

EFFECTS OF INFORMATION TECHNOLOGY ON BANKING OPERATIONS IN OSUN STATE, NIGERIA

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Abstract

The study examined the effects of information technology on banking operations in Osun State of Nigeria. Survey questionnaire was administered and data collected were descriptively and inferentially analysed using Percentage, Pearson Product Correlation and Regression Analyses. Results showed that there is significant relationship between information technology and banking operations and that there is positive correlation between information technology and customers' service in Osun State. The study concluded that efficient deployment of information technology will affect not only banking operations but also customers' service. It is therefore recommended that banks should proactively deploy state of the art technology to enhance their operations to meet the banking needs of their teeming customers, while government should raise the bar in the provision of basic infrastructure that will sustain information technology drive of banks.

Key-words: Bank Operations, Customers Service, Customers Satisfaction, Queuing, Globalisation

Background to the Study

Information has always played prominent roles in business operations and performance. From time past, its increased influence on business activities has been based on the emergence of rapid development in science and technology. This change brought by new technologies has had a significant effect in the way people live, work, operate, think and play globally. The world is at our fingertip today through various technological inventions and this affects markets and economy tremendously. Also, Aliyu & Tasmin, (2012) identified the contribution of information technology (IT) to have significantly affected banking services as it resulted in the development of more flexible and user friendly banking services.

Wali, (2013) reveals that in Nigeria, contemporary firms are making significant investment in IT's infrastructure to build business strategies, improve profitability and provide extended

services and this will continue as businesses explore better ways of doing things. As a growing number of companies launch new internet based business lines, many of the new technology advances occur as a result of their using the internet to improve business processes (Oluwagbemi, Abah & Achimugu, 2011). However, fast and easy access to information through the use of Information Technology is very important to the firm because it influences all other success factors and the competitive strategies cannot be implemented without its support. The banking sector of an economy which plays a significant role in economic growth and development through capital accumulation and technological advancement by boosting savings rate, delivering information about investment amongst others has effectively operated with the help of Information technology. The application of Information technology concept, techniques, policies and implementation strategies to banking services has become a fundamental importance and concern to all banks and a pre-requisite for local and global effectiveness.

Prior to the advent of IT, operations were conducted manually and is with attendance challenges such as delay in preparation and presentation of financial statement; customers' statements are manually computed and take time before it could be made available to customers; recording of transactions in the main book of account were done manually and this was prone to errors due to fatigue; upon all the manual system is fraught with delay in customers; service.

Objective of the Study

The general objective of this study was on how the adoption of Information technology has enhanced the performance of banking operations with reference to selected deposit money banks in Osun State, Nigeria. Specifically, the study examined:

1. The influence of IT and its attendance on the growth and development of bank services.
2. The effect of the use of IT on globalisation of banking operations.
3. The implication of the use of IT on reduction of queuing in banking operations.

Research Hypotheses

Two hypotheses were formulated and tested in order to establish the impact of IT on banks operations in Nigeria and these are:

H₀₁: There is no significant relationship between the use of Information Technology and banking operations.

H₀₂: The use of Information Technology does not lead to improvement in customer services.

Significance of the Study

Manual banking operations in Wema Bank Nigeria Plc and First Bank Plc. demands that customers should arrive at the banks premises at wee hours of the day so as to minimize waiting time for service delivery but the introduction of modern and electronic technology into banking space changed all these. Consequently, this study revealed the importance of IT in effort to reduce queuing in banking operations. Also, the leverage on IT for the promotion of banking services without border.

The study therefore revealed the fact that effective deployment of IT will provide the impetus for customer service satisfaction and will enhance the operations of banks not only in the selected banks but in the banking industry as a whole.

Literature Review

Conventionally, it is generally believed that information technology is the key to the success of a business, yet the paradox behind the so called Information Technology productively has led many managers to believe that the huge investment does not commensurate with increase in productivity. Managers cannot ignore Information Systems because they play a critical role in contemporary organisations. The application of Information technology concepts, techniques, policies and implementation, strategies to banking services has become a subject of fundamental importance and concerns to all banks and indeed a pre-requisite for local and global competitiveness. Information Technology directly affects how managers decide, how they plan and what products and services are offered in the banking industry. It has continued to change the way banks and their corporate relationships are organized worldwide and the variety of innovate devices available to enhance the speed and quality of service delivery (Agbolade, 2011). Its increased application on the operations of the banks has even started making people wonder if bankers would still be needed in the banking hall in course of time. This is because its impact cannot be underestimated.

It is also reasoned that if Nigerian banks move towards a high level of adoption of information technology in their entire operations, it will impact positively on customers' satisfaction that will also translate to high retention rate and higher profitability (Alabar & Agema, 2014). Today, information technology has become a key element in economic development and a backbone of knowledge based economy in terms of operations, quality delivery of services and productivity of services (Oluwatolani, Abah & Achi mugu, 2011).

