Perception on Adoption of Interactive Website for Internet Banking in Nigeria; A Case Study of Fidelity Bank

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Abstract— The internet, as a product of information and communication technology is becoming a serious method of business communication and data transfer worldwide. As such, banks and other financial institutions are beginning to use the internet as new vehicle for doing business. Banks have accordingly introduced web-based services referred to as "Internet Banking". Internet banking allows customers of a financial institution all time access to perform financial transactions on a secured website. If the content of the website fails to pass sufficient information on account capabilities, then the site is not fulfilling its objectives. This study was therefore aimed to determine the perception on the adoption of interactive website for internet banking in Nigeria using Fidelity Bank plc, Okpara Avenue, Enugu, Nigeria as a case of study. Data were collected using questionnaire and analysed using chi-square under 5% level of probability. The results showed that adoption of interactive website for internet banking will; improve banking operation; have significant positive effect on banking activities; and bring about products and customers' participatory revolution in the banking industry in Nigeria. It is therefore recommended that banks in Nigeria should design and implement interactive website for internet banking in Nigeria.

Keywords— Internet banking, information and communication technology, interactive website, web-based services, Nigeria.

I. INTRODUCTION

Banking is one of the most information intensive sectors and is an ideal domain for the successful development of ecommerce (Kardaras and Papathanassiou, 2001). For banks, information technology has emerged as a strategic resource for achieving higher efficiency, speed, control of operations, productivity and profitability (Adeyemi and Abefe-Balogun, 2011; Woherem, 2001). According to Oloruntoba (1992), Internet banking started in the mid 80's (1980's) with technology driven products that has influenced more technological advances. He further stated that what used to be termed electronic data processing has transformed into Internet banking via Information Technology. Oloruntoba (1992) emphasized that this changes in technology reflects on equivalent transformation of the use of the computer from automation of paper to reduction in unit cost, the replacement of manual with computer processing today focuses on Internet product and service delivery. All these being in line with today's modern international banking climate. This brought about the adoption and the introduction of internet networks in the banking systems in Nigeria. Internet banking refers to the use of the internet as a remote delivery channel for banking services (Furst et al., 2002; Suganthi et al., 2001). Internet banking involves customers or individuals using the internet at their convenience to access their bank accounts and undertake banking transactions such as balance inquiries, account

transfer, contact customer services, request for loan, etc (Edet, 2008; Usman, 1998).

At the basic level, internet banking can mean the setting up of a webpage by a bank to give information about its product and services while at advanced level, it involves provision of facilities like access to accounts, funds transfer, payment of bills and other online services. Ovia (2001), in his paper on the practices and potentials of Internet banking in Nigeria stated that the technology is understandably a very important tool for every banks competitive strategy. Despite the benefits of internet banking against the traditional branch banking practice, banks in Nigeria are yet to fully advance in operational infrastructure (Agbada, 2008). Ezeoha (2005) attributed this problem to poor telecommunication network, poor power supply, lack of knowledge, insecurity and inability to access bank websites. The banking industry in Nigeria does not at present enjoy the level of global integration that may allow for full benefits of internet banking system. Even at home, the level of public confidence in the banks is not such that can guarantee effective customer patronage of internet banking services. In addition to the cases of poor access to the requisite facilities, customers' ignorant of the services and benefits of internet affects the use of internet for banking in Nigeria. A website plays very significant and key role in internet banking. If the content of the website fails to pass sufficient information on account capabilities, then the site is not fulfilling its objectives. An interactive website is an internet webpage that uses various types of software to create

an interactive experience which allows the user viewing the web page to be actively engaged with the site. A good interactive website for internet banking is defined by its ability to engage the user in an immersive experience that delivers satisfaction.

The development of banks websites in Nigeria has not gone beyond information stage. This could explain why only very few customers actually transact businesses through the internet. There is need for banks to design and implement an interactive website for internet banking in order to boost the internet banking services in Nigeria. This study was therefore aimed to determine the bank staff's perception on adoption of interactive website for internet banking in Nigeria using Fidelity Bank Plc, Okpara Avenue, Enugu, Nigeria as a case of study.

