffusion of innovation is a process and it is appropriate to focus on demographic variables that influence the relative time of adoption over geographic space. The diffusion of innovations is also an individual process; and some individuals decide to adopt innovations before others do (Arnould et al 2004).

In consumer behaviour literature, consumers have been categorized into five based on the time they decide to adopt an innovation. Across national markets, the different categories of consumers share a number of characteristics. For instance: innovators are often venturesome, less risk averse and younger, have higher income and better educated than the later adopters. Active information seeking characterizes the innovators' behaviours. They are often more involved with media relevant to product categories that interest them and heavier users of product within a product class (Arnould et al 2004).

Innovators are more upscale than other consumer segments and they are more likely to be professionals in managerial and or executive positions. According to Achumba (2006), it is reasonable to assume that the age of the consumer innovators is related to the specific product in which the consumer innovates; however, research suggests that consumer innovators tend to be younger than later adopters or non-innovators. This he adds is no doubt due to the fact that many of the products selected for research attention (fashion, convenience, grocery products, new automobiles, and of course e-banking) are particularly attractive to or are targeted by marketers to younger consumers. Gan et al (2006, 2005) show that older and younger consumers are negatively disposed to electronic banking while middle age consumers are positively disposed to electronic banking adoption and use. Their study also shows positive relationship between white – collar occupations and electronic banking usage.

They equally found a positive relationship between low income and electronic banking use; arguing that the costs associated with electronic banking are currently affordable than when electronic banking was first launched. Similarly, Howcroft et al. (2007) found that innovative consumers, which they clustered action-inert cluster possessed very high annual household income, had professional qualifications and were, aged between 36-45 years old. This group of consumers exhibited a moderately high level of involvement, as they possessed good knowledge of the products/services they patronise. Internet users are dominated by the educated younger generations. Howcroft et al. (2007) study show that younger consumers value the convenience or time saving potential of online services more than the older customers, and care less about the importance of face-to-face contact. Filotto, et. al. (1997) study showed that the adoption rates of ATM were higher among younger users. In addition, Barnett (1998) findings showed that the younger the consumers, the more comfortable they were in using electronic banking. Similarly, Karjaluoto, (2002) demonstrated that electronic banking users were younger than non-electronic banking users.

These findings imply that older consumers are less likely to favour electronic banking. Yuan, Lee and Kim (2010) report that 70 per cent of Chinese netizens are highly educated or younger and the purpose for which that segment of the population uses the internet is entertainment, such as music downloads or on-line games. They further report that when compared to the total population of Chinese netizens, internet banking users are young people with relatively high educational attainment and income, and constitute the most viable potential consumers for internet banking in the future. Chan (1997) established that income was the single most important variable that influenced a consumer's use of a credit card. Empirical findings of income positively influencing adoption of electronic banking can be found in Al-Ashban and Burney's (2001), Stavins's (2001) and Karjaluoto's (2002) studies.

A typical on-line banking user is described as a "highly educated, relatively young and wealthy person with good knowledge of computer, especially, internet" (Karjaluoto et al., 2002). Shafeei and Mirani (2011) argue that education of customers can affect their acceptance of e-banking. Al-Ashban and Burney (2001) and Stavins (2001) studies showed that as consumers increased their educational qualification level, their adoption of electronic banking would increase as well. In the Finnish culture, the income and education predicted whether or not consumers would adopt internet banking (Mattilia et al., 2003). Similarly, Izogo et. al. (2012) show that age group and education level differences and the adoption of e-banking is statistically significant. Numerous studies (Lassar et al., 2005; Karjaluoto et al., 2002; Gerrard and Cunningham, 2003; Flaviàn et al., 2006) revealed that demographic factors such as age and gender would influence the adoption of internet banking services. However, Shafeei and Mirani (2011) study shows no significant relationship between age and sex as regards the use of internet or other facilities associated with e-banking. As for the impact of marital status on the assessment of electronic banking, Stavins (2001) identified that married consumers were more likely to use electronic banking. Izogo, et. al. (2012) concluded that the relationship between marital status and adoption of e-banking is significant among Nigerian e-customers. Katz and Aspden (1997) findings showed that males were more likely to use electronic banking than females. Similarly, Karjaluoto (2002) found that electronic banking users were dominated by males.

