

Impacts of Information Technology on Banking Industry (A Case Study of Akure Bank Area)

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ABSTRACT

As information technology is the modern trend on banking today, it's very imperative for banks to access its impact operational performance so as to justify if the capital invested on it is Justifiable or not, analyze their problem and profit possible solutions. The objective of this research is to examine how the adoption of information technology affects the operations of commercial banks and the impact of information technology on banks and customer relationship. The main research instruments used are questionnaire from staffs and customers of the bank, 156 questionnaire were distributed and 150 questionnaire were administered. The simple frequency percentage was adopted as the statistical measure and hypothesis testing was analyzed using chi-square statistical tool, at 0.05 level of significance to show whether they should be upheld or rejected. The results of this research affirmed that there is significant relationship between management disposition and the utilization of information technology by banks in Nigeria. In conclusion, the study reward that information technology has tremendously improved growth and performance of the Nigeria commercial banks. Information technology has lead to increase customer satisfaction, improved operational efficiency, reduced transaction time, and gives the bank a competitive edge. The study recommends that every bank in Nigeria should not only invest heavily on IT especially the point of sales (POS), but should distribute same to business outlets where business owners and customers will have access to smooth and hassle free transactions. It is therefore necessary for the government to emphasize the need for more policies that will boost the efficiency in utilization of IT equipment by reducing the cost of acquiring them so as to reduce cost and boost the growth of the economy. Consequently, it is hereby suggested that further studies be carried out on the impact of Information Technology on development finance institutions.

KEYWORDS: Banks, Productivity, Information Technology and Nigeria

INTRODUCTION

In recent times, Information Technology (IT) has in particular brought a complete paradigm shift on bank's customer service delivery and financial performance in the banking industry. In a bid to catch up with global development, improve the quality of customer service delivery, reduce transaction cost and increase shareholders wealth, banks have invested heavily in IT, and have widely adopted IT software, hardware and networks for delivering a wide range of value added products and services. The IT

development has a significant effect on development of more flexible and user friendly banking services (Adeku, 2020). Today, IT has become the heart of banking sector, while banking industry is the heart of every robust economy (Babatunde, 2018). If it collapses so will the economy. It is absolutely evident from the current financial downturn in most of the European banks' crises, and in turn. IT has created a new infrastructure for the world economy to become truly global and also provided the users of new

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technology a competitive advantage over their rivals. Services like electronic banking and ATMs have become the main technology driven revolution in conducting banking financial transactions. Banks have made huge investments in telecommunication and electronic systems, users have also been validated to accept electronic banking system as useful and easy to use (Schiavi and Behr, 2018). Transactions worth billions of dollars can only take place in seconds in the electronic circuit throughout the globe by pressing a single button. The Ghana economy yearns for serious development. Irrespective of the fact that she is blessed with massive natural resources such as Gold, Oil, Cocoa and Timber, she remains one of the poorest countries in the world (Castells, 2001). Banks today are looked upon as stated above as vehicle of change for a much needed economic growth and development as it behaves on banks to develop the most effective means of delivering effective, efficient and quality service that will help drive our much awaited economic success. These can be made possible if and only if IT is properly put to use in the Nigeria banking sector (Adesina and Ayo, 2010). It is believed that the application of IT in banking has the tendency to stimulate economic growth by bringing borrowers and lenders of financial resource together more efficiently than if they had to relate directly with one another. IT has been acknowledged as the backbone of banks in the financial sector as it promotes and facilitates the performance (Financial and Operational) of banks in the country (Oria and Kibati, 2016).

REVIEW OF RELATED LITERATURE

literature review covers issues concerning the development of banking in Nigeria, impact of information technology, contribution of information technology in Nigeria, the role of IT on banking sector, problems and challenges of information technology on banking sector, theoretical framework and review of empirical literature.

Information technology (IT) in Bank industry in Nigeria

The world of business has witnessed enormous changes in its nature due to the recent developments in IT and the emerging technologies that appear frequently. The rapid changes in the business market and the hectic and fierce competition among companies have led to the adoption of new and innovative techniques in their business to gain trust and reap the benefits.