Hypothesis statement

The null-hypotheses that were tested in the study were; *Hypothesis one*

H₀: The policy on *interactive website* for internet banking will not significantly affect banking activities in Nigeria.

H₁: The policy on *interactive website* for internet banking will significantly affect banking activities in Nigeria.

Hypothesis two

H_o: The *interactive website* for internet banking will not significantly affect banking operation in Nigeria.

 H_1 : The *interactive website* for internet banking will significantly affect banking operation in Nigeria.

Hypothesis three

 H_0 : The adoption of *interactive website* for internet banking in Nigeria will not significantly present technical and operational challenges.

 H_1 : The adoption of *interactive website* for internet banking in Nigeria will significantly present technical and operational challenges.

Hypothesis four

 H_0 : The introduction of *Interactive website* for internet banking will not significantly revolutionize the banking industry in Nigeria.

 H_1 : The introduction of *Interactive website* for internet banking will significantly revolutionize the banking industry in Nigeria.

Hypothesis five

H₀: The successful implementation of interactive website for internet banking will not significantly improve the banking services in Nigeria.

 H_1 : The successful implementation of interactive website for internet banking will significantly improve the banking services in Nigeria.

II. RESEARCH METHODOLOGY

Area of the Study

The study was carried out at the Fidelity Bank Plc, Okpara Avenue, Enugu which served as the main branch of the bank in Enugu. It is bounded in the north by First Bank of Nigeria Plc, Enugu main branch, bounded in the west by John Holt Stores, and bounded in the east by Eco Bank building, Enugu state, Nigeria.

Research Design

A survey research design was adopted in this study. A group of people was studied by collecting and analyzing sample data from the population, referred to as a sample survey. Decision was taken thereafter.

Population of Study

The population of study was made up of 48 member staff of Fidelity Bank Plc, Okpara Avenue, Enugu, Nigeria. This number was composed of both male and female staff.

Method of Data Collection

Five (5) research questions on the specific objectives out of the research topic constituted the research hypothesis. Four questions from each of the five (5) research questions were asked making it a total of 20 questionnaires. The questionnaires were applied face to face to the staff of Fidelity Bank Plc, Okpara Avenue, Enugu, Nigeria. Their responses were collected and presented for analysis and decision.

Sample Size

The population of staff of Fidelity Bank Plc, Okpara Avenue, Enugu, quoted under population of study was used to calculate the sample size of actual number of the staff on whom questionnaire were being applied on. The Yaro Yamani statistical formular was used to determine sample size as thus;

$$n = \frac{N}{1 + (Ne^2)}$$

Where n = Sample size, N = Population size, e = error limit taken as 5%, <math>1 = Unit

The given population in the study was 48, Therefore, sample size (n) was determined as thus;

$$n = \frac{48}{1 + 48 \times (5/100)^2} = \frac{48}{1 + 48 \times (0.05)^2}$$
$$n = \frac{48}{1 + 48 \times 0.0025} = \frac{48}{1 + 0.120} = \frac{48}{1.120} = 42.85$$

The sample size was taken as 42, hence 42 sets of questionnaires were prepared and distribution to the staff of Fidelity Bank Plc, Okpara Avenue, Enugu, and another ten (10) copies prepared for instrument reliability test. Hence, a total of 52 questionnaires were prepared and employed for data collection.

Sampling Technique

Simple probability (Random) sampling technique was adopted to distribute the research questionnaire. No unit or department was given preference during the administration of the questionnaire on the staff of Fidelity Bank Plc, Okpara Avenue, Enugu, Nigeria.

Instrument for Data Collection

The main instrument employed for data collection was the questionnaire that was divided into sections A and B. Section A contained the personal data of the respondent and section B, the technical aspect of the questionnaire.

The respondents' response item followed Likert type scale of:

Strongly Disagree SD



Disagree D
Tend to Agree TA
Agree A
Strongly Agree SA

With scoring ranging from 1,2,3,4 and 5 respectively and equally weighted.

Instrument Reliability Test

To improve on the reliability of the data gathering instrument, the questionnaire were set in a simple and unambiguous English sentences such that the questions meant the same thing to the respondents, carefully avoiding variation error as individuals interprets the items.