Using the findings from these studies, it can be proposed that male gender positively impacts on the choice of electronic banking. However, Izogo, et. al. (2012) show that the difference in gender adoption of e-banking is not significant; indicating a weak positive relationship. In terms of the consumers' ethnic background in electronic banking, Katz and Aspden (1997) found evidence that consumers' ethnic backgrounds were an influential factor in using electronic banking. Stavins (2001) identified white-collar consumers as being most likely to use electronic banking. It can be postulated that occupation status (namely white-collar) is positively related to the choice of electronic banking. Mohammed (2012) found that education, gender and income and occupation strongly contribute to e-banking adding that graduates are more disposed to use the service more than non-graduates.

METHODOLOGY

Discrete analysis employed in this study combines both the Logistic Regression procedure and the Multinomial Logistic Regression procedure. Each procedure has options not available in the other. An important theoretical distinction is that the Logistic Regression procedure produces all predictions, residuals, influence statistics, and goodness-of-fit tests using data at the individual case level, regardless of how the data are entered and whether or not the number of covariate patterns is smaller than the total number of cases, while the Multinomial Logistic Regression procedure internally aggregates cases to form subpopulations with identical covariate patterns for the predictors, producing predictions, residuals, and goodness-of-fit tests based on these subpopulations (IBM-SPSS, 2011).

The logistic model is of the form:

$$Logit_i = \ln\left(\frac{prob_{event}}{1-prob_{event}}\right) = b_0 + b_1x_1 + \ldots + b_nx_n$$

or

$$Odds = \left(\frac{prob_{event}}{1-prob_{event}}\right) = e^{b_0+b_{1+\cdots+b_n}X_n}$$

The discrete dependent variable, EBANKING, measures whether an individual is an electronic banking or non-electronic banking user. The dependent variable is based on the question asked in the mail survey: "frequency of using e-banking products." this was dichotomized since the study is a discrete analysis of e-banking usage. Demographic characteristics such as age, gender, marital status, education, ethnic group, occupation and income were hypothesized to influence the respondent's decision to use electronic banking. Structured questionnaire was used to collect data on a sample of 400 retail banking customers in Awka, Anambra State, Nigeria. The variables included in the study, apart from e-banking product, with their options are: gender: male and female; marital status: single, married, separated and divorced; income: ₦30,000 and below, ₦31,000-450,000, above ₦450,000, age: 18-35 years, 36-55 years, and above 55 years; occupation: student/apprentice, clerical, trading, technical/administrative, and casual worker; ethnicity: Igbo, Hausa/Fulani, Yoruba, Efik and others; and education: primary/non-formal, secondary, graduate, and postgraduate.

The model for this study is formulated thus:
Electronic-banking = f(Young, Old, Ma, Single, Mar, D, Lo, Hi, SA, Clerical, Trading, TA, Igbo, H/F, Y, S, Gra, PG, ε).

Where: E-BANKING = 1 if the respondent is an electronic banking user; 0 otherwise
Male (+) = Male; if respondent is a male; 0 otherwise.
YOUNG (+) = Age level; 1 if respondent age is between 18 to 35 years old; 0 otherwise
OLD (-) = Age level; 1 if respondent age is above 56 years old; 0 otherwise
Single (+) = Single; 1 if respondent is single; and 0 otherwise
Married (+) = Marital status; 1 if respondent is married; 0 otherwise
D (+) = Divorced; 1 if respondent is divorced; 0 otherwise
Lo (+) = Low income; 1 if respondent monthly income is ₦30,000 or below; 0 otherwise
Hi (-) = High income; 1 if respondent monthly income is above ₦450,000 and above; 0 otherwise
SA (+) = Student/apprentice; 1 if respondent is student/apprentice; 0 otherwise
Clerical (+) = Clerical; 1 if respondent is a clerical worker; 0 otherwise
Trading (-) = Trading; 1 if respondent is a trader; 0 otherwise
TA (-) = Technical/administrative; 1 if respondent works as a TA; 0 otherwise
Igbo (+) = Igbo; 1 if respondent is of Igbo ethnicity; 0 otherwise
H/F (+) = Hausa/Fulani; 1 if respondent is of Hausa/Fulani ethnicity; 0 otherwise
Y (+) = Yoruba; 1 if respondent is of Yoruba ethnicity; 0 otherwise
S (+) = Secondary; 1 if respondent has secondary education; 0 otherwise
Gra (-) = Graduate; 1 if respondent has tertiary education; 0 otherwise
PG (-) = Postgraduate; 1 if respondent has post graduate education; 0 otherwise
ε = Error term.