Conceptual Framework

Information Technology

The definition of Information Technology (IT) encompasses a variety of components. Johnson, (2005) defined it as the automation of processes, controls and information production using computer, telecommunications, software and ancillary equipment such as automated teller machine and debit cards. In the opinion of Agbolade, (2011) it is a term that largely covers the coupling of electronic technology for the information needs of a business at all levels. Information technology in general expression covers computers, telecommunications and electronics. It is application of electronic apparatus in the process of information need hence it was viewed by Agboola, (2003) & Adeoti, (2005) in Agbolade, (2011) as the automation of processes, controls and information production using computers, telecommunications, software and other gadget that ensure smooth and efficient running of activities. Technology applications are developed and business processes are supported. Information Technology Infrastructure includes a group of shared, tangible, Information Technology resources that provides foundation to enable present and future business prosperity. Broadent & Weill (1997) stated that Information Technology Infrastructure capabilities enables the various types of Information Technology required supporting current and future business opportunities. Similarly, it enables the competitive positioning of business ideas. These resources include;

- Computer hardware and software
- Network and telecommunications technology
- Key data
- Core data- processing applicants
- Shared Information technology services

Adetayo, Sanni, & Ilori, (1999) identified two forms of Information Technology as telemetric (big media) and ethnotronic (small media). Telemetric which includes such technologies as computer, satellites, video and television has been applied to banking operations in various ways. Information Technology is not one but many which have conveyed to serve the needs of the information revolution (Alamu, 2000). Ethnotronic include technologies such as typewriters, audio cassette recorders, tax machines, paper copiers, calculators, digital watches and other more personal types of technology.

The Impact of Information Technology on Banking Operations

According to Oluwatolani, Abah, & Achimugu, (2011), the following include some of the major impacts of Information Technology in Nigerians banking system:

GSM Banking

This mode of e-banking makes use of the Global system for Mobile Communication (GSM) phones as the primary electronic device. GSM has improved the operational efficiency of many banks in the country. The mobile banking services basically allow customers to operate their accounts with the operating banks from mobile phones to a large extent as long as their phones and network support SMS (short messaging service). The user could be able to check account balance up to his two last transactions.

Automated Teller Machine (ATMs)

ATMs are a computer controlled device that dispenses cash, and may provide other services to customers who identify themselves with a personal identification Number. ATM dispenses cash at any time of the day, unlike the traditional method where customers have to queue for a very long time in order to withdraw cash or transfer funds.

Adoption of the ICT integrated project

Banks in Nigerian have successfully completed information technology integrated project which enables them to communicate easily across as many employees as possible within and outside the country to deliver radically –enhanced customer-centric services.

Funds Transfer

Customers can now electronically transfer funds across the globe without any problem or delay as compared to the traditional method before the advent of information technology when funds are seriously delayed before they are delivered to the recipients.

On-line Banking

With the aid of information technology, online banking provides for opportunity of paying bills and performing transactions of any kind electronically. Electronic payments can be credited or debited the same day. Customers can make payments for goods or service without necessarily coming in contact with physical cash and running the risk of handing a large amount of money.

Electronic Mail

Information technology has given rise to electronic mail which improves communication between individuals, external parties and the bank within or across various geographical

regions or boundaries. The availability of online information provides bankers and customers with a powerful vehicle for research.

Bankers Automated Clearing Services

This involves the use of Magnetic Ink Character Recognition (MICR) for cheque processing. It is capable of encoding, reading and sorting cheque books or purchase of draft can made and granted via electronic devices that are web-enabled. Availability of IT has significantly contributed to the adoption of cheque truncation in the clearing system.

Electronic Banking Services

Electronic banking is an offshoot of ICT and it provides the classic and current means of banking. In other words, it is ICT that brought about electronic banking services that are conducted on the platform of mobile devices and wireless networks. It also facilitates the provision of banking and financial services with the help of mobile telecommunication devices. It has brought changes into the banking industry and it is having major effects on banking relationships. He further observed that, almost all the 25 banks that survived the consolidation exercise of 2005 in Nigeria have adopted electronic banking in one form or another, although the adoption level was mostly low and most cases at basic interactivity and functionality level.

Information and Communication Technology (ICT) and Banking Development

The primary purpose of the banking system is to create and manage financial resources and to intermediate between surplus and deficit economic units. In the process of carrying out this role, the banking industry provides secondary services which include mobilising financial resources for investment purposes, assisting in resources allocation, promoting the payments system and facilitating international trade. In the financial analysis, the performance of the sector is measured not only by the number and variety of products/services provided but also more importantly by the speed, efficiency and safety with which these products/services are provided. The only way of achieving this is through well-built infrastructural facilities.

The increasing volume, complexity, competitiveness, customers' sophistication and globalisation of financial services have induced a number of technological developments in the Nigeria banking industry, which include:

- Introduction of computers to cope with the phenomenal increase in the volume of transactions, product development, credit risk management and business process re-engineering;
- The use of automated bank note processing systems by the CBN;
- The introduction of Magnetic Ink Character Recognition[MICR], which is an automated system for sorting cheques and other payment instruments;
- The setting up of the Nigerian Interbank Settlement System;
- The application of Society for World -Wide Inter-Bank Financial Telecommunication (SWIFT);
- The use of Automated Teller Machines (ATMs), Smart Cards, Electronic Cash and Mobile Banking; and
- Automation of the Clearing system amongst others.

The adoption rate of IT in banking remains relatively low in terms of both international standards and local need. At the home front, only a few individual customers have embraced technology-based products such as ATMs and other forms of Electronic Banking such as Smart Cards and Debit Cards. For example, most of the aged men and women are not familiar with the evolving technologies. They prefer to work into the banking hall for their transactions. They don't even request or accept some of the technology-based products that are offered by the banks.