Furthermore, clear and standard instructions were provided when preparing the questionnaire to reduce error and avoid misleading of the respondents. These steps made the research instrument to be reliable.

Validity of Instrument

Ten (10) copies of the questionnaire were given to selected respondents of another bank - Access Bank Plc, also at Okpara Avenue, Enugu (a similar new generation bank) as pilot test.

Method for Data Analysis

From sample size of 42, 52 questionnaires were prepared, 42 were applied to the staff of Fidelity Bank Plc, Okpara Avenue, Enugu and 10 questionnaires were administered to the Staff of Access Bank Plc, Okpara Avenue, Enugu for Validity test. No instrument was lost; hence 42 numbers were used for analysis. The Chi-Square data analysis was used and decision for the hypotheses tested was taken at 5 percent level of significance.

III. RESULTS AND DISCUSION

Response Rate

All of the 42 questionnaires that were applied to the staff of Fidelity Bank Plc, Okpara Avenue, Enugu were returned giving 100% response rate. No instrument was lost; hence 42 questionnaires were used for analysis.

Test of Hypothesis

The calculated chi-square and the discernment on whether policy on interactive website for internet banking will affect banking activities in Nigeria were presented in table I and table II respectively. The tables showed that 23.81 % of the respondents strongly agreed, 50% agreed, 16.67% tend to agree, 7.14% disagreed while 2.38 strongly disagreed. The results showed that majority of the staff of Fidelity bank, Okpara Avenue, Enugu believed that policy on interactive website for internet banking will significantly have positive effect on banking activities in Nigeria.

TABLE I. Calculated Chi-Square (X²) for hypothesis I.

Response	foi	f ei	f oi –f ei	$(f oi - f ei)^2$	$X^2 = \frac{(f oi - f ei)^2}{f ei}$
S A	10	8.400	1.60	2.56	0.30
A	21	8.400	12.60	158.76	18.90
TA	7	8.400	- 1.40	1.96	0.23
D	3	8.400	- 5.40	29.16	3.47
SD	1	8.400	-7.40	54.76	6.52
Total	42	42.00	0.00	249.48	29.42

f oi = observed frequency; f ei = expected frequency; X^2 = Calculated Chisauare

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The result of the chi-square analysis revealed that policy on interactive website for internet banking will have significant positive effect on banking activities in Nigeria. The calculated chi-square (X^2) value (29.42) was greater than the critical value (9.49) at 5% probability level leading to the rejection of the null hypothesis and the acceptance of the alternative hypothesis.

TABLE II. Responses on whether policy on interactive website for internet

Choice	Frequency	Percentage	X ²	Degree of freedom	Critical value	Remark
Strongly Agree (SA)	10	23.81				
Agree (A)	21	50.00				
Tends to Agree (TA)	7	16.67	29.42	4	9.49	Significant
Disagree (D)	3	7.14				
Strongly Disagree (SD)	1	2.38				
Total	42	100.00				

The calculated chi-square and the perception on whether interactive website for internet banking will affect banking operation in Nigeria in a positive way were presented in table III and table IV respectively. The results revealed that 28.57% of the respondents strongly agreed, 42.86 % agreed, 7.14% tend to agree, 14.29 % disagreed while 7.14% strongly disagreed.

TABLE III. Calculated Chi-Square (X²) for hypothesis II.

Response	foi	f ei	foi –fei	$(f oi - f ei)^2$	$X^2 = \frac{(f oi - f ei)^2}{f ei}$
S A	12	8.400	3.60	12.96	1.54
A	18	8.400	9.60	92.16	10.97
TA	3	8.400	-5.40	29.16	3.47
D	6	8.400	-2.40	5.76	0.69
SD	3	8.400	-5.40	29.16	3.47
Total	42	42.00	0.00	169.20	20.14

f oi = observed frequency; f ei = expected frequency; X^2 = Calculated Chisauare

TABLE IV. Responses on whether interactive website for internet banking will affect banking operation in Nigeria in a positive way

Choice	Frequency	Percentage	X ²	Degree of freedom	Critical value	Remark
Strongly Agree (SA)	12	28.57				
Agree (A)	18	42.86				
Tends to Agree (TA)	3	7.14	20.14	4	9.49	Significant
Disagree (D)	6	14.29				
Strongly Disagree (SD)	3	7.14				
Total	42	100.00				

probability level leading to the rejection of the null hypothesis and the acceptance of the alternative hypothesis, therefore, the introduction of *Interactive website* for internet banking will significantly revolutionize the banking industry in Nigeria.