The increase in IT gadgets has encouraged banks to increase IT usage and the business environment is becoming more and more reliant on IT. Banks have taken the advantage of the technology developments

in almost all aspects of its operations to increase productivity, profitability, and expandability especially in era of the sever competition in banking sector in the country.

Payment systems such as ATM, Electronic Fund Transfer (EFT), Clearing House Automated Payments (CHAPs), Electronic Purse (E-Purse), Automated Cheque Sorter (ACS), and Electronic and Transfer at Point of Sale (EFTPOS) has made the services much easier, faster, and at convenience for both customers and banks. In addition regulations in banks became more sophisticated and technology dependent and speeded up operations thus reducing the cost per unit in banking operations (Salawu and Salawu, 2007).

The Nigerian banks have nowadays online services and facilities that accelerate funds transfer instantly from any location and provides safer and convenient facilities to all stakeholders. The telephone banking technology is another innovative technology that improved the productivity, comfort, and innovative way to serve customers (Osabuohien, 2008). It can be concluded that Information technology has impacted positively on the mode of operations in the banking sector in Nigeria.

METHODOLOGY

The methodology adopted in this research is presented, based on the following:

- Research Design
- Research Procedure.
- Population of the Study
- Sample Size
- Sample and Sampling Technique (s)
- Research Instrument
- Validation of Instrument
- Reliability of Instrument.
- Method of Data Collection
- Method of Data Analysis

Research Design

This study adopted descriptive-survey design. A survey approach is adopted where portion of the entire population is subjected to analysis and the findings used to draw conclusion on the entire population. This research is also descriptive in nature because it described the current situations in respect of the impact of Information Technology on Nigerian's Banking. A study of Akure Bank Area.

Research Procedure

The primary and secondary data were collected through the questionnaire and collated. The secondary

data was specifically collected by the researcher from related publications by scholars and other relevant authorities in the field of Information and Communication Technology.

Population of Study

The main population of this study comprised of first bank, zenith bank, UBA bank, Polaris bank, unity bank, heritage bank, access bank, Fidelity Bank in Akure Metropolis. However, the following Banks in Akure were selected for the study.

1. Zenith Plc.
2. UBA. Plc.
3. First Bank plc.

Schedule of Sample Selection

Bank	No of Junior staff selected	No of Senior Staff selected	No of Mgt Staff selected	No of Customers selected	Total Respondents
Zenith	20	15	5	10	50
UBA	20	15	5	10	50
First Bank	20	15	5	10	50
Grand total	60	45	15	30	150

Table 1 Sample and Sampling Techniques

For the purpose of this study, the stratified random sampling method was employed in selecting the sample size. The relevant respondents from each of the groups (junior staff, senior staff, customers and management staff) were derived using the stratified random method. This technique was used because it enhances the representativeness of the sample in relation to the problem.

Research Instrument

The instrument used for this research was a questionnaire. The structured and well validated questionnaire was self-designed by the researcher based on 4-points scale. It has two sections as follows.

Section A- Background information and demographic data of respondents,

Section B- This is in respect of the subject matter, under study. The impact of Information Technology in Nigerian Banking. A study of Akure Banking Area.

It consisted mainly of close-ended questions which required the respondents to tick their best option and was structured on four Point Scale i.e. Strongly Agree (SA), Agree (A), Strongly Disagree, (SD), Disagree,(D).

Method of Data Collection

The researcher personally visited all the selected towns and districts in the company of trained research assistants during the period of data collection. The researcher, with the help of research assistants, established rapport with members of staff and customers on their arrival. After making formal introduction, the researcher and research assistants made the respondents aware that the questionnaire was only meant for research purposes and information obtained would be treated in strict confidence.

A total of 154 copies of the questionnaire were produced and distributed. The researcher was able to retrieve 150 out of 154 copies of the questionnaires, which were all filled. This means that 150 copies of the questionnaire administered were subjected to analysis.

Method of Data Analysis

Data collected was mainly presented by use of quantitative methods. The responses from the structured questions were computed into frequency counts and percentages and means. It was summarized and tabulated for easy presentation, assessment, analysis and interpretation.