Customer Satisfaction and Service Delivery through Information Technology

The term customer service delivery is not new in the business environment, because every customer exercises awareness as touching his needs and wants, also service providers being knowledgeable about this awareness ensures that customers receives quality. The key to customer service delivery lies in making the few minutes of a customer convenient, efficient and effective. For instance, a bank introduces welcome kits wherein, a customer comes in to open an account with the bank and walks out with a fully enabled account debit card, cheque book, net banking account and phone banking account in a matter of minutes. However, this not only lead to customer convenience, they also help the banks save cost on and identify customer needs and tailoring products to match these needs. In service provision, the customer plays an important role; many services require customers to participate in creating the service product. For example, in using an ATM card to withdraw money from the bank account, in cooperating with hair dressers, hotels and schools, the role of customer is central in any good service delivery (Wali, 2013). Furthermore, customer service delivery practice helps enhance a firm's competitive positioning, enhance reliability, courtesy and access to good services (Alam & Perry, 2002).

Problems and challenges of adopting Information Technology in Nigeria

In our contemporary days, a lot of factors are inhibiting against the growth of Information Technology and this by extension, the ability of banks to meet the yearning needs of their numerous customers. Such factors are:

- a) Inadequate awareness about information technology and technical knowledge ineffective towards Information Technology.
- b) Negative attitude of government through inadequate funding.
- c) Inadequate power supply: - because of the government's inability to provide stable power supply to the country, it hindered access to the internet and the spiral effect is system shut down, down time rate experienced by banks in Nigeria.
- d) Insecurity of sensitive information transformation transmitted data and message from one point to another.
- e) Unreliable telecommunication facilities: because of poor telecommunication network in Nigeria, transaction Information Technology is greatly limited compared to what exist in developed countries.
- f) Internet frauds and the related cybercrimes may discourage full adoption of information technology concepts by the society (Oladejo & Adereti, 2010)

Theoretical Framework

Innovation Diffusion Theory: This theory on technology acceptance is based on Roger's theory of diffusion of innovation (IDT). The theory posits that innovation adoption is a process of uncertainty about the young technology; individuals will gather and harmonise information

about using the technology. Beliefs then cause individuals to accept or reject the technology. After analyzing different past innovation diffusion researches, this research found Roger's five characteristics of innovation that consistently influence the adoption of technologies. They are relative advantage, compatibility, simplicity, observability and triability. The theory has been vigorously utilized in information technology acceptance research and tested on information technology such as operation systems internet banking (Olayinka, Alina & Eta, 2013)

Theory of Reasoned Action: While the Innovation diffusion theory focus on perceived characteristics of technology to explain looks at beliefs to adopt the technology. The theory of reasoned action looks at beliefs within the individual to explain adoption behavior. The theory of reasoned action hypothesizes that a behaviour is predicted by an individual intention to engage in a given behavior (Olayinka, Alina and Eta, 2013)

Theory of Perceived Behaviour: Another related technology acceptance research is the theory of perceived behavior. Theory of Perceived Behaviour is an extension of Theory Reasoned Action. Theory of Perceived Behaviour added an additional belief, that is, perceived behavioural control to explain behavioural intent (Olayinka, Alina, & Eta, 2013).

Technology Acceptance Model: A widely used model to predict human behavior is the Technology Acceptance. It suggests that attitudes predict intentions and intentions predict behavior. According to Technology Acceptance Model, adoption behavior is determined by the intention to determine a particular system and the intention to determine by the attitude which in turn is determined by the perceived usefulness and perceived ease of use of the system. (Olayinka, Alina, & Eta (2013).

Unified Theory of Acceptance and Use of Technology (UTAUT)

Venkatesh, Morris, Davis, & Davis (2003) developed UTAUT as a comprehensive synthesis of prior technology acceptance research. UTAUT has four key constructs, (that is, performance expectancy, effort expectancy, social influence, and facilitating conditions) that influence behavioral intention to use a technology and/or technology use. We adapt these constructs and definitions from UTAUT to the consumer technology acceptance and use context. Here, performance expectancy is defined as the degree to which using a technology will provide benefits to consumers in performing certain activities; effort expectancy is the degree of ease associated with consumers' use of technology; social influence is the extent to which consumers perceive that important others (e.g., family and friends) believe they should use a particular technology; and facilitating conditions refer to consumers' perceptions of the resources and support available to perform a behavior (e.g, Brown & Venkatesh 2005; Venkatesh, Morris & Davis. 2003).

According to UTAUT, performance expectancy, effort expectancy, and social influence are theorised to influence behavioral intention to use a technology, while behavioral intention and facilitating conditions determine technology use. Also, individual difference variables, namely age, gender, and experience (note that we drop voluntariness, which is part of the original UTAUT) which are theorised to moderate various UTAUT relationships.

Empirical Studies

Evidences from works of Zhu & Chen (2003) according to Alabar & Agema (2014) revealed that electronic banking system is expected to serve the purpose of decongesting banking hall, reducing waiting time, making customers more liquid and above all, ensuring a cashless society. The advent of electronic banking in Nigeria also brought in some products to make bank transaction easy and efficient, these products include amongst others:

- Efficient Quick G Service (EQS)
- Electronic Payment System (e-PS),
- Telephone Banking (TeB),
- Electronic Purse Service (EPS),
- Smart Cards (SC),
- Automated Teller Machine (ATM),
- Wireless Transfer

The study centered on what adoption of it in banking operations stands to provide while the present study examined the effect of the use. It is a post mortem study.