The results showed that majority of the staff of Fidelity bank, Okpara Avenue, Enugu believed that policy on interactive website for internet banking will significantly have positive effect on banking activities in Nigeria. The calculated chi-square (X²) value (20.14) was greater than the critical value (9.49) at 5% probability level leading to the rejection of the null hypothesis and the acceptance of the alternative hypothesis.

The results of the chi-square analysis revealed that interactive website for internet banking will affect banking operation in Nigeria in a positive way.

The calculated chi-square and the perception on whether technical and operational difficulty will trail the adoption of interactive website for internet banking in Nigeria were presented in table V and table VI respectively. The calculated chi-square (X²) value (3.47) was lesser than the critical value (9.49) at 5% probability level leading to the acceptance of the null hypothesis. The results showed that the adoption of *interactive website* for internet banking in Nigeria will not significantly present technical and operational challenges.

TABLE V. Calculated Chi-Square (X²) for hypothesis III.

TIBLE VI Culculated Cili Square (II) for hypothesis III.							
Response	foi	f ei	f oi –f ei	$(foi-fei)^2$	$X^2 = \frac{(f oi - f ei)^2}{f ei}$		
S A	10	8.400	1.6	2.56	0.30		
A	12	8.400	3.6	12.96	1.54		
TA	8	8.400	-0.4	0.16	0.02		
D	7	8.400	-1.4	1.96	0.23		
SD	5	8.400	-3.4	11.56	1.38		
Total	42	42.00	0.00	29.20	3.47		

f oi = observed frequency; f ei = expected frequency; X^2 = Calculated Chisquare

TABLE VI. Responses on whether technical and operational difficulty will trail the adoption of interactive website for internet banking in Nigeria.

Choice	Frequency	Percentage	\mathbf{X}^2	Degree of freedom	Critical value	Remark
Strongly Agree (SA)	10	23.81				
Agree (A)	12	28.57				
Tends to Agree (TA)	8	19.05	3.47	4	9.49	non significant
Disagree (D)	7	16.67				
Strongly Disagree (SD)	5	11.9				
Total	42	100.00				

The calculated chi-square and the perception on whether the introduction of an interactive website for internet banking will revolutionize the banking industry in Nigeria were presented in table VII and table VIII respectively. The results showed that 38.1% of the respondents strongly agreed that the introduction of an interactive website for internet banking will revolutionize the banking industry in Nigeria, 47.62 % agreed, 7.14% tend to agree, 7.14 % disagreed while 0% strongly disagreed. Majority of the staff of Fidelity bank, Okpara Avenue, Enugu agreed that the introduction of an interactive website for internet banking will revolutionize the banking industry in Nigeria. The calculated chi-square (X²) value (38.24) was greater than the critical value (9.49) at 5%

TABLE VII. Calculated Chi-Square (X2) for hypothesis IV

	Tribel vii. Calculated Ciri Square (11) for hypothesis iv.							
Response	foi	f ei	f oi –f ei	$(foi-fei)^2$	$X^2 = \frac{(f oi - f ei)^2}{f ei}$			
S A	16	8.400	7.6	57.76	6.88			
A	20	8.400	11.6	134.56	16.02			
TA	3	8.400	-5.4	29.16	3.47			
D	3	8.400	-5.4	29.16	3.47			
SD	0	8.400	-8.4	70.56	8.40			
Total	42	42.00	0.00	321.2	38.24			

f oi = observed frequency; f ei = expected frequency; X^2 = Calculated Chisquare

TABLE VIII. Responses on whether the introduction of an interactive website for internet banking will revolutionize the banking industry in Nigeria.

