EFFECT OF INFORMATION AND COMMUNICATION TECHNOLOGY ON PERFORMANCE OF DIAMOND BANK PLC IN ABUJA METROPOLIS

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Abstract

The study examined the effect of information and Communication Technology on the Performance of Diamond Bank Plc, in Abuja metropolis. The study adopted survey research design. The population of this study comprised of all the branches of Diamond Bank Plc in Abuja Metropolis. The Nigeria Business Directory (2018) records a total of nineteen (19) branches of Diamond Bank Plc in Abuja Metropolis. Also, the population of this study comprised of all the employees of Diamond bank in Abuja Metropolis, which by the report of 2018, was 839 and this was reduced using Taro Yamane to 271 as the sample size, out of which 30 were management staff. The statistical tools used include simple regression and simple percentages with a statistical package of SPSS, version 25.00. The study established a positive and significant relationship between ICT and performance (business growth) in Diamond Bank Plc but realised that mismanagement negatively affect the performance of Diamond Bank Plc in Abuja. The study also recommended that investment in ICT should be sustained and enhanced as it constitutes an important component in the overall strategy of banking operation. Adopting this strategy will make the bank to become more effective and competent in the current competitive and dynamic business environment. The Bank which recently merged with Access Bank PLC should ensure that they properly manage their resources since mismanagement has not only negatively affected their performance, but has also led them to seek the merger.

***Keywords**: Information and Communication Technology, Performance, ATM, Point of sales and Internet Banking.*

Introduction

The desire for efficiency and effectiveness in the running of banks as leading players and financial services providers in all countries of the world cannot be overemphasized. Prior to the advent of information and communication technology (ICT), the transaction of businesses, especially in the financial sector was difficult and stressful, hence, the dismal performance level of banks in Nigeria. However, Quereshi and Zalar (2008) have observed that many banks have shifted from the traditional arm chair banking during the past two decades to internet banking where customers can use self-service channels such as Automated Teller Machines (ATM), Point of Sale (POS) and internet to satisfy their financial needs. The main reason for this dramatic shift

has been its perceived usefulness in terms of ease of transaction, convenience, security and privacy provided by on-line banking. This period has been associated with high level of customers' focus on banking services, improvement in regulatory framework and performance growth. Binugo and Aregbeshola (2014) observed that recent advances in technological world which gave rise to the emergence of Information and Communication Technology (ICT) have led to remarkable changes in the way businesses are conducted in the contemporary era. Currently, banking operation in Nigeria is rapidly becoming IT based since the introduction of the Automated Teller Machine (ATM), Internet banking and Point of Sales (POS) to enhance the quality of service delivery and performance growth among banks. Laudonand Laudon, (1991), opined that managers of banks cannot overlook information technology due to the significant role it plays in modern-day organizations such as providing Automated Teller Machines (ATM), Internet banking and Point of Sale (POS) terminals being used by bank customers to enhance the operational efficiency to boost their growth potentials. The building of information technology in to banks' products and operational strategies has greatly enhanced the speed and quality of service delivery. This has also positioned banks to compete more effectively both in local and global markets. No invention has ever influenced the performance of business firms in all sectors of the economy as information technology has.

Automated Teller Machine (ATM) is a product of technological development designed to deliver quick and effective service as well as diversifying financial services such as cash deposits, withdrawals, funds transfer, and payments for utilities service, credit card bills, cheque book requests and other financial enquiries. ATM is also designed to provide important banking services such as cash withdrawals, deposits, and printing of mini statements and settlements of bills. Users of ATM facilities gain access to their funds through the use of personal identification number (PIN), and a plastic card that contains magnetic chip which confirms the identity of customers before authenticating their transactions. The use of information technology facilities like Point of Sale device is in line with the recent policy of the Central Bank of Nigeria (CBN) in promoting cashless transactions in the Nigerian economy. Similarly, the CBN has placed much emphasis in promoting the use of POS and other electronic payment devices (e-payment) to curb the excessive cost associated with cash management and handling during business transactions and other related activities.

The adoption of internet banking, especially by new generation banks necessitated the need to create a niche by financial service providers in Nigeria vide the provision and delivery of quality banking services. To buttress this, Williams, Ogege and Ideji (2014) observed that effective customer service in the banking sector driven by new technology is one of the most vital means of ensuring that customers come back to a particular bank in spite of the hurdles in the sector. Concurring to this view, Ukah (2015) observed that the Nigerian banking industry has become highly ICT-based and is reaping the benefits of a technological revolution as evidenced by its

application in most of its operations. With the rapid diffusion of the Internet, Banking in cyberspace is fast becoming an alternative channel for delivering banking services and products.