Sunil, Narayan, Krishnan, & Sambamurthy, (2014) studied the effect of Information Technology investment on customer satisfaction and hypothesized that Information Technology investment is positively related to perceived quality and perceived value, the study findings revealed that Information Technology investment have a positive effect on perceived quality and perceived value for firms in the service sectors than in the manufacturing sector. Also, they studied Information Technology Infrastructure capability and firm performance; the study revealed that Information Technology Infrastructure is positively related to customer and market focus, process management and performance management of firm's performance respectively. In addition, it examined the implication of investment and aftermath the result on customer satisfaction with no direct bearing on the effect of it on the operations; on queuing nor on globalisation of banking services

Wali (2013) found Marchan, Kettinger & Rolins (2000) to have studied the link between Information Technology and firm performance and the study revealed that are three sets of factors that keep a firm's performance: the quality of Information Technology Management practices. Information Technology management should sense, gather, organize and disseminate information. In other words Information Technology management is positively related to a firm's performance and continual existence. Muhammed, Gatawa & Kebbi (2013) assessed the Impact of Information and Communication Technology on the Nigerian banking industry using eleven selected Commercial Banks in Nigeria. The study used bank annual data over the period 2001 to 2011 and applied Fixed and Random Effects Models in its analysis. The results from the Hausman test revealed that Random Effects Model was appropriate. The findings of the study indicated that the use of ICT in the banking industry in Nigeria increases return on equity.

Agbolade, (2011) examined the nature of the relationship that exist between Banks Profitability and the Adoption of Information and Communication Technology (ICT) using a primary data sourced through a structured questionnaire administered to selected banks in South-Western Nigeria and the Ordinary Least Square approach econometric techniques. The data analysis showed that a positive correlation exists between ICT and banks profitability in Nigeria. This implies that a marginal change in the level of the investment and adoption of ICT in the banking industry will result to a proportionate increase in the profit

level. This is confirmed by the level of the regression coefficient as well as the factor analysis which revealed that an insignificant size of profit exist without the introduction of the ICT. (Wali, 2013; Muhammed, Gatawa, & Kebbi, 2011; and Agbolade, 2011) were all centered on IT and bank performance with no direct attention on bank operations nor globalisation of banking service.

Appraisal of Literature

From the empirical studies, it is revealed that quite a number of authors have worked on Information technology in the banking sector of Nigeria limiting it to the customer delivery service and customer satisfaction which are subsidiaries of bank operations. Also, emphasis is also laid on bank profitability and performance which cannot be measured without the assessment and effectiveness of bank operations.

In the study of Wali (2013), Spearman's rank correlation was used to test the formulated hypothesis: there is no Significant Relationship between Connectivity of Information Technology Infrastructure (ITI) and Reliability of Customer Delivery Service in Commercial Banks. In this study, the hypothesis formulated is: there is no significant relationship between Information Technology and bank operations will be tested using the Pearson Product Movement Correlation. The present study though replicated that of Agbolade, (2011) in the use of primary data sourced through a structured questionnaire; but Pearson Correlation was used along with simple Regression analysis. In addition, emphasis was laid on the enhancement of cash transactions, funds transfer, cheque clearing, amongst others with the deployment Information Technology as measure of banking operations.

Methodology

Survey research design was employed for this study as this enable the researcher to reach the target audience. The population used in the course of this research work was drawn from the First Bank of Nigeria Plc and Wema Bank of Nigeria Plc in Osun State. The sample size was made up of 100 customers of the First Bank and Wema Bank. Also, 60 staff of First Bank and Wema Bank. The choice of this sample size took into consideration the population size, homogeneity of respondents, level of accuracy desired and rate of response proposed from the respondents. This was done using judgmental sampling technique which is non-probability sampling method which gives the researcher opportunities to use its opinion based on convenience to select sample elements which has been considered best to provide good outcome from a given population considering the relevance to the study. Structure and non-structured questionnaires were distributed to customers and staff (employees) of the selected banks.

The non-structured questionnaire method with questions drawn on a closed ended format which include, multiple choice, two way and scale questions while the structured questionnaire was drawn on five likert scale. Data collected were processed with the aids of statistical package for social sciences (SPSS, Version 20). The descriptive statistics was used to determine the demographic information of the respondents while the inferential statistics was used to test the research questions. The inferential statistics with the aid of linear regression, Pearson correlation, multiple regression were employed in the analysis the study's hypotheses at 0.05 level of significance.

Fifty seven (57) retrieved questionnaires out of the 60 administered at First Bank and Wema Bank of staff of both banks, and the 95 retrieved questionnaires out of the 100 administered to the customers of First Bank and Wema Bank, the response rate was 95% of the respondents (staff and customers) from the selected banks in Osun State, Nigeria.

Presentation and Analysis of Data

Demographic Information Analysis of Staff of First Bank and WEMA Bank

Table 1: Distribution of Respondents by Age of staff of the banks				
Age	Frequency	Percent	Cumulative Frequency	Cumulative Percent
20 - 25 years	12	21.05	12	21.05
26 - 30 years	17	29.82	29	50.88
31 - 35 years	14	24.56	43	75.44
36 - 40 years	6	10.53	49	85.96
41 years above	8	14.04	57	100.00

Source: Field Survey, 2016

Table 1 revealed that majority (50.88%) of the respondents was within the age range 20 to 30 years while those within 31 and 40 years were (35.09%). This indicate that majority of this staff are those that could appreciate the importance of I.T. in banking operations and are likely to be computer literate

Table 2: Distribution of staff of the banks by Educational Qualification				
Educational	Frequency	Percent	Cumulative Frequency	Cumulative Percent
NCE/OND	11	19.30	11	19.30
B.Sc/HND	31	54.39	42	73.68
M.Sc/MBA	15	26.32	57	100.00

Source: Field Survey, 2016

Table 2 revealed the fact that almost 100% of respondents eminently possess the technical knowledge of information technology at least from their academic qualification perspective.