The null hypothesis generated for the study were tested statistically using chi-square statistical tool, at 0.05 level of significance to show whether they should be upheld or rejected. Data were presented in tables on the basis of the research questions and null hypothesis generated for the

Sample Size

A total sample size of 150 was adopted for this research. A sample of 50 was drawn from each of the three (3) banks that are under study. Each of these samples were randomly selected from the total number of staffs employed by the three (3) banks and the total number of customers of the three banks under study. Each sample comprised of 20 junior staff, 15 senior staff, 10 customers and 5 management staff. The reason behind having them in this order derives from our preliminary investigation which revealed that the junior staff in each of these banks have the highest population followed by senior staff and management staff in that order.

DATA PRESENTATION, ANALYSIS AND INTERPRETATION

This chapter presents the analysis and interpretation of data obtained from respondents on the impact of Information Technology on Nigerian's Banking. A study of Akure Bank Area. The application of descriptive and inferential statistics were employed for the overall analysis and test of research hypotheses. The analysis is based on 150 copies of questionnaire found suitable for analysis, although a total of 154 copies of questionnaire were originally administered among the respondents. Thus the response rate stood at 97.4%.

Questionnaire Distribution

S/N	Description of Respondents	No. Retrieved	Percentage	Cummulative Percentage
1	Zenith	50	33.3	33.3
2	UBA	50	33.3	66.6
4	First Bank	50	33.3	100
Total		150	100	

Table 2: Source: Field Survey Work, 2020.

From Table 2 shows that equal retrieval rate for all respondents from the selected banks. 50(33.3%) respondents are from Zenith. 50 respondents were obtained from UBA, which accounts for 33.3%. Finally 50(33.3%) respondents were obtained from First bank PLC. The distribution showed and equal reorientation from the selected banks.

For the purpose of this analysis, the sum percentage of the respondents that indicated strongly agreed and agreed were grouped to be the percentage of the respondents that agreed with the statement while those that chose disagreed and strongly disagreed were grouped to be disagreed. Furthermore, an expected mean was calculated using $(4+3+2+1)/4 = 10/4 = 2.5$ and any item with mean below 2.5 which is the expected mean is accepted as DISAGREED while items with mean with 2.5 and above is accepted as AGREED. The mean value of each statement was estimated and used in ranking the statements. Also, in table 1 strongly agree, agree, disagree and strongly disagree are represented by SA, A, D, SD respectively and the mean and standard deviations for the variables are represented by X and STD respectively.

Respondents answers to questions on the Impact of IT on Banking Operations.

	SA	A	SD	D
The adoption of IT in banking has enhanced profitability of our Bank.	37.30 %	29.30 %	10%	23.30 %
The adoption of IT in banking has enhanced the overall performance of our Bank.	48.7%	18%	30%	3.30%
IT utilization led to high labour turnover in our bank.	46.7%	30%	20%	3.30%
The adoption of IT has made our operations faster, accurate and reliable.(Efficiency)	70%	23.30 %	4.00%	2.70%
The adoption of IT has led to increased customers loyalty (patronage)	55%	10.00 %	14%	21%
IT has positive effects on labor productivity and total factor productivity of banks.	43.3%	20.00 %	26.70 %	10.00 %
Customers services have improved considerably since the adoption of IT in my bank.	40.0%	13.30 %	30.00 %	16.70 %
IT reduces cost of operation and increases output in the long-run.	73.3%	3.30%	23.40 %	0.00%