Over the years, Diamond Bank Plc has adopted information technology elements such as Automated teller machine (ATM) in all their branches, including Abuja. Introducing point of sale (POS) facilities for organizations alongside internet banking services have become vital for customers to conduct money transfer activities without recourse to the traditional banking halls. In spite of the huge resources committed in the acquisition of new technology tools like internet banking, ATMs, POS and other related facilities to improve operational efficiency and customer service delivery, Diamond Bank seems to be experiencing dismal growth in its overall performance. This low performance has also led to their recent merger with Access Bank. The main objective of this study is to examine the effect of information technology on the growth (performance) of Diamond Bank in Abuja Metropolis. The specific objectives of the study are to: examine the effect of Automated Teller Machines (ATM) on the performance of Diamond Bank in Abuja Metropolis; evaluate the effect of point of sale (POS) on the performance of Diamond Bank in Abuja Metropolis; assess the effect of internet banking on the performance of Diamond Bank in Abuja Metropolis; and examine the effect of mismanagement on the performance of Diamond Bank in Abuja Metropolis.

This study aimed at assessing the effect of information technology on the performance of Diamond Bank Plc in Abuja Metropolis. The study period is from 2011 to 2018, and the reason for choosing this period is to appraise the growth of Diamond bank after the recapitalization of Nigeria banks alongside the huge investment in information technology to enhance its operational efficiency.

It would be recalled that Diamond bank was rated among the top 25 commercial banks operating in Nigerian in terms of capitalisation and spread as evidenced during the last restructuring exercise of 2005 when the CBN directed all commercial banks to raise their capital base to a minimum of ₦25 billion. The study covered Automated teller machines (ATM), point of sale (POS) and internet banking as information technology elements. Performance is measured by business growth in terms of increase in the number of branches, increase in customers' base and increase in the number of employees.

The hypotheses are stated below:

H_{01}: Automated Teller Machine (ATM) has no significant relationship with the Performance of Diamond bank in Abuja Metropolis

H_{02}: Point of Sale (POS) has no significant relationship with the Performance of Diamond bank in Abuja Metropolis

H_{03}: Internet Banking has no significant relationship with the Performance of Diamond bank in Abuja Metropolis.

H_{04}: Mismanagement has no significant relationship with the Performance of Diamond bank in Abuja Metropolis.

Concept of Information Technology

Information technology refers to anything related to computing technology, such as networking, hardware, software, the Internet, or the people that work with these technologies (Kariuki, 2015).The World Bank (2003) opines that information technology is the set of activities which facilitate electronic means of processing, transmission and display of information. The United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP, 2001) described Information technology as technologies people use to share, distribute, gather information and to communicate, through computers and computer networks. In this study, ICT is viewed as set of tools that can be used to process, avail and access, information and communication services or products. The services and products may include hardware and software; Internet, telephones/mobile phones, telefax, type-writer, calculators, radios, televisions, hydraulic machines used in industries among others.

Bakkabulindi (2002) observes that information technology is of two major types namely; information technology for converting or processing data into information such as adding machines, calculators, typewriters and computers; and information technology for communication of data and or information from one place to another: These include telegraph, telephone, telefax and computer networks. These gadgets offer the possibility for an interactive approach. Interaction refers to the relation between the user and these gadgets. In this study, information technology further refers to the availability, accessibility and user-ability of these gadgets. Ssewanyana (2009) further describes Information Technology as a strategic tool that allows users to become more efficient and effective in the use of Automated Teller Machine, Point of Sales and internet banking.

Automated Teller Machine

ATM, as previously highlighted, is the abbreviation of Automated Teller Machine, and it is an electronic appliance that gives out or receives cash deposits from account holders. A smart card is used to initiate and complete a transaction with the machine. The smart card or simply put, ATM card as widely called, has electronic chip that identifies each customer with respect to corresponding accounts belonging to the customer (Odewale, 2008).

Point of Sales (POS)

The intention of earlier inventors of cash register was to create a system that will be used for recording cash transactions to prevent employee from tampering with the profit of the organization (Ritty, 1879). This device soon became a tool for financial transaction as it issues receipts functioning like sales as well as keeping the records and the reports generated from it. Improvements in technology over the years gave rise to what is today known as POS. Gilaninia, Fattahi and Mousavian (2011) defined POS as a device that is installed in the center of the sale of goods and services instead of paying cash by physical transportation of money. Through this, the transaction amount is deducted directly from customers' accounts electronically using an electronic card, while the card acceptor (seller) is paid.

Internet Banking

In the view of Gerrard and Cunningham (2003), internet Banking is the usage of Internet and Telecommunication networks to deliver banking services to customers. Similarly, Ongkasuwan and Tantichaltonon, (2002) described Internet Banking Services as banking practice that allows customers to access and perform financial transactions on their bank accounts from their web – enabled computer internet connectivity with bank Web sites any time they wish. Kim, et al. (2006) also defined Internet Banking as the process whereby the customer is able to access, control and use his or her account over the Internet. They described Internet Banking as the act of conducting financial intermediation on the internet.

Mismanagement

Policy makers often assert that mismanagement is at the heart of performance failure. This notion that is the bane for poor performance can be attributed to public officials is reflected in the concept of administrative accountability (Oliver 1991). The challenges associated with turning a failing organization around are also thought to be susceptible to managerial control. According to Ilirjan and Rudina (2008) mismanagement is a modern-day illness that managers face. All individuals face various difficulties in their journey. Inadequate management is a problem in itself. This becomes a greater problem when the manager begins to spend his time on inconsequential issues. In such cases, everybody can make wrong decisions that lead to a waste of resources.