Table 3: Distribution of staff by Working Experience with the Banks				
Working Experience	Frequency	Percent	Cumulative Frequency	Cumulative Percent
1 - 5 years	24	42.11	24	42.11
6 - 10 years	13	22.81	37	64.91
11 - 15 years	10	17.54	47	82.46
16 - 20 years	10	17.54	57	100.00

Source: Field Survey, 2016

From the questionnaire collected, which is presented in Table 3 above, it was found that of the respondents, (42.11%) have spent between 1 to 5 years working in the bank; (22.81%) have spent not less than 10 years; (17.54%) of the respondents have spent between 11 and 15 years, while (17.54%) of the respondents have also spent within 16 and 20 years with the bank.

This shows that over 86% of the respondents were experienced enough to treat the questionnaire.

Cadre	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Management	9	15.79	9	15.79
Senior Staff	14	24.56	23	40.35
Junior Staff	19	33.33	42	73.68
Contract Staff	15	26.32	57	100.00

Source: Field Survey, 2016

Finally, the bulk of the respondents are non-management staff and this constitute of 84% of the respondents (see table 4 above) with implication that these set of employee will be comfortable provide very objective appraisal of their services and the effectiveness of technology in driving the quality of service rendered

Demographic Information Analysis of Customers of First Bank and WEMA Bank

Age	Frequency	Percent	Cumulative Frequency	Cumulative Percent
> 20 years	19	20.00	19	20.00
21 - 30 years	40	42.11	59	62.11
31 - 40 years	16	16.84	75	78.95
50 years above	20	21.05	95	100.00

Source: Field Survey, 2016

Table 5 established the fact that 20% of the respondents are within age bracket of less than 20 years old while 42% of the respondents are between age 21 and 30. It is reasonable to assume that the larger number of the banks' customers are those that could constructively criticise and appraise the services provided by these banks

Duration	Frequency	Percent	Cumulative Frequency	Cumulative Percent
1 - 5 Years	43	45.26	43	45.26
6 - 10 Years	20	21.05	63	66.32
11 - 15 Years	18	18.95	81	85.26
16 years above	14	14.74	95	100.00

Source: Field Survey, 2016

The above table shows the duration of customer banker relationship of the two banks' customers.

About 15% could be those that had witnessed the eras of manual and electronic banking systems and these are better placed to appreciate the effect of information technology.

However, the bulk of banks' customers for this study, about 85% of them are those that came into banking net during the introduction of electronic banking in wider scale and are in better position to appraise the effect of I.T. from a robust view point.

Account	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Savings account	58	61.05	58	61.05
Current account	35	36.84	93	97.89
Domiciliary/Fixed	2	2.11	95	100.00

Source: Field Survey, 2016

The Table reveals that most of the customer of Wema Bank and First Bank operate savings account, 58 (61.05%) of the respondents operate Savings Account, 35 (36.84%) of the respondents operate Current Account and 2 (2.11%) of the respondents operate Domiciliary account/Fixed account.

Occupation	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Student	53	55.79	53	55.79
Teacher/Lecturer	11	11.58	64	67.37
Self Employed	17	17.89	81	85.26
Civil Servant	7	7.37	88	92.63
Others	7	7.37	95	100.00

Source: Field Survey, 2016

Base on the analysis in Table 8, 53 (55.79%) of the customers of Wema Bank and First Bank were students, 11 (11.58%) of the customers of the bank were Teacher/Lecturer, 17 (17.89%) of the customers of the bank were Self Employed, 7 (7.37%) of the customers of the bank were Civil Servant, while 7 (7.37%) of the customers of Wema Bank and First Bank have other occupation different from those listed in the questionnaire. The bulk of customers by occupational distribution are the most demanding and challenging when it comes to provision of quick and efficient service and which voice/view cannot be ignored. The rest of the customers (45%) hold the ache for the operational survival of banking institution as they tend constitute main source of revenue for these banks

Interpretation of Results/Testing of Hypotheses

Two research hypotheses were formulated to enable the researcher subject some important aspects of the data to statistical verifications. Research hypotheses are statements or assumption about a population parameter and such a statement should be subjected to a test. Research hypotheses are based on researcher(s) experience and previous knowledge of the subject being investigated, these ideas are believed to be true, but the result of the

researcher(s) may prove to be otherwise. As a result of this, the need arises for research hypotheses to be tested.

Hypothesis one

H₀₁: There is no significant relationship between the use of Information Technology and banking operations.

Table 9: Simple Statistic: Correlation Analysis							
Variable	N	Mean	Std Dev	Sum	Minimum	Maximum	Label
Information Technology	57	2.26316	1.12641	129.00	1.00000	5.00000	Information Technology has an increasing impact on banking operations
Globalization of bank	57	2.03509	1.37536	116.00	1.00000	5.00000	Information Technology increases the globalization of the bank
Elimination of queues	57	2.54386	1.19628	145.00	1.00000	5.00000	The introduction of Automated Teller Machine has eliminated queues in the banking hall.

