

## Impacts of Information Technology on Nigerian Banking Industry

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### ABSTRACT

Information technology (IT) has introduced humanity globally to a new age of digital communications where electronic business transactions are made possible. IT has taken a center stage in changing the way business is done both in formal and informal sectors around the world, banking industry is not an exception. More so, this industry is the mainstay of any economy. To this end, this paper reviewed extant literature to examine the influence of IT on banking systems in Nigeria. The paper discovered that IT compliance in the banking industry enhances efficiency and innovations. It also improves decisions making processes of management to a reasonable level of accuracy. However, there are concerns in the area of geometric increase in banking fraud in recent times and the huge cost of investing in IT. The paper therefore recommends the introduction of forensic audit units to banks as part of their internal control mechanism to help unravel and prevent high technological fraud. It further recommends a bilateral agreement between the software manufacturing countries and Nigeria government for knowledge transfer so as to reduce the cost of purchasing the IT infrastructure.

**Keywords:** Information technology, Productivity, Innovation, Internet banking fraud.

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### 1. INTRODUCTION

Information technology has become an engine block of every banking institutions around the world, Nigerian banking industry is not an exception. Due to global challenges industries are facing in rendering better and efficient services to their customers at a relatively cheaper rates, heavy investments are made into IT, and commercial banks are not left out of this, in order to improve banking system efficiency and effectiveness. In the past few decades, Nigerian banking industry has experience tremendous changes in its financial processes due to IT integration. It is widely recognized that the banking sector plays a crucial roles in socio-economic development and transformation of any economy. Part of bank services is granting credit facilities, accept deposits, and create wealth among others. These functions are now made easy through IT intervention (Ewa, & Udoayang, 2013). Omotoso, Dada, Adewole and Siyanbola (2012) defined IT as a platform where banks and customers transact business without necessarily having physical contacts.

Prior to investment and integration of IT to Nigerian banking system, financial transactions and processing of large volume of data were initiated and completed manually which made banking operations cumbersome, costly, inefficient (Adeoti, & Osotimehin, 2012).

Furthermore, there are growing debate as to the impacts of IT on banking industry in Nigeria and several authors have express their views in this regards. While some viewed it as a positive development to the industry, other are of the opinion that it has done more harm than good to the banking system, considering the spate of internet banking fraud in recent times. Devaraj and Kohli (2003) posited that IT has positive impact on the banking sector. The study further averred that business models have changed considerably due to IT. Banks now compete to invest in latest technological infrastructures for better services and to meet up customer satisfactions and convenience. Wilson, Cosmas, & Ezeudu, ( 2014) conducted a study on the influence of information technology on quoted banks in the Nigerian Stock Exchange market, and findings revealed that it has no significant impact on operating performance of the banks. However, the study acknowledged the importance of information technology investment for efficient banking operations. Also, Saifullahi and Abubakar, (2013) conducted a study on the impact of IT investments on Tunisian banks' performance, and it was revealed that it has a positive impact on Tunisian banks cost efficiency levels.

While IT can be seen as a blessing, it appears also that it has exposed banks to high fraud risks considering the financial statistical bulletin and media reports of increasing rates of fraud cases in Nigerian banks in recent times. According to Okunbor and Obaretin (2010) the rate of bank fraud in recent time give a source of worry and required more sophisticated approach for prevention. Internet banking fraud is perceived to be a challenge associated with the integration of IT to various banking operations and it has caused of huge financial loss to both customers and shareholders. This has created the need for management to be on their toes in fostering control mechanisms that can ensure fraud prevention, because fraud is a threat to any organization's going concern and its public image (Enofe, Abilogun, Omoolorun & Elaiho, 2017). According to Association of Certified Fraud Examiner ACFE (2007) fraud can be defined as any intentional or deliberate act to deprive another of property or money by deceptive means

Technology is developing at a very fast pace and business organizations are quick to invest heavily to new software to fortify their various control systems for efficiency and better performance, however, many of these organizations are not quick to adapt and adjust to security measures to protect these software platforms from being hacked by fraudsters (Chariri, 2009), and very few studies have been conducted on the side effects of IT investment and the geometric increase in fraud incidence in banks.

## **2. REVIEW OF LITERATURE**

### **2.1 Information technology and productivity in Nigerian banks**

According to Omotoso, Dada, Adewole and Siyanbola (2012), IT has become an indispensable factor in banking system globally. It enhances efficient operations, business development, meet customer satisfaction and gaining competitive advantage. IT tools has made it possible for easy payment of bills through electronic transfer, Automated Teller Machine (ATM), Point of Sales Machine (POS) among others. Several studies were conducted regarding the linkage between productivity and IT investments, while some studies attempt to explain the ineffectiveness of IT in improving banks performance, others are of the view that IT has re-engineer banking operations and improve productivity.

The studies of Brynjolfsson and Hitt (1996) found a positive relationship between IT investment and banks productivity.