Concept of Organizational Performance

Organizational performance is associated with the quantity of output, quality of output, timeliness of output, presence or attendance on the job, efficiency of the work completed and effectiveness of work completed (Mathis,et al. 2009). It is a standard by which someone does something such as a job or examination (Macmillan English Dictionary for Advanced Learners 2007).Organizational performance is the accomplishment of a given task measured against pre-set standards of accuracy, completeness, cost and speed (Business Dictionary 2010).

Performance is a function of the ability of an organization to gain and manage the resources in several different ways to develop competitive advantage (Iswatia, 2007). Similarly, Iswatia (2007) stipulates that there are two kinds of performance: financial performance and non-financial performance. While financial performance emphasizes on variables that relate directly to financial report, non-financial performance emphasizes on variables not related to financial issues. Iswatia also established that financial performance is a subjective measure of how well a firm can use assets from its primary mode of business and generate revenues. The term is also used as a general measure of a firm's overall financial health over a given period of time and can be used to compare similar firms across the same industry or to compare industries or sectors in aggression (Stewart, 2009). Company performance is very essential to management as it is an outcome which has been achieved by an individual or group of individuals in an organization related to its authority and responsibility in achieving the goal legally, not against the law, and conforming to the morale and ethics. Company's performance is evaluated in three dimensions. The first dimension is company's productivity, or processing inputs into outputs efficiently. The second is profitability dimension, or the level at which a company's earnings are compared with its costs. The third dimension is market premium, where the level of a company's market value exceeds its book value (Weinraub, 2004).

Empirical Studies

Kariuki (2015) determined the level of use of information technology and its relationship with organizational performance at Population Services (PS) Kenya. Study used descriptive survey research method. Primary data was collected using a semi-structured questionnaire. The population for this study comprised of the entire PS Kenya staff which was 438. The questionnaire was administered electronically for data collection, out of which 311 respondents responded to the study resulting in a response rate of 71 percent which was considered as a sufficient representation of the organization. The study findings revealed that majority of the respondents had various IT company devices at their disposal to enable them perform their duties. The study findings further recorded that there was a positive relationship between the level of IT use and organizational performance at Population Services Kenya. The study results indicated that IT use explains 82.4% of organizational performance at PS Kenya.

In a related study, Oyinkola (2016) examined the impact of information technology (IT) on banking operation in First Bank of Nigeria plc. Data used was sourced through primary data and the research instruments used questionnaires and personal interviews on staff and bank customers. Simple frequency percentage was adopted as the statistical and Hypothesis was analyzed using Chi-square. The findings showed that IT has greatly improved the growth and performance of Nigerian commercial banks and has also enhanced customer satisfaction. The study recommends government support to improve local IT firms to foster importation of IT equipment.

Similarly, an empirical study was conducted by Madueme (2010) on the impact of ICT on banking efficiency in Nigeria using a survey of 13 banks. The outcome of the study are based on Capital Adequacy, asset quality, management expenses & expertise, earnings quality and liquidity (CAMEL) rating and a transcendental logarithmic function of the banks. Findings revealed that the efficient values obtained through the CAMEL rating system were higher during post-adoption era than the pre-adoption period.

Macharia, Mike, Ondabu and Kepha (2015) examined the effects of information technology on Logistic firm's performance in Nairobi Kenya to realize its significant impact on their operations in order to guarantee their profitability and growth. The target population was logistic firms within Nairobi County. Data was collected from 10 firms in the logistic industry suppliers in Nairobi. A set of items, based on the research model, was developed, and aggregated into four scales for measuring the use of IT in the company, and three scales for measuring the company performance. The data was analyzed using SPSS and result presented in form of tables and charts. The respondent rate was 93%. On the demographic data, the researcher sought to investigate the age of respondent. 10% of the respondents were aged between 18 to 26 years and 27 to 35 years of age respectively; 20% of respondents were aged between the ages of 36 to 45. On the ownership of the firms, majority 70% followed by other firms 20%, foreign firms was 10% while government does not own any logistic firms. On the extent to the use of Information Technology, the findings reveals that over (50%) of the firms are not using IT in their departments and service delivery, indicating low level of IT usage among logistic firms in Nairobi County. This shows that the factors that are not covered amount only to 20.9%. It therefore, means that the four factors have a big role to play on the performance of logistic firms in Nairobi County. The ANOVA result for all variables indicates that there was a highly significant relationship between the variables at $F = 2.729$ and $P = 0.000$. This implies that there is a strong relationship between the four variables and the performance of logistic firms in Nairobi County.