Choice	Frequency	Percentage	\mathbf{X}^2	Degree of freedom	Critical value	Remark
Strongly Agree (SA)	16	38.1				
Agree (A)	20	47.62				
Tends to Agree (TA)	3	7.14	38.24	4	9.49	Significant
Disagree (D)	3	7.14				
Strongly Disagree (SD)	0	0				
Total	42	100.00				

The calculated chi-square and the perception on whether the successful implementation of interactive website for internet banking will improve banking services in Nigeria were presented in table IX and table X respectively.

TABLE IX. Calculated Chi-Square (X²) for hypothesis V.

Response	foi	f ei	f oi –f ei	$(foi-fei)^2$	$X^2 = \frac{(f oi - f ei)^2}{f ei}$
S A	14	8.400	5.6	31.36	3.73
A	16	8.400	7.6	57.76	6.88
TA	6	8.400	-2.4	5.76	0.69
D	4	8.400	-4.4	19.36	2.30
SD	2	8.400	-6.4	40.96	4.88
Total	42	42.00	0.00	155.20	18.48

f oi = observed frequency; f ei = expected frequency; X^2 = Calculated Chisquare

TABLE X. Responses on whether the successful implementation of interactive website for internet banking will improve banking services in

Choice	Frequency	Percentage	\mathbf{X}^2	Degree of freedom	Critical value	Remark
Strongly Agree (SA)	14	33.33				
Agree (A)	16	38.1				
Tends to Agree (TA)	6	14.29	18.48	4	9.49	Significant
Disagree (D)	4	9.52				
Strongly Disagree (SD)	2	4.76				
Total	42	100.00				

improve banking operation. The adoption of *interactive* websites for internet banking will not significantly present operational challenges when customers engage in accessing the beautiful new products made available. Successful implementation of *interactive* website for internet banking will significantly improve banking operation in Nigeria and bring about expected products and customers' participatory revolution in the nation's banking industry.

The results showed that 33.33% of the respondents strongly agreed that the introduction of an interactive website for internet banking will revolutionize the banking industry in Nigeria, 38.1% agreed, 14.29% tend to agree, 9.52% disagreed while 4.76% strongly disagreed. Majority of the staff of Fidelity bank, Okpara Avenue, Enugu believed that successful implementation of interactive website for internet banking will improve banking services in Nigeria. The calculated chisquare (X^2) value (18.48) was greater than the critical value (9.49) at 5% probability level. Hence, successful implementation of interactive website for internet banking will improve banking services in Nigeria.

V. RECOMMENDATION

The advent of Information Communication Technology (ICT) and electronic banking pave way to internet banking for an easy and cost effective business transaction. This web based internet services made it possible for worldwide business transaction and more importantly ensuring businesses are carried out successfully without visit to the bank or carrying of cash from one point to the other.

Based on the above conclusion, it is recommended that Banks in Nigeria should design and implement effective and functional interactive website for internet banking to facilitate banking operation in the country. Banks should conduct training programs for their employees in order to enhance their ability to deal with interactive technology tools adopted by them. The opportunity offered by computer for a global village should be harnessed by all financial institution to ensure compliance and good services to customer.

The respondents of Fidelity Bank held the opinion that government policy on interactive website for internet banking will significantly affect positively the banking activities in Nigeria.

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However, they totally disagree with the insinuation that Nigerians are always skeptical in accepting new ideas until proven otherwise and stood strong in their resolution that *interactive website* for internet banking will significantly and positively affect banking operation as Nigerians will be availed several opportunities and new products introduced in the cause of this new operation strategy.

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They believe in total adoption of *interactive websites* for internet banking as it will not significantly present operational challenges when customers engage in accessing the beautiful new products made available.

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The implementation of interactive website for internet banking will enable the customers to have self-banking services of their choice at the convenience of their home. This possibly would enable the customers to engage in an interactive experience that allows the customer to be actively involved with the site. Hence, providing the customer immense experience that will give satisfaction to them. In addition, with the outburst of social sites today, customers will definitely find it interesting to always log in to the bank website if some social features which will help to make the website more interactive in nature are provided.

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IV. CONCLUSION

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The finding of the study showed that interactive website for internet banking will transform banking services in Nigeria to the standard that is being enjoyed in the developed countries. The interactive website will not only significantly affect positively the banking activities in Nigeria, it will also

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