Table 3 Computed from Field Survey, 2020

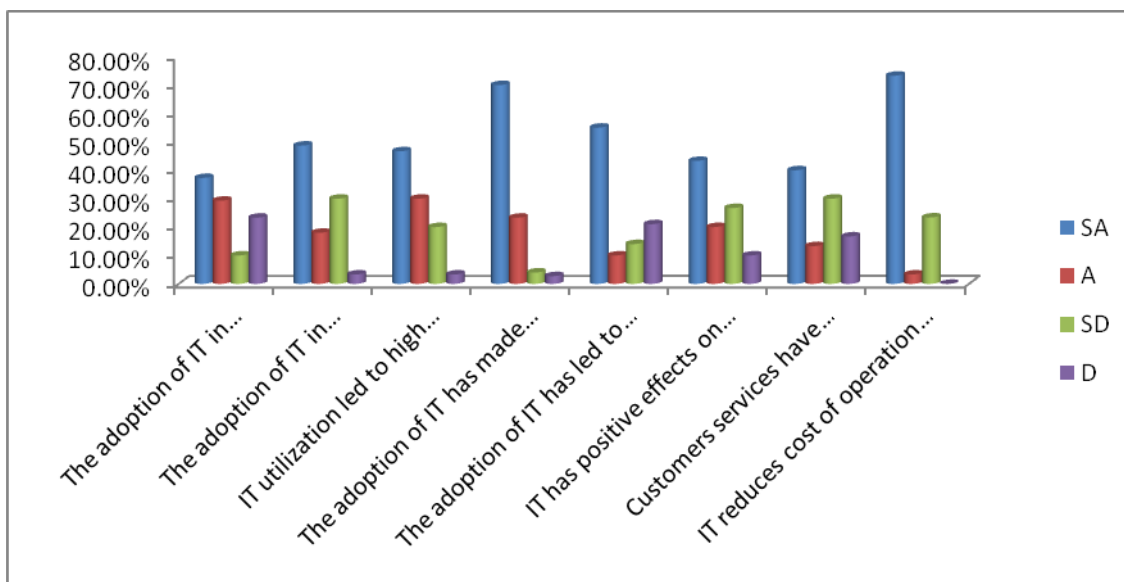


Figure 1

For the purpose of this analysis of the results in table 3 on the impact of IT on banking operations, the sum percentage of the respondents choosing strongly agreed and agreed were grouped to be the percentage of the respondents that agreed with the statement while those that chose disagreed and strongly disagreed were grouped to be disagreed. Furthermore, an expected mean was calculated using $(4+3+2+1)/4 = 10/4 = 2.5$ and any item with mean below 2.5 which is the expected mean is accepted as DISAGREED while items with mean score 2.5 and above is accepted as AGREED. The mean value of each statement was estimated and used in ranking the statements. Also, in the table strongly agree, agree, disagree and strongly disagree are represented by SA, A, D, SD respectively and the mean and standard deviations for the variables are represented by X and SD respectively.

It was observed that 73.3% of respondents agreed that the statement of accounts are promptly updated with the adoption of IT, with a mean score of 2.83 and was ranked 6th among the statements. Also about 76.6% of respondents agreed that IT reduces cost of operation and increases output in the long-run, with a mean score of 2.70 and was ranked 7th. The 8th ranked statement was on the improvement of customers services as a result of IT adoption, with a mean score of 2.69 and 53.3% of respondents agreed. While the 9th ranked statement was that the adoption of IT in banking has enhanced the overall performance of Banks, with a mean score of 2.68 and about 66.7% agreed. The statement that IT provides proximate banking, and about 66.7% of respondents agreed with a mean score of 2.67. Majority of respondents (63.3%) agreed that IT helps in the detection of fraud, with a mean value of 2.63 and the statement that IT has positive effects on labor productivity and total factor productivity of banks as about 63.3 agreed and a mean value of 2.59. Finally, majority (76.7%) agreed that IT utilization led to high labour turnover in the bank, with a mean score of 2.57.

Figure 1, it can adduced that IT have positively impacts on bank performance, employee productivity, customer's service, operational efficiency, prompt account update, prompt rendition of returns, increase in output, labour turnover and increased profitability of banks. Figure 1 shows that's, improvement in IT infrastructures was considered of utmost necessity, while others were, reduction in cost implications on customers, prioritizing IT solutions in banks, provisions of necessary infrastructures, regular electricity, training for staff and improvement of Network Security and Firewalls.

Inferential Statistics

Test of Hypotheses level of 0.05 (or 5%) which means at 5% probability. SPSS 22 software was used to generate the results.

1. H_0 ; There is no significant relationship between Management disposition and the utilization of information technology by banks in Nigeria.