Table10: Pearson Correlation Coefficients, N = 57 Prob > r under H0: Rho=0			
	Information Technology	Globalization of bank	Elimination of queues
Information Technology	1.00000	0.92759 <.0001	0.91230 <.0001
Globalization of bank	0.92759 <.0001	1.00000	0.92159 <.0001
Elimination of queues	0.91230 <.0001	0.92159 <.0001	1.00000

Table 10 shows the relationship between Information Technology and banking operations. It shows that there is a strong positive relationship ($r = 0.92759$) between Information technology and globalisation of the bank. It also reveals that the relationship between Information Technology and globalisation of the bank is significant ($p < .0001$), which means that the adoption of Information technology in the banks has increased the global visibility of the banks. It also reveal that there is a strong positive relationship ($r = 0.91230$) between Information Technology and queue elimination in banking halls. (Elimination of queue in baking halls is taken as proxy for customer service satisfaction) The relationship between Information Technology and queue elimination is significant ($p < .0001$).

Hypothesis One

H_{01} : There is no significant relationship between the use of Information Technology and banking operations

Table 11 : Parameter Estimates					Model Summary ^b	
Variable	Label	Parameter Estimate	Standard Error	t Value		
Intercept	Intercept	1.05996	0.33477	3.17	R-Square	0.5101
	Information Technology	0.94234	0.12452	7.57	Adj R-Square	0.5012

a. Predictors: (Constant), Information Technology.

b. Dependent Variable: Banking Operations.

Table 11 reveals the degree of improvement of banking operations by Information Technology; it shows Information Technology improves banking operations by 51.01 percent while the remaining 48.99 percent is explained by other exogenous variables that are excluded in the model. The adjusted R^2 of 0.5012 means the explanatory power of the independent variables is considerably high

Table 12: Summary of Regression Analysis of Information Technology on Improvement in banking operations ^a					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	33.77556	33.77556	57.27	<.0001
Error	55	32.43496	0.58973		
Corrected Total	56	66.21053			

a. Dependent Variable: Improvement in Banking Operations.

b. Predictors: (Constant): The use of Information Technology

Decision Rule

We reject the null hypothesis if the value of F calculated is greater than the value of F tabulated ($F_{cal} > F_{tab}$), otherwise accept it. At 95% level of significance ($\alpha = 0.05$), the F tabulated is given as: $F_{0.05, (1, 56)} = 4.0012$.

Decision

Since $F_{calculated} = 57.27 > F_{tabulated} = 4.0012$. We reject the null hypothesis. In conclusion, the results of the regression confirm with 95% confidence that the use of Information Technology leads to a great improvement in banking operations.

Hypothesis Two

H_{02} : The use of Information Technology does not lead to improvement in customer service.

Table 13: Parameter Estimates					Model Summary ^b	
Variable	Label	Parameter Estimate	Standard Error	t Value		
Intercept	Intercept	0.01376	0.19561	0.07	R-Square	0.7001
	Information Technology	0.87474	0.07719	11.33	Adj R-Square	0.6947

a. Predictors: (Constant), Information Technology.

b. Dependent Variable: Customer Service.

Table 13 shows the magnitude of impact of Information System on customer service, it shows that Information System affects customer service by 70.01%, while the remaining 29.99% is explained by other exogenous variables that also affect customer service but excluded in the model. The adjusted R^2 of 0.6947 implies that the explanatory power of the independent variables is moderately high.

Table 14: Summary of Regression Analysis of Information Technology on Customer service^a

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	39.01042	39.01042	128.41	<.0001
Error	55	16.70888	0.30380		
Corrected Total	56	55.71930			

- a. Dependent Variable: Customer service
- b. Predictors: (Constant), Information Technology

Decision Rule

We reject the null hypothesis if the value of F calculated is greater than the value of F tabulated ($F_{cal} > F_{tab}$), otherwise accept it. At 5% level of significance ($\alpha = 0.05$), the F tabulated is given as: $F_{0.05, (1, 56)} = 4.0012$.

Decision

Since $F_{calculated} = 128.41 > F_{tabulated} = 4.0012$. We reject the null hypothesis. This result of the regression confirmed with 95% confidence that the use of information technology has significant effects on customers’ service.

Discussion of Findings, Summary and Conclusion

Discussion of Findings

The result of Pearson Product-Moment Correlation at 99% confidence level shows that there is a strong positive relationship between Information Technology and banking operations which is tested using the following variables:

1. Globalisation of the bank
2. Elimination of queues in the banking hall.

The global visibility of the banks is widened which affects their mode of operations such as cash transactions, advancement of loans and advances, safeguarding of valuables, foreign exchange transactions, etc. Also, the queues generated by customers of the banks due to transactions are reduced greatly. The banking hall no longer has to be congested with customers, complaints and conflicts. The hypothesis on this was tested at 99% confidence level, which gives no doubt of the fact that there is a significant relationship between Information Technology and banking operations.

The effects of information technology on banking operation was singly tested with regression analysis, result which revealed that Information Technology has positive and significant relationship between the improvement on banking operations and this was at 5% confidence level.

Similarly, it was found that information technology has significant impact on customers' satisfaction as r^2 69.5% which is substantial enough to support this assertion.