Syrine (2013) investigates the performance of information technology (IT) investments on a sample of 15 Tunisian banks over the period 1998–2009. The research employs the Standard Stochastic Frontier Approach on panel data to generate estimates of cost efficiencies. The study is enhanced by a comparison between the results found using the Data Envelopment Analysis(DEA) method and the Stochastic Frontier Analysis (SFA) method to test the soundness of these approaches to efficiency measurement. The empirical findings suggest that the impact of IT investments on Tunisian banks' performance is positive. The analysis of the internal determinants of banks' efficiency levels shows that size and managerial capacity positively and significantly affect the Tunisian banks' cost efficiency, while the share of non-performing loans represents a source of inefficiency. Measuring the impact of various categories of IT investments

(hardware, software and IT services) on banks' cost efficiencies suggests that "the Productivity Paradox" does not affect all IT investments.

Yao and Usajoe (2004) studied the link between information technology (IT) investment and firm performance due to the effect of mediating and moderating variables. For example, in the banking industry, the IT-value added activity helps to effectively generate funds from the customer in the forms of deposits. Profits then are generated by using deposits as a source of investment funds. Traditional efficiency models, such as data envelopment analysis (DEA), can only measure the efficiency of one specific stage when a two-stage production process is present. Researchers develop an efficiency model that identifies the efficient frontier of a two-stage production process linked by intermediate measures. A set of firms in the banking industry is used to illustrate how the new model can be utilized to (i) characterize the indirect impact of IT on firm performance, (ii) identify the efficient frontier of two principal value-added stages related to IT investment and profit generation, and (iii) highlight those firms that can be further analyzed for best practice benchmarking.

Usujo (2008) identify the impact of using Information Technology (IT) on the financial performance of the industrial companies (Mining and Extraction). Questionnaire was used to collect the data for this study. The questionnaire was distributed to the following category of staff: Assessment Managers, Assistants, Heads of Departments, Administrative Assistant and Workers in Middle Management, the random sample were (176) respondents. The researchers extracted the financial performance indicators data from 2009 to 2012. Statistical Package of Social Sciences (SPSS) was used to analyze the data and findings showed a lot of inconsistencies between information technology variables and financial performance.

Binuyo and Aregbeshola (2015) assessed the impact of ICT on the performance of South African banking industry using bank annual data over the period 1990 –2012 published by Bank- scope World banking information source. Data analysis was carried out in a dynamic panel environment using the orthogonal transformation approach. The robustness of the results was affirmed by residual co-integration regression analysis using both Pedroni and Kao methods. The findings of the study indicated that the use of ICT increases return on capital employed as well as return on assets of the South African banking industry. The study discovers that more of the contribution to performance comes from information and communication technology cost efficiency compared to investment in information and communication technology.

Balogun (2016) examined customer's and employee's responses to technology innovation, and their effects on the performance of the Nigerian banks. Fifteen (20) major banks were selected for the research. Two null hypotheses based on sets of questionnaires distributed to selected banks' employees and customers were formulated to test whether there is no significant relationship between technology innovation and customer's satisfaction; and between

technological innovation and Nigerian banks employee's performance. Four hundred and fifty (450) questionnaires were distributed to customers to test the first hypothesis out of which 400 was collected which is 88.88% of the distributed questionnaires and Chi Square was used to test the hypothesis. Findings revealed that technological innovation influenced banks employee's performance, customer's satisfaction and improvement in banks profitability.

Bismark (2015) examined the impact of information technology on the financial performance of Asutifi Rural Bank in the Brong Ahafo Region. Perceptions of the management staff of the rural bank, branch managers, staff members and customers were collected using a survey method. In all 155people were sampled from Asutifi Rural Bank. Questionnaires were used to collect data randomly from the customers and staff of the Bank. Two types of questionnaires were prepared and distributed among staff and customers. Both semi-structured and 5-point likert scale questionnaire were developed. Data analysis was done using descriptive statistics approach and the one-samplet-test statistics. The findings established that information technology has a positive linear relationship with the financial performance of rural banks. The study concludes that information technology has a positive impact on the image, goodwill and growth of Asutifi rural bank.

Abubakar, Nasir and Haruna (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. This study 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. Result also found an inverse relationship between additional sustained investment in ICT and efficiency.

Saifullahi and Abubakar (2013) examined the impact of Information and Communication Technology (ICT)on banks performance in Nigeria using annual panel data set during the period 2001 to 2011. The data was analyzed using panel unit root, panel cointegration, Fully Modified Ordinary Least Square (FMOLS) and Generalized Method of Moments (GMM) which indicates a positive impact of ICT on banks performance in the country. Therefore, the study concludes that cautious application of ICT apparatus will continue to enhance commercial banks performance in the country unless otherwise disrupted by externalities. The implication of this finding exposes the potentiality of cashless economy in Nigeria for strengthening the efficacy of financial system. Consequent upon this, the Central Bank of Nigeria (CBN) is of the view that cashless policy is an initiative at the right direction since it will help in minimizing the cost of issuing currency in the fairly performing Nigerian economy.