However, Harker (1997) studies found no relationship between IT and bank productivity. According to Saifullahi and Abubakar (2013), it has been difficult to determine the relationship between IT investment and productivity gains of businesses especially financial institutions. However, it alluded to the fact that it has helped bank staffs in their day to day operations. A research survey conducted by RambolManagement (2008) on the influence of IT on the productivity of European industries especially in their financial institutions found that there was a simultaneous rise in productivity and reduction in the average working hours of their employees. To this end, there is a positive and significant impact of IT on the speed, efficiency, productivity and profitability of European financial institutions (Osabnohien, 2008).

Bankers, accountants and auditors working in the banking environments cannot do a meaningful job today without the use of IT. Virtually, all the accounting processes are now automated to give accurate results and helps in taking informed decisions that can affect the growth of banks. This computerization of business operations in the banks has led to reduction in operational costs of banks. Reoccurring issue of data duplications, avoidable errors and mistakes inherent in manual processes are no more applicable.

## **2.2 Information technology and innovations in Nigerian banks**

IT innovations has contributed immensely to better services in banks. It has helped in the distribution channels of banks to meeting customer's satisfaction and convenience. It has also brought competitions to the industry. Adeoti, and Osoimehin (2012) conducted a study on the effects of adoption of electronic payment system Nigerian banking industry, the study found that the traditional banking system is not in line with global trends and therefore recommends that the application and usage of IT in the banking system as an innovation for better and efficient service delivery cannot be underestimated. The study further revealed that electronic banking has revolutionized service delivery to customers through various electronic fund transfer and payment services such as the automated teller machine (ATMs), POS, mobile banking among others. These as speed up service delivery and stimulate efficiency in the entire financial system. The introducing and building of money counting machines, software for processing millions of data and distribution to customers in few minutes and control access to sensitive business data are great innovations for the banking industry.

Technological innovations to a large extent has been a contributory factor to the success of the distribution channels in Nigerian banks (Oluwagbemi, Abah, & Achimugu, 2011). It has improved banking distribution networks to customers who on daily basis seek convenience and satisfaction in banking services. These distribution channels infrastructures inbuilt a book keeping system synchronized with a cash vault which permit customers to gain access to their bank account using a password or plastic card containing their personal identification number which is linked to the bank computerized database records and customers can transact business within and outside the country (Rose, 1999). This process can be refers to as e-banking.

## **2.3 Information technology and banking fraud in Nigeria**

The desire to expand and enlarge market share has influence many banks to heavily invest in IT. However, internet banking which is an aspect of IT has being a big threat to this industry in recent times due to the fraud being perpetrated through this means. Unauthorized access and hacking to the banks and customers' accounts are now rampant. There seems to be an insider's collusion for this to happen.

According to Nwankwo (2013), it is not sufficient to acquire IT infrastructure for better and efficient services only, it is also imperative for banks to understand the flaws of these IT tool, so as to guide against security threats and hacking of banks account which can cost banks huge loss of cash.

According to Nigerian Deposit Insurance Corporation (NDIC) annual report (2018), 16,751 fraud cases were reported by commercial banks in 2016. While in 2017, the figure skyrocketed to 26,182 cases of fraud. Over ₦8 billion and ₦12 billion were lost in the respective years. And the shocking part of the report was that internet banking fraud takes a lion share of 92.68% of these fraud cases. This has resulted to various litigation issues from bank customers. There seems to be a link between information technology and fraud cases in the Nigerian banking sector. Therefore, drastic measures must be taking by banks to curtail this trend and rebuild customer's confidence

#### **2.4 Images of the Use of Information Technology in Baking**

What follows are several images depicting the use of Information Technology in Banking





### 3. CONCLUSION

An advocacy for the use of forensic auditing for fraud investigations and preventions have been a public debate for a while now. Forensic auditing is the examination and evaluation of financial transactions of an individual or organizations with the aim of unraveling fraud or financial irregularities and present a report to the management in such a manner to be use in court. Forensic auditors look beyond the figures and have a suspicious mind that financial documents or transactions may not be what they purported to be. They are fraud examiners employed by corporate organizations to unravel fraudulent financial transactions and present the report in such a way that can be used in court of law.

Considering the gamut of literature reviewed, it is important for all stakeholders in the banking industry in Nigerian to come together to tackle this persistence challenge of fraud in the industry. Establishment of forensic audit unit in Nigerian banking sector for fraud prevention may be the direction to look. This unit will be saddled majorly with fraud prevention and detection through examination and investigation of daily financial transactions in soft and hard copies. Though, it may be capital intensive to set up, but the benefits outweigh the costs at long run. Forensic auditors are trained experts in data mining in search for preponderance of evidence, to help them locate hidden, obscured, or even deleted information. They combined all the relevant skills in accounting, auditing, investigation, law, and technology to perform their duties. They are trained investigator, they collect, analyze, and evaluate financial data in other to give evidence of fraud and financial manipulations using different software. These software can recover deleted data, files, e-mails from the system and customers' accounts. It can also perform Microsoft access recovery functions. The establishment of a forensic audit unit in Nigeria banks may go a long way to mitigate frauds in banks and also reduced the incessant litigation cases from customers in relation to fraud issues



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