One dummy variable is dropped from each group while some others were merged to avoid the dummy trap problem in the model. The two variables/options dropped attracted very low response. The analysis was conducted with the aid IBM-SPSS Statistics version 20.

DATA ANALYSIS

Binary Logistic and Multinomial Logistic regression methods were the discrete analysis method used to test the effect of demographic variables on e-banking usage in Nigeria. The study was based on a sample of 400 respondents out of which 246(61.5%) respondents returned complete usable questionnaire. The mean and standard deviation of the variables are: gender: 1.49, .501; marital status: 1.35, .565; monthly income: 1.57, .594; age bracket: 1.18, .437; occupation: 2.02, 1.364; ethnicity: 2.60, 1.658; and education: 2.91, .498 respectively. These show that ethnicity and occupation show the highest variations as they each have standard deviation more than one. On the other hand education shows the least variation as it recorded the least standard deviation of .498 even with highest mean value.

Table 3: Discrete Analysis Output.

Binary Logistic Regression						**Multinomial Logistic Regression**					
Number of Observations	246					Number of Observations	246				
Log likelihood	292.100					Initial log likelihood	204.428				
Cox & Snell R Square	.154					Restricted log likelihood	163.412				
Nagelkerke R Square	.207					Cox & Snell R Square	.154				
Chi Square Statistics	41.016					Nagelkerke R Square	.207				
Degree of Freedom	18					McFadden	.123				
Probability (p value)	.002					Chi Square Statistics	.41.016				
Wald	7.785					Degree of Freedom	18				
Probability (p value)	.005					Probability (p value)	.002				
	B	**S.E.**	**Wald**	**Sig.**	**Exp(B)**		**B**	**S.E.**	**Wald**	**Sig.**	**Exp(B)**
Male	.616	.320	3.694	.055	1.851	Intercept	-.926	.860	1.160	.281	.396
Single	1.233	1.351	.834	.136	3.432	Male	-.616	.320	3.694	.055	.540
Married	.259	.464	.307	.579	1.293	Single	-1.233	1.351	.834	.136	.291
Divorced	.153	.908	.103	.087	1.422	Married	-.259	.464	.307	.579	.773
Low Income	.101	.497	.041	.839	1.106	Divorced	-.153	.908	.103	.087	.432
High Income	-1.697	.717	5.607	.018	.183	Low Income	-.101	.497	.041	.839	.904
Young	-.402	.652	.381	.537	.669	High Income	1.697	.717	5.607	.018	5.458
Old	1.760	1.507	1.364	.243	5.811	Young	.402	.652	.381	.537	1.495
Student/Apprentice	.115	.681	.029	.865	1.122	Old	-1.760	1.507	1.364	.243	.172
Clerical	.319	1.139	.078	.779	1.376	Student/Apprentice	-.115	.681	.029	.865	.891
Trading	-1.338	.876	2.334	.127	.262	Clerical	-.319	1.139	.078	.779	.727
Tech/Administrative	.005	.723	.000	.994	1.005	Trading	1.338	.876	2.334	.127	3.812
Igbo	.771	.371	4.316	.038	2.162	Tech/Administrative	-.005	.723	.000	.994	.995
Hausa/Fulani	-.095	.480	.039	.844	.910	Igbo	-.771	.371	4.316	.038	.463
Yoruba	.385	.552	.485	.486	1.469	Hausa/Fulani	.095	.480	.039	.844	1.099
Secondary	.201	1.392	.021	.885	1.223	Yoruba	-.385	.552	.485	.486	.681
Graduate	1.300	1.396	.868	.352	3.670	Secondary	-.201	1.392	.021	.885	.818

Post Graduate	.381	1.256	.092	.762	1.463	Graduate	-1.300	1.396	.868	.352	.272
Constant	.926	.860	1.160	.281	.396	Post Graduate	-.381	1.256	.092	.762	.683

Table 2 above contains information on the discrete analysis, Binary Logistic Regression (BLR) and Multinomial Logistic Regression (MLR). The first thing to look at is the pseudo R^2 – Cox & Snell = .154, Nagelkerke = .207 and the McFadden = .123. These measures reflect the amount of variation accounted for by the logistic models. The Nagelkerke is a modification of the pseudo R^2 (Hair, et. al 2010); hence it is used to explain the model summary. The value is .207 and this means that 20.7% of the variation in e-banking usage is accounted for by the logistic model. The Chi Square value is 41.016 and is significant at .002, which shows that the model is a good fit.