H_1 ; There is a significant relationship between Management disposition and the utilization of information technology by banks in Nigeria.

2. H_0 ; There is no significant relationship between the utilization of Information technology and operational performance of banks in Nigeria.

H₁; There is a significant relationship between the utilization of Information technology and operational performance of banks in Nigeria.

3. H₀; There is no significant relationship between the use of information technology and customers satisfaction in Nigeria's banking sector.

H₁; There is a significant relationship between the use of information technology and customers satisfaction in Nigeria's banking sector.

Result of Hypotheses Testing

Details about the test of the hypotheses are indicated below:

Results of Test of Hypotheses using Chi-square (χ^2)

Hypotheses	Chi-square (χ^2) value	Likelihood Ratio	Linear by Linear Association	Degree of freedom	Asymp. Sig 2-sided	Decision
H ₀	220.689 ^a	249.181	126.181	9	0.000	Reject H ₀
H ₀	242.808 ^a	257.050	125.549	9	0.000	Reject H ₀
H ₀	249.020 ^a	247.320	124.842	9	0.000	Reject H ₀

Table 4 Computed from Field Survey, 2020

H₀: There is no significant relationship between Management disposition and the utilization of information technology by banks in Nigeria. According to Table 4, the null hypothesis was rejected and the alternative was accepted given the chi-square (χ^2) value of 220.689^a and Asymp. Sig. (2-sided) of 0.000 which is less than the probability of 0.05 (Prob. < 0.05). The results therefore affirmed that there is significant relationship between Management disposition and the utilization of Information Technology by banks in Nigeria. This is in line with the findings of Babatude, (2018) on the Impact of information communication technology on bank performance of selected banks in Ondo State Nigeria and Adesina and Ayo, (2010) on the Impact of Electronic Banking on Customers Service in Lagos, Nigeria.

H₀: There is no significant relationship between the utilization of Information Technology and operational performance of banks in Nigeria.

According to Table 4, the null hypothesis was rejected and the alternative was accepted given the chi-square (χ^2) value of 242.808^a and Asymp. Sig. (2-sided) of 0.000 which is less than the probability of 0.05 (Prob. < 0.05). The results therefore affirmed that there is significant relationship between the utilization of Information Technology and operational performance of banks in Nigeria. This is in consonance with the findings of Castells (2001) in his study on banking efficiency and information technology in Nigeria: An empirical investigation.

H₀ There is no significant relationship between the use of information technology and customers satisfaction in Nigeria's banking sector. According to Table 4, the null hypothesis was rejected and the alternative was accepted given the chi-square (χ^2) value of 249.020^a and Asymp. Sig. (2-sided) of 0.000

which is less than the probability of 0.05 (Prob. < 0.05). The results therefore affirmed that there is significant relationship between the use of information technology and customers satisfaction in Nigeria's banking sector. This is in line with the findings of Osabuohien, (2008) in his empirical investigation on IT and Nigeria Banks Reforms: Analysis of Anticipated Impact in Selected banks.

Discussion of Findings

i) Consequent upon the results of this section of the survey, it could be adduced that most banks have deployed Information and Communication Systems in their various operations. Examples of such systems are indicated in the survey. It can also be concluded that these IT systems and solutions are predominantly utilized for banking operations in Akure metropolis. Automated Delivery Channels, Point of Sales solutions, SMS, Fax machine, photocopying machines, Email services, internet banking, electronic fund transfer, plastic cards, magnetic ink readers (MICR) and other Telebanking interactive services are examples of IT solutions utilized by banks.

ii) Furthermore, it was found that IT, positively impacts on bank performance, employee productivity, customer's service, operational efficiency, prompt account update, prompt rendition of returns, increase in output, labour turnover and increased profitability of banks.