Kabiru and Farouk (2012) investigated the impact of investment in information technology on the return on assets of selected banks in Nigeria for the period 2000-2010, using MIS surrogates as independent variables, comprising of software, hardware investment, and some ATMs, while the financial performance as a dependent variable is proxied by the return on assets. The study employed secondary data generated from annual reports and accounts of selected banks quoted in the Nigerian Stock Exchange (NSE). The data were analyzed using multivariate regression analysis; that is, the Statistical Package for Social Sciences (SPSS). It was found that MIS surrogates which are software, hardware investment and number of ATMs had a significant impact on financial performance of Nigeria banks as measured by return on assets (ROA) because t- statistics results are all significant at 1 percent.

Jegede (2014) investigated the effects of ATM on the performance of Nigerian banks. The study focused on the significant dimensions of ATM (automated teller machine), service quality and its effect on customer satisfaction with a bias against ATM producers. The study is motivated by the astronomical challenges confronting the proliferation of ATM infrastructure and attendant financial losses to banks which are often under-reported. Also, there are serious debates on the relevance of ATM technology as most countries in the world are moving away from the virus technology to the more secured chip cards free of credit and debit frauds. Questionnaire was used to collect the data from a convenience sample of 125 employees of five selected banks in Lagos State with interswitch network. Therefore, data collected through the questionnaire were analyzed statistically vide the use of the Software Package for Social Sciences (SPSS Version 20.0 for Student Version) and chi-square technique. The results indicate that less than the benefits, the deployment of ATM terminals have averagely improved the performance of Nigerian banks because of the alarming rate of ATM fraud. Similarly, ATM service quality is less correlated to security and privacy of users and providers. The conclusion therefore is that banks should strive to increase their security layers to subvert the tricks of web scammers, limit the amount which customers may be allowed to withdraw at a time and provide electronic alerts to customers' phone for all transactions carried out on their bank accounts through ATMs and the provisions of extra security layer that can prevent third party to make use of someone else's ATM card for unauthorized withdrawals electronically.

Michael (2008) determines the effect of Automated Teller Machines usage on operational performance of commercial banks in Nakuru County, Kenya. The study was guided by the research objective: to establish the effect of automated teller machines (ATMs) usage on operational performance of commercial banks in Nakuru County, Kenya. The study employed the following theories namely: Diffusion of Innovation and The Theory of Reasoned Action. The study adopted a correlational-cross-sectional research design. The study population comprised of 56 employees of the 28 commercial banks. There are 31 commercial bank branches in Nakuru

County, Kenya comprising of Kenya Commercial Bank, Co-operative Bank and Equity bank having 3, 2 and 3 branches respectively which makes a total of 31 commercial banks out of which the researcher, through a simple random sampling, chose 28. Data was collected using structured questionnaires. A pilot study was conducted in Eldoret Town, Uashin Gishu County to determine validity of the research instruments where Cronbach's alpha coefficient was employed. For the purpose of determining the effect of ATMs usage on operational performance, correlation and regression analysis were carried out. The study established that ATM usage has a positive significant relationship with operational performance.

Technology Acceptance Model (TAM)

Technology acceptance model (TAM) was originally proposed by Davies in 1986. This model was designed to forecast the user's acceptance of information technology and usage in an organizational setting. Cracknell (2004) posits that firms are adopting technology to cope with the dynamics of the external environment. This model has been tailored in a manner that can accommodate changes for improved costs reduction and efficiency. Technology Acceptance Model deals with perceptions as opposed to real usage. The model also suggests that users, the key factors that influence their decision on how, where and when they will use it (Davis, 1989). The factors to consider are: Perceived usefulness (PU). According to Davis, it is the degree to which a person believes that using a particular system will lead to improved performance (Britton and Mc Gonegal, 2007). Perceived Ease-of-Use (PEOU) is explained as the degree to which a person believes that using a particular system would results to improved productivity. The TAM was proposed by Davis et al. (1989).This model expounds on the attitude behind the objective to use technology or a service. This theory is relevant to this study since it explains user's acceptance of information technology and its usage in an organizational context. Acceptance is the first process in technology use and has a bipolar or dual implication. First of all acceptance is a precursor to adoption and hence this theory complements the preceding theories. Secondly, acceptance dictates the attitude and perception of the users which eventually affects efficiency of use and hence performance. Strategic adoption as well as operational efficiency on productivity of systems is a function of acceptance of the technology. It is thus plausible to conclude that without acceptance, the rest of the theories would be redundant and invalid. Though acceptance is an initial phase, it is also an attitude shaping facet that influences adoption and effectiveness of use.

Methodology

The study adopted survey research design. This is because the information or data needed for this study requires the use of structured questionnaire administered on the respondents who are the staff of Diamond Bank Plc in Abuja Metropolis. Also, the reason for using survey research design is because the method is appropriate in describing the characteristics of a large

population, provides broad capability, which ensures a more accurate sample to gather target results in which to draw conclusions and make important decisions. The other reason is that, the survey research design allows for anonymity of surveys which allows respondents to give candid and valid answers which anonymously provide an avenue for more honest and unambiguous responses than other types of research methods, especially if it is clearly stated that survey answers will remain completely confidential. The population of this study comprises of all the branches of Diamond Bank Plc in Abuja Metropolis. Based on the report in the Nigeria Business Directory (2018), there are nineteen (19) branches of Diamond Bank in Abuja Metropolis. Also, the population of this study is all the employees of Diamond Bank Plc in Abuja Metropolis. Diamond Bank report, 2018 showed that there are 839 employees of Diamond Bank in Abuja Metropolis.