For the BLR the model Wald that measures the combined effect of the independent variables on the dependent is 7.785 and is significant at .005. The ratio of correct classification for the BLR is 68.7% against the cut value of .50; while that of MLR is 73.9 against 65. This shows that the model is dependable in explaining variations in e-banking usage. The regression analysis resulted - coefficients β and exponentiated coefficients Exp(β). The estimated β coefficients are measures of the changes in odds ratio. A positive coefficient sign indicates increases the probability of customer responses to use e-banking services and a negative sign not to use it. The degree of impact of the independent variables is represented by exponentiated coefficients Exp(β) which indicate the change of the odds ratio when the independent value increases by one. Exponentiated coefficients are the logarithms of the original coefficients and this explains the absence of signs; and an exponentiated coefficient of 1 means no direction (Hair et. al. 2010).

This study was necessitated by the need to identify how the different demographic variables impact use of e-banking; since the different groups reflect differences in mix and types of banking services used. The signs in the coefficients indicate the direction of influence/effect. Thus the BLR coefficients base on use of e-banking while MLR coefficients base on non-usage. A positive coefficient in BLR transforms to negative in MLR while the absolute values remain same. Male has a positive coefficient of .616 and a positive coefficient increases the probability of impact on the dependent variable e-banking. Though this is less than 1, but the positive sign indicates that males are more disposed to use e-banking than females hence we confirm the first proposition. Marital status has: single, married and divorced with coefficients: 1.233, .259 and .154. This means that all categories within this variable increase of probability of use of e-banking. The three coefficients agree with our propositions. Low income, that is, those earning ₦30,000 or less has low but positive score of .101 while high income has high but negative coefficient of -1.697. This means that people with low income are favourably disposed to using e-banking than those in the high income category; hence the two propositions are confirmed. Occupation is the next demographic variable used in the study. The coefficients are: student/apprentice .115, clerical workers .319, trading -1.338 and technical/administrative .005. The last is positive but very small and with this we confirm the propositions relating the variable, occupation.

Three ethnic variables were included: Igbo, Hausa/Fulani and Yoruba with .771, -.095 and .385 respectively. Thus the proposition on Hausa/Fulani is rejected while those for the other two groups are confirmed.

The last is education that has secondary, graduate and post graduate with scores of .201, 1.300 and .381 respectively. This means the three education variables increase probability of impacting on the dependent variable and can be used in classifying e-banking customers on the basis of users and non-users.

CONCLUSION

This research seeks to determine which gender group has the greatest tendency to use electronic banking. The results of the study show that males are more inclined to use e-banking. This is in line with Katz and Aspden (1997) and Karjaluoto (2002) findings that males were more likely to use electronic banking than females. Among the different categories with the educated respondents, the study results show that graduates are more inclined to use e-banking than secondary school leavers. This is in line with Al-Ashban and Burney (2001) and Stavins (2001) studies that as consumers increased their educational qualification level, their adoption of electronic banking would increase as well. The study also shows that people in different occupation differ in their adoption of e-banking. The findings show that while traders and respondents in technical/administrative occupation are less inclined, students/apprentices and clerical workers are more inclined to use e-banking.

This study also shows that low income increases probability of e-banking usage. This contrasts with (Mattilia et al., 2003) that increase in income is associated with increase in e-banking use. In terms of the consumers' ethnic background in electronic banking, the study found out that the Igbo and Yoruba ethnic groups have higher and positive probability of using e-banking while the Hausa/Fulani show very negative probability. This agrees with Katz and Aspden (1997) that consumers' ethnic backgrounds were an influential factor in using electronic banking.