Summary of Findings

Most financial institution in Nigeria are revolutionising their operations through the use of Information Technology since they have come to realise the fact that computerised banks enjoy faster, more accurate accounting devices, more organised data handling, facilities utilisation among others. In light of the above, this studied the impact of information technology on the banking operations at Wema bank and First bank of Nigeria Plc. and know how the evolvement of Information Technology has affected the bank customers services.. Among other things, the major finding of the study showed that the adoption of Information Technology has advantage on increasing service delivery and reducing customer's queue. It also increases customer's satisfaction which could be therefore be traced to reduced waiting time, innovative new products and services, internationalisation of the banks, speedier and more efficient services among others. These are the benefits accrued to the evolvement and adoption of Information Technology in the banking operations of First Bank of Nigeria Plc and Wema bank Plc.

Apart from the customer's satisfaction, staff satisfaction through ease of their job and early closing has been ensured through application of the information technologies. Information Technology has a great impact on the banking operations of Wema bank Plc and First Bank Nigeria Plc.

Conclusion

The study has shown that information technology is extremely important in the present and in the future banking operations. Though, it can be extremely dangerous when confidential data creeps in to the wrong hands, but the fact still remains that the pay offs in adoption of information technology obviously surpass the shortcomings. The unpleasant truth that Nigerians are still far behind the advanced countries of the world in the employment of computer technology to solve management and operational problems in the banking system, but given the attitude of the Nigerian bank's management to Information Technology, it may not be too long before the perceived gap is narrowed. It is therefore become important that technology changes such as the introduction of technology driven services should be evaluated carefully so that the positive effect of the exercise will not be eluded.

It is pertinent to highlight that efficient information system will, among others;

1. Increase in the customer's satisfaction going by the product and facilities available to regain customer's loyalty.
2. Increase operational efficiency of deposit money banks as less time is required to carry out more transaction.
3. Positive impact on the customer base of the bank and by so doing gives the bank a competitive edge over its competitors.
4. Reduction in the running cost and expenses incurred by the banks. This leads to a resultant increase in the banks' revenue.
5. Swift response in service delivery.
6. Provision of various sources of acquiring information in the bank.

Recommendations

1. A virile banking system is driven engine of economic growth of any economy hence institutions of government should promote enabling environment for very efficient deployment of information technology by banks in Nigeria.
2. Banks should constantly identify and proffer solution to all such impediment to efficiency in the of operation of information technology's apparatus.
3. The regulatory agencies should be proactive in the formation of necessary framework to guarantee the security of banking activities on information technology platforms.

Limitation of the Study

The major limitations of this research work are the constraints we encountered in the use of questionnaires for generating data information. Bank customers often find the efficiency of the operational system of the bank in different ways or perspective; hence, it is not possible to determine the exact level of difference between belief and practice in the banking operation. Moreso, the study involved only two banks within Osun State, nevertheless, this is in no way affect the outcome of the study. In fact the choice of these banks were informed by the fact that they were established during manual operations and had envolved to technology driven.

References

- Acharya, R. N; Kagan, A; Lingam, S.R & Gray, K. (2008). 'Impact of Website Usability on Performance: A Heuristic Evaluation of Community Bank Homepage Implementation', *Journal of Business and Economics Research* 6 (6).
- Adeoti J.O (2005). 'Information Technology Investment in Nigeria Manufacturing Industry: The Progress so Far. Selected Papers for the 2004 Annual Conference, Ibadan: Nigeria Economic Society, 213-244.
- Adepoju, A. T. (2012). *Research Methodology and Simple Guide to Project Report Writing* 3rd edition. (Osogbo). AYF Publishers Ltd. 50-55
- Adepoju A.T. (2009). *Introduction to Business Statistics*. (Osogbo). AYF Publishers Ltd.
- Adetayo, J. O. Sanni S.A. & Ilori, M.O (1999). 'The Impact of Information Technology on Product Marketing: A Case Study of Multinational Company in Nigeria' *Technovation*, Elsevier Science Ltd
- Agbolade, O.K. (2011). *Information and Communication Technology and Banks Profitability in Nigeria' Australian Journal of Business and Management Research*. 1(4)103-104.
- Agboola, A.A. (2003). 'Information Technology, Bank Automation and Attitude of Workers in Nigeria Banks.' *Journal of Social Science*. Department of Management and Accounting, Obafemi Awolowo University. Ile- Ife Nigeria. 7(3).
- Alabar T.T. & Agema R. J (2014). 'Information and Communication Technology and Customer Satisfaction in the Nigeria Banking Industry'. *Journal of Advance Management Science*. Benue state University, Department of Business Management, Markurdi Nigeria. 2(4) 334-335.