From the above observations, it can be safely inferred that the critical challenges of IT utilization in banks are, low tele-density, poor IT infrastructure, poor internet connectivity and coverage, inadequate government support, insecurity and poor management disposition among others.

iii) Improvement in IT infrastructures was considered of utmost necessity, while others were, reduction in

cost implications on customers, prioritizing IT solutions in banks, provisions of necessary infrastructures, regular electricity, training for staff an improvement of Network Security and Firewalls.

iv) It was established that there exist a significant relationship between Management disposition and the utilization of information technology by banks in Nigeria. This finding is in consonance with the findings of Salawu and Salawu, (2007) in their study on management disposition and IT application in Nigeria banks.

v) It was also found that there is a significant relationship between the utilization of Information Technology and operational performance of banks in Nigeria. This is in line with the findings of Adeoti, (2005) on IT application in Nigeria banks.

vi) It was found that there is a significant relationship between the use of information Technology and customers satisfaction in Nigeria's banking sector. This finding is in consonance with the findings of Tella, (2006) in his study on IT and Customers services in Financial Institutions.

vii) The use of Information Technology positively impacts of bank profit.

Conclusion

In the course of this study, it has been established that Information Technology play key roles in the banking sector in Nigeria. It has made reasonable impacts in banking operations such as helping in critical areas as End-user technical supports, customers service delivery, Network management, voice and data communications, business applications and strategic technology planning. Information Technology (IT) has helped in reducing the cost of doing business in banks, banks all over the world are involved in time consuming and routine task on a daily basis and it's dependent on Information Technology cannot be overemphasized. It has also been observed that it has been abused and encouraged fraudulent and unethical banking practices as its downside.

In conclusion, the impact of Information Technology in banking sector is enormous and has global impact. It has equally affected leading organizations all over the world. The effect is not only in the banking sector because virtually all sectors of human endeavor have experienced the revolution. Again, the speed of change is fast and in many years to come the impact will continue to cut across all areas of human endeavor going by the Research and Development (R&D) taking place all over the world presently. Change is a constant phenomenon and banking sector is not exempted. As such one needs to prepare

himself or herself to such changes whenever the situation calls for it.

Recommendations

Arising from the findings of this study, it is obvious that Information Technology is highly important in the banking sector due to its immense contributions. Therefore the researcher makes the following recommendations with the intent that if adopted would have positive effects on the banking sectors.

1. Investment in IT has been proven to enhance the performance of Nigerian commercial banks. The banks should therefore give emphasis to efficient utilization of the IT enabled services such as credit and electronic cards to pay at retail outlets, points of sales (POS), phone banking, electronic payment debit, Automated Teller Machines (ATM), home banking, internet banking, mobile banking, personal digital assistant banking.
2. The study recommends that every bank in Nigeria should not only invest heavily on IT especially the POS, but should distribute same to business outlets where business owners and customers will have access to smooth and hassle free transactions. It is therefore necessary for the government to emphasize the need for more policies that will boost the efficiency in utilization of IT equipment by reducing the cost of acquiring them so as to reduce cost and boost the growth of the economy.
3. The use of (IT) in the banking sector should not only be restricted to the cities alone, rural banking should also be improved upon.
4. The banks should embark on aggressive campaign and re-orientation of clients to create awareness for the customers to patronize the facilities especially in the area of use of POS, mobile banking and so on. Acceptance of these facilities will consolidate the gains from investing in them. In achieving this, every bank should partner with the government to make internet connectivity cheap and accessible, especially in the rural areas.
5. The government should emphasize the need for more policies that will boost the use of IT solutions such as ATM, POS, MM and WP hence long run equilibrium relationship with commercial banks performance.
6. Staff should be used side by side with IT rather than reducing human capital which will in turn lead to unemployment in the country.
7. Banks must ensure that the Internet service provider (ISP) has implemented firewalls and

other security checks to protect the banks website from unauthorized users.

8. Banks should ensure that they properly configure their IT solutions and institute procedures for continued monitoring and maintenance arrangements to avoid breakdowns and downsides.
9. Government should make Improvements in electricity supply through the national grid and also provide additional IT infrastructures to assist banking operations.

Suggestions for further studies

Based on the above study findings, the following areas are suggested for further studies. This is because of the fact that this study is focused on commercial banks, which imposes some limitations on the application of its findings. Consequently, it is hereby suggested that further studies be carried out on the impact of Information Technology on development finance institutions.

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