With respect to marital status, singles have the highest probability to use e-banking. Married/divorced people also show positive disposition to use e-banking. This is in line with Stavins (2001) that married consumers were more likely to use electronic banking. With respect to age it is established here that young people are not more inclined toward e-banking than old people. This contrasts with Filotto, et. al (1997) study which showed that the adoption rates of ATM were higher among younger users. It also contrasts with Barnett (1998) and Karjaluoto, (2002) findings showed that the younger the consumers, the more comfortable they were in using electronic banking. This however agrees with Gan et. al (2005, 2006) that middle age favour e-banking usage.

From the results of this study it is clear that to achieve improved product and service offering, a strong product management is required. As customers consolidate payment relationships and embrace e-banking, banks become more exposed to non-bank financial institutions and service providers which impact on margins. A key element of product management is to manage offerings through market segmentation. Tailoring offerings to a specific need of customers, instead of generic offering for a broad category of customers will give the customers a better impression of the banks' ability to

understand their needs. The results of this study show that ATM dominates the e-payments segments of the Nigerian financial system. This means that the potentials in the other electronic channels can be realised. What is needed however is sustained awareness on the part of banks and e-service providers on the similar benefits of other e-channels.

REFERENCES

Achumba, I.C. (2006). The Dynamics of Consumer Behaviour. Lagos: Mc-Williams Publishers.

Al-Ashban, A. A. & Burney, M. A. (2001) "Customer Adoption of Tele-Banking Technology: the Case of Saudi Arabia", The International Journal of Bank Marketing, 19(4/5), pp.191-200.

Arnould, E; Price, L; & Zinkhan, G. (2004). Consumers. Irvin: Mc Graw Hill.

Barnett, C. (1998) "Virtual Communities and Financial Service: On-Line Business Potentials and Strategies Choice", The International Journal of Bank Marketing, 16(4), pp.161-169.

Central Bank of Nigeria (CBN) (2003). Guidelines on Electronic Banking in Nigeria.

Central Bank of Nigeria (CBN) (2012). Annual Report and Statement of Accounts.

Chan, R. Y. (1997) "Demographic and Attitudinal Differences Between Active and Inactive Credit Cardholders - the Case of Hong Kong", The International Journal of Bank Marketing, 15(4), pp.117.

Don, S. & David, E. (2002). Internet banking: a customer-centric perspective. Proceedings of the 2002 Hawaii International Conference on System Sciences.

Federal Republic of Nigeria (FRN) (2006). Financial System Strategy 2020.

Filotto, U., Tanzi, P, M., & Saita, F. (1997), "Customer Needs and Front-Office Technology Adoption", The International Journal of Bank Marketing, 15(1), pp.13.

Flaviàn C.; Guinaliu, M.; & Torres, E. (2006). "How Bricks and-Mortar Attributes affect Online Banking Adoption", The International Journal of Bank Marketing (24:6), pp 406-423

Gan C; Clemes, M; Limsombunchai V; & Weng A (2006). A Logit Analysis of Electronic Banking in New Zealand. Discussion paper No. 108.

Gan, C, Limsombunchai, V Clemes, M. & Weng, A (2005) "Consumer Choice Prediction: Artificial Neural Networks versus Logistic Models". Journal of social Sciences I (4): pp 211-219.

Gerrard, P. and Cunningham, J.B. (2003). "The diffusion of internet banking among Singapore consumers". International Journal of Bank Marketing. 21: pp 16-28.

Howcroft, B; Hamilton, R; & Hewer, P. (2007) "Customer Involvement and Interaction in Retail Banking: An Examination of Risk and Confidence in the Purchase of financial products" Journal of services Marketing: 21/7 pp 481-491 Emerald Publishing www.emeraldinsight.com/0887-6045.htm.

Hair, J.F.; Black, W.C.; Babin, B. J.; & Anderson, R.E. (2010). Multivariate data analysis (7th Edition). New Jersey: Pearson Prentice Hall.

IBM (2011). IBM-SPSS Statistics users guide version 20.

Izogo, E.E.; Nnaemeka, O.C.; Onuoha, A.O.; Ezema, K.S. (2012): Impact of Demographic Variables on Consumers' Adoption of E-banking in Nigeria: An Empirical Investigation. ***European Journal of Business and Management***. Vol. 4, No. 17. Downloaded from www.iiste.org

Karjaluoto, H., Mattila, M. & Pento, T. (2002). "Electronic banking in Finland: consumer beliefs and reactions to a new delivery channel". Journal of Financial Service Marketing. 6: pp 346-361.