Thus, the population of employees of Diamond Bank in Abuja Metropolis in this study is 839 and this was reduced using Taro Yamane (1967) formula as stated below**:**

$n=N/1+N(e)^2$
Where N is the population size
e is the margin error (assume 5%)
1= constant=
e=0.05
$n = 839/1+839(0.05)^2$
n=839/1+839(0.0025)
n = 839/1+2.0975
n = 839/3.0975
n= 271

Therefore, the sample size of the study is 271 employees of Diamond Bank Plc in Abuja Metropolis. Out of this number (271), 30 were management staff who responded to questionnaire on performance.

The method of data collection used in this study is questionnaire which was administered on the respondents which involves the use of primary source of data. The reason for using primary sources of data is that, it is crucial in presenting a study of this nature and other research data that is based on original subject area of research. The reasons for employing the use of questionnaire are as follows: it is practical, involving large amount of information that is collected from a large number of respondents within a short period of time and in a relatively cost effective way. The questionnaire can be administered by the researcher or any other persons with limited effort to its validity and reliability and the results of the questionnaires can usually be quickly and easily quantified by either a researcher or through the use of a software package.

A designed questionnaire was used in the cause of this research work to obtain all the vital data on information technology and performance of Diamond Bank Plc in Abuja Metropolis. The instruments elicit opinions and views from respondents regarding the variables and the respondents were afforded the opportunity to supply more considered opinions and more adequate information. It is designed in a five (5) point Likert scale questionnaire to collect information from the respondents regarding the variables. The questionnaire is divided into two sections. While section A seeks information regarding respondent's personal details and general knowledge on the subject of the study, section B provides data on information technology as well as questions on performance.

The questionnaires that were administered on the respondents used simple random sampling method where all the respondents had equal chance of being selected.

The questionnaire was tested to ascertain the reliability of the questions and if they were properly answered. It was observed that the instruments used are unique and perfect. The reliability of the questionnaire is not more than the Alpha values 0.6. The copies of the questionnaires were tested to ensure that the questions were answered properly and the table below indicates the reliability value of the variables.

Table 1: Reliability test

Variables	**Number of items**	**Cronbach's Alpha**
Business Growth	3	0.87
Automated Teller Machine	3	0.89
Point of Sale	3	0.78
Internet Banking	3	0.84
Mismanagement	3	0.79

Source: researcher's computation (2019)

Therefore, the Alpha values are reliable.

The statistical tools used are simple regression, and simple percentages. The simple regression was used to determine whether there is an effect in the relationship between the variables.

The software statistical package of SPSS was used in analysing data in this study. The reason for employing SPSS statistical software package is because it has the capacity to indicate how a model fits in to the work and also shows various tests such as t-test, f-test, and the probability of either accepting or rejecting based on the condition of 5% level of significant.

The sign of the relationship between information technology and performance is tested using simple regression. The simple regression is a widely used method of regression analysis. This is expressed in this study as**:**

$Y = \alpha + ß_I X$ ----------1

Where y = dependent variable, α = intercept, $ß_I$ is coefficient and x is the independent variable. However, the above model is expressed as:

$BG = \alpha + ß_I ATM + ß_I POS + ß_I ILE + ß_I MIG + \mu$ …...equation 2

Where:

BG = Business Growth (number of customer base, number of branches per year and number of employees) of Diamond Bank within Abuja Metropolis

ß = Coefficient
α = Intercept
μ = Error terms
ATM = Automated Teller Machines
POS= Point on Sales
ILE = Internet Banking
MIG = Mismanagement

Data Analysis and Discussion

Table 2: Automated Teller Machine (ATM)

Items	**Strongly Agree**	**Agree**	**Undecided**	**Disagree**	**Strongly Disagree**
Diamond Bank branches in Abuja have effective ATM that enables workers/customers to access their funds or use the service	46(21.69)	78(36.79)	12(5.66)	23(10.85)	53(25.00)
Diamond Bank branches in Abuja have effective or sound ATM machines that provide hitch-free service and user-friendly.	67(31.60)	87(41.38)	10(4.72)	10(4.72)	38(17.92)
Diamond Bank branches in Abuja have effective ATMs that are being monitored by workers to render effective and efficient service to customers.	89(41.98)	88(41.51)	7(3.30)	20(9.43)	8(3.77)

Source: Survey, 2019

Table 2 indicates the respondent percentage on each question relating toATM of Diamond Bank branches in Abuja. It shows that the majority of the respondents agreed and strongly disagreed on various questions. The percentage is in bracket while the number of respondents is outside the bracket.