- Alam, I. Perry, C. (2002). A Customer Oriented New Service Development Process. *Journal of Marketing Research* 16(6) 515-534.
- Alamu, A. (2000). Effects of Environment on I.T Industry in Nigeria. Unpublished Paper submitted to the Department of TPDU, OAU, Ile-Ife
- Aliyu, A.A; Rosmaini, B. & Tasmin, H.J. (2012.) The Impact of Information and Communication Technology on Bank's Performance and Customer Service Delivery in the Banking Industry . *International Journal of Latest Trends in Finance & Economic Sciences*. 2(1):80-90
- Berger, A. N. & Mester, L. J. (1997). Inside the Black Box: What Explains Differences in the Efficiencies of Financial Institutions? Wharton School, Center for Financial Institutions Working Paper Series 97-04
- Bloemer, J., de Ruyter, K.& Peeters, P. (1998). Investigating Drivers of Bank Loyalty: The Complex Relationship between Image, Service Quality and Satisfaction, *International Journal of Bank Marketing*, 16(7), 276-286
- Boyett, J.H. & Boyett. J.T (1995). *Beyond workplace 2000: Essential Strategies for the New American Corporation*. New York. Dutton.
- Broadent . M. & Weil P. (1997). Management by Maxim: How Business and IT Managers can create IT Infrastructures .*Sloan Management Review* 38(3). 77-92
- Brown, S. A. & Venkatesh, V. (2005). "Model of Adoption of Technology in the Household:A Baseline Model Test and Extension Incorporating Household Life Cycle," *MIS Quarterly*. (29:4), 399-426.
- Byro, T. A. & Turner, E.D. (2000). An exploratory Analysis of the Information Technology Infrastructure Flexibility Construct. *Journal of Management Information Systems* 17(1) 167- 208.
- Castells, M. (2001), *The Internet Galaxy: Reflections on the Internet, Business and Society*, Oxford; Newyork: Oxford University Press Newyork. *International Journal of Lastest Trend in Finance and Economics Sciences* 2(1): 80
- DeYoung, R. (2005). The Performance Internet- based Muhammed A, Gatawa N.M and Kebbi HS (2013Business Models: Evidence from the Banking Industry. *Journal of Business*, 78(3), 893-947.
- De Young, R., Lang, W. W. & Nolle, D. L. (2007). How the Internet affects Output and Performance at Community Banks, *Journal of Banking & Finance*, 31;1033–1060.
- Dick, A. A. (2003). Nationwide Branching and its Impact on Market Structure, Quality and Bank Performance. *Journal of Business*,
- Duncan, N. B. (1995). Capturing flexibility of Information Technology Infrastructure. A Study of Resource Characteristics and their Measure. *Journal of Management Information System* 12(20) 37-57

- Furst, K., Lang, W. & Nolle, D., (2002). Internet Banking. *Journal of Financial Services Research*, 22; 95-117.
- Gwashi, Y.J. & Alkali, A. (1996). The Role of Computer in Record Management. A Project Submitted to the Caliphate Computer Training School affiliated with the Usman Danfodiyo University Consultancy Services, Sokoto.
- Ibikunle F. & Oluwafemi J.(2011). 'Impact of Information Technology on Nigeria Banking Industry : A Case Study of Skye Bank'. *International Journal of Computing Academic Research*, Covenant University, Ota Nigeria 1(1) 26.
- Johnson, M, (2005). 'Overview of Electronic Payment Systems in Nigeria Strategic and Technical issues'. *Central bank of Nigeria Bullion*, 29(2).
- Kassim, N. M. & Bojei, J. (2001). Service Quality: Gaps in the Malaysian Telemarketing Industry, *Journal of Business Research*, 55(10); 845-852.
- Marchand, D.A., Kettinger, W. J. & Rolins, J.D. (2000). Information Orientation: People Technology and Bottom Line. *Sloan Management Review* 41(4): 69-80.
- Mattos, A. (1999). Empregos e empresas que mudaram com a Internet. *Revista de Administração de Empresas* 39(3), 1999, 73- 108.
- Muhammed A, Gatawa N.M & Kebbi HS (2013). Impact of Information and Communication Technology on Bank Performance: A Study of Selected Commercial Banks in Nigeria, (2001-2011) *European Scientific Journal* 9(7): 214-217
- Oladejo M.O. & Adereti A.S. (2010). 'Impact of Information Technology Performance of Microfinance Institutions in Ogun state Nigeria, Olabisi Onabanjo University, Ago Iwoye, Ogun state Nigeria Department of Accounting. *International Journal of Economic Development, Research Investment* 1(1) 113
- Olayinka S., Alina ,S. & Eta, W. (2013). 'Identifying Factors that Determine Intention to use Electronic Banking: A Conceptual Study. *Middle East Journal of Scientific Research* 18(7) 1013-1014
- Oluwatolani, O., Abah, J. & Achimugu, P. (2011). 'The Impact of Information Technology in Nigeria's Banking Industry. *Journal of Computer Science and Engineering* 7(2) 63-66
- Oyedokun, T.A; Lawal T.T; Ojo, J.A; Adewuyi, I.D; & Omotosho, M.A. (2005). *Banking Elements and Operations*. (Lagos) Forthright Educational Publisher.
- Sambamurthy, V; Bharadway, A.S. & Grover. V. (2003). Shaping Agility through Digital Options; Reconceptualising the Role of IT in Contemporary Firms. *Management Information System quarterly* 27(2) 237-263
- Sunil, M., Narayan, R., Krishnan, M.S. & Sambamurthy. V. (2004). Information Technology Infrastructure Capability and Firm Performance: An Empirical Analysis. <http://ball.handlenet/2027.42/39170.1-31> Downloaded Dec 3rd, 2015.

- Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). "User Acceptance of Information Technology: Toward a Unified View." *MIS Quarterly* 27(3); 425-478.
- Wali, A.F. (2013). 'Information Technology Infrastructure and Customer Service Delivery' *British, Journal of Marketing Studies* (2) 20-22.
- Xia. W & King W.R. (2004). Information Antecedents of Organizational Technology Infrastructure Capabilities .Retrieved January 3rd, 2016.
- Zhu F.W & Chen .I. (2002). 'IT based Services and Service Quality in Consumer Banking' *Internet Journal of Service Industry Management*. 13(1):69-90.