Katz, J., & Aspden, P. (1997), "Motivations for and Barriers to Internet Usage: Results of a National Public Opinion Survey", Internet Research, 7(3), pp.170.

Khan, M.A (2010). "An Empirical study of Automated Teller Machine Service Quality and Customer Satisfaction in Pakistani Banks". European Journal of Social Sciences

– vol. 13,No.3.

Kolodinsky J.M., Hogarth, J.M.; & Hilgert, M.A. (2004). "The adoption of electronic banking technologies by US consumers", The International Journal of Bank Marketing (22: 4/5), 2004, pp 238-359.

KPMG, (2012) Banking industry customer satisfaction survey. KPMG Nigeria. Retrieved from www.kpmg.com.

Lassar, W.; Manolis, & Lassar, S. S. (2005). "The Relationship between Consumer Innovativeness, Personal Characteristics and Online Banking Adoption". The International Journal of Bank Marketing (23:4/5), p.176.

Mattila, M.; Karjaluoto, H. & Pento, T. (2003). "Internet Banking Adoption among Mature Consumers: early Majority or Laggard", The journal of services Marketing (17: 4/5), p. 514.

Mirza, A.P.; Hamidi-Beheshti, M.T.; Wallstrom, A.; & Mirza, O.P. (2009). Adoption of Internet Banking by Iranian Consumers: An Empirical Investigation. Journal of Applied Sciences 9, 2567-2575. Retrieved April 01, 2011 from http://scialert.net/fulltext/?doi=jas.2009.2567.2575.

Mohammed, S. (2012). "Factors affecting ATM Usage in India: An empirical analysis". UTMS Journal of Economics 3 (1): pp 1-7.

Pikkarainen, T.; Pikkarainen, K.; Karjaluoto, K. & Pahnila, S. (2004). "Consumer Acceptance of Online Banking: An Extension of the Technology Acceptance Model." Internet Research, Vol. 14, No. 3, pp. 224-235.

Safeena, R. Abdullah; and Date, H. (2010). "Consumer Perspectives on e-business value: case study on Internet Banking". Journal of Internet Banking and commerce vol. 15,NO. 1. Assessed from http: //www.arraydev.com/commerce/jibc/.

Shafeei, R. & Mirani, V. (2011). "Designing a model for Analysing the Effect of Risks on e-Banking Adoption by Customers: A focus on Developing Countries" African Journal of Business Management Vol. 5 No. 15.

Stavins, J. (2001) "Effect of Consumer Characteristics on the Use of Payment Instruments", New England Economic Review, No. 3, pp. 19-31.

Suganthi, B; & Balachandran, G. (2001). "Internet Banking Patronage: An Empirical Investigation of Malaysia" Journal of Internet Banking and commerce Vol. 6, No. 10

Yuan, X; Lee, H.S. & Kim, S.Y. (2010). "Present and Future of Internet Banking in China". Journal of Internet Banking and Commerce JIBC. Vol.15, No.1.

Zheng, L.; & Zhong, Y. (2005). The Adoption of Virtual Banking in China: An Empirical Study. Chinese Business Review.4(6), pp 75-78.

APPENDIX: Demographic Variables*E-banking Usage Cross tabulation

		E-banking Usage		Total
		Non-Users	Users	
Gender	Male	52	95	147
	Female	49	50	99
Total		101	145	246
Marital Status	Single	70	114	184
	Married	29	28	57
	Divorced	2	3	5
Total		101	145	246
Income	₦30,000 or below	58	96	154
	₦31,000-₦450,000	31	43	74
	Above ₦450,000	12	6	18
Total		101	145	246
Age Bracket	Below 30 years	92	130	222
	31-50 years	8	13	21
	Above 50 years	1	2	3
Total		101	145	246
Occupation	Student/Apprentice	69	108	177
	Clerical	2	3	5
	Trading	14	4	18
	Tech/Administrative	9	21	30
	Casual/Worker	7	9	16
Total		101	145	246
Education	Secondary	30	24	54
	Graduate	59	115	174
	Post Graduate	13	9	22
Total		101	145	246
Ethnicity	Igbo	47	81	128
	Hausa/Fulani	19	20	39
	Yoruba	8	13	21
	Others	27	31	58
Total		101	145	246