Table 3: Point of Sales (POS)

Items	**Strongly Agree**	**Agree**	**Undecided**	**Disagree**	**Strongly Disagree**
Diamond Bank branches in Abuja provided sufficient point of sale in various business outlets for use by customers and staff.	77(36.32)	111(52.36)	6(2.83)	13(6.13)	5(2.36)
Diamond Bank point of sale in Abuja are easily accessible by customers and workers	98(46.22)	71(33.49)	7(3.30)	11(5.19)	25(11.79)
Diamond Bank point of sale are effective and user-friendly at different locations	99(46.70)	74(34.91)	12(5.66)	10(4.72)	17(8.02)

Source: Survey, 2019

Table 3 indicates the respondent's percentage on each question relating toPOS of Diamond Bank branches in Abuja. It shows that majority of the respondents agreed and strongly disagreed on various questions. The percentage is in bracket while the number of respondents is outside the bracket.

Table 4: Internet Banking

Items	**Strongly Agree**	**Agree**	**Undecided**	**Disagree**	**Strongly Disagree**
Diamond Bank internet services in Abuja is accessible to workers/customers	112(52.83)	55(25.94)	20(9.43)	7(3.30)	18(8.49)
There is frequent availability of internet services in Diamond Bank branches in Abuja metropolis	110(51.89)	45(21.22)	44(20.75)	10(4.72)	3(1.42)
Diamond Bank internet service in Abuja is effective and user-friendly	111(52.35)	45(21.22)	21(9.91)	16(7.54)	19(8.96)

Source: Survey, 2019

Table 4 indicates the respondent's percentage on each question relating toInternet banking of Diamond Bank Plc branches in Abuja. It shows that majority of the respondents agreed and

strongly disagreed on various questions. The percentage is in bracket while the number of respondents is outside the bracket.

Table 5: Mismanagement

Items	**Strongly Agree**	**Agree**	**Undecided**	**Disagree**	**Strongly Disagree**
Diamond Bank mismanaged its resources which lowered staff morale	120(44.28)	112(41.32)	3(1.11)	21(7.75)	15(5.54)
Diamond Bank mismanaged its resources which reduced the productivity of workers	112(41.32)	123(45.39)	4(1.47)	12(4.43)	20(7.38)
Diamond Bank mismanaged its resources which resulted in decreased profit	121(44.65)	111(40.95)	6(2.21)	10(3.69)	23(8.49)

Source: Survey, 2019

Table 5 indicates the respondent's percentage on each question relating to mismanagement in Diamond Bank Plc branches in Abuja. It shows that majority of the respondents agreed and strongly disagreed on various questions relating to mismanagement. The percentage is in bracket while the number of respondents is outside the bracket.

Table 6: Business Growth

Items	**Strongly Agree**	**Agree**	**Undecided**	**Disagree**	**Strongly Disagree**
Diamond Bank Plc in Abuja has witnessed a significant increase in the number of customers	13(43.33)	10(33.33)	2(6.67)	4(13.33)	1(3.33)
Diamond Bank Plc in Abuja has witnessed great increase in the number of branches during the past 8 years	10(33.33)	10(33.33)	2(6.67)	6(20.00)	2(6.67)
Diamond Bank Plc in Abuja has recorded great increase in the number of employees during the last 8 years	9(30.00)	12(40.00)	4(13.33)	7(23.33)	5(0.67)

Source: survey, 2019

Table 6 indicates the respondent's percentage on each question relating tobusiness growth of Diamond Bank Plc branches in Abuja. It shows that the majority of the respondents agreed and strongly disagreed on various questions. The percentage is in bracket while the number of respondents is outside the bracket.

Table 7: Descriptive Statistics of variables used in the Study

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
ATM	212	1.50	4.40	3.1261	.81068
POS	212	1.40	4.30	3.4137	.85913
ILE	212	1.00	4.10	3.1158	.82520
MIG	212	1.10	4.11	3.5151	.81120
BG	30	1.10	4.70	3.2550	.81947
Valid N (listwise)	30				

Source: SPSS, 25 Version, 2019

The table 7 revealed the mean and standard deviation. The mean value of ATMis 3.12, POS is 3.41, and the mean value of ILE is 3.11 while the mean value of Business Growth(BG) is 3.25. Also, the mean of mismanagement is 3.51. The table also recorded standard deviation of the variables asATM is 0.81, POS is 0.85, ILE is 0.82, BG is 0.81 and MIG is 0.819.

Table 8: Regression Test

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.088[a]	.558	-.521	.15767

a. Predictors: (Constant), log_ATM, ,log_ ILE,log_POS

ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	.065	2	.022	232.874	.005[b]
	Residual	8.303	210	.025		
	Total	8.368	212			

a. Dependent Variable: BG

b. Predictors: (Constant), log_ATM, ,log_ ILE,log_POS Log MIG

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	T	Sig.
1	(Constant)	.389	.044		8.756	.000
	Log_ATM	.031	.054	.031	.575	.006

	Log_ILE	.042	.059	.039	.711	.000
	Log_POS	.081	.058	.076	1.398	.343
	Log_MIG	-.088	.051	.0881	-2.311	.061

a. Dependent Variable: BG

Source: econometric output, 2019

Decision Rule: 5% level of significance

The Fisher-statistics (F) is 232.874 with an associated P statistic value of 0.000 which suggested that the model is a good fit. The coefficient of automated teller machine (ATM) is positive and significant in enhancing performance (business growth) in Diamond Bank Plc in Abuja Metropolis. The BG= .38+0.03log_ATM which indicates that automated teller machine will increase by 3% for every 1% increase in performance (business growth) in Diamond Bank Plc in Abuja Metropolis. The p-value of 0.006 is less than the t-Statistic value of 0.575 and the standard error value of 0.05 is less than the t-statistic value which implies that there is positive and significant relationship between automated teller machine and performance (business growth) in Diamond Bank Plc in Abuja Metropolis.

The coefficient of internet banking (ILE) is positive and significant in enhancing performance (business growth) in Diamond Bank Plc in Abuja Metropolis. The BG = .383+0.04log_ILE which indicates that internet banking will increase by 4% for every 1% increase in performance (business growth) in Diamond Bank Plc in Abuja Metropolis. The p-value of 0.00 is less than the t-Statistic value of 0.711 and the standard error value of 0.059 is less than the t-statistic value which implies that there is positive and significant relationship between internet banking and performance (business growth) in Diamond Bank Plc in Abuja Metropolis.

The coefficient of point of sales (POS) is negative and insignificant in enhancing performance (business growth) in Diamond Bank Plc in Abuja Metropolis. The BG= .383-0.08log_MIG which indicates that performance will decrease by 8% for every 1% increase in mismanagement in Diamond Bank Plc in Abuja Metropolis. The p-value of 0.34 is less than the t-Statistic value of 1.398 and the standard error value of 0.058 is less than the t-statistic value which implies that there is negative and insignificant relationship between point of sales and performance (business growth) in Diamond Bank Plc in Abuja Metropolis.

The coefficient of mismanagement (MIG) is negative and insignificant in enhancing performance (business growth) in Diamond Bank Plc in Abuja Metropolis. The BG= .383-0.08log_POS which indicates that point of sales will decrease by 8% for every 1% increase in performance (business growth) in Diamond Bank Plc in Abuja Metropolis. The p-value of 0.06 is more than the t-Statistic value of (2.311) and the standard error value of 0.051 is more than the t-

statistic value which implies that there is negative and insignificant relationship between mismanagement and performance (business growth) in Diamond Bank Plc in Abuja Metropolis.

The coefficient of determination (r^2) of 0.55 indicates that about 55% variation in performance (business growth) in Diamond Bank Plc in Abuja Metropolis can be explained by automated teller machine, internet banking and point on sales. The remaining 45% can be explained by other related factors not noted in the regression model. Thus, the finding is that there is positive and significant relationship between ICT and performance (business growth) in Diamond Bank Plc in Abuja Metropolis.

Discussion of Findings

The results of the analysis indicates that there is significant relationship between information and communication technology and performance (business growth) in Diamond Bank Plc in Abuja Metropolis. This implies that information and communication technology (ATM, POS and internet banking) contribute significantly to performance (business growth) in Diamond Bank Plc in Abuja Metropolis. The study is in line with the findings of Kariuki (2015) and Macharia, Mike, Ondabu and Keoha (2015) who found out that there is statistically significant relationship between information and communication technology and performance. The study is also not in tandem with the findings of Syrine (2013) and Balogun (2016) who found insignificant relationship between information and communication technology and performance.

The study is also in tandem with technology acceptance model (TAM) which states that the actual use of a technology is a function of the motivations to use such a system and its features and capabilities. However, when a user assumed the device such as POS has features that are needed and the staff are adequately motivated to use the facility, the customers are likely to be willing to adopt the system. Further review of the above model by Davis indicates that the actual usage of technology is entirely dependent upon the attitude towards its use which in turn depends on perceived usefulness and perceived ease of use (Davis, 1986).

Conclusions and Recommendations:

There is a significant relationship between automated teller machine and performance (business growth) in Diamond Bank Plc in Abuja Metropolis. This implies that automated teller machine contribute to performance (business growth) in Diamond Bank Plc in Abuja Metropolis. There is significant relationship between internet banking and performance (business growth) in Diamond Bank Plc in Abuja Metropolis. This implies that internet banking contribute significantly to performance (business growth) in Diamond Bank Plc in Abuja Metropolis. There is insignificant relationship between point-of- sale and performance (business growth) in Diamond Bank Plc in Abuja Metropolis. This implies that POS does not contribute significantly to performance (business growth) in Diamond Bank Plc in Abuja Metropolis. The finding also showed that mismanagement affected negatively the performance of Diamond Bank Plc in Abuja Metropolis

which implies that mismanagement of resources affect the performance of Diamond Bank Plc in Abuja. The performance of failure of diamond bank is a result of mismanagement of its resources which prompted them to emerge with Assess Bank Plc.

The study thus made the following recommendations:

That Diamond Bank Plc which has just merged with Access Bank should continue to invest heavily on ATM by making it more accessible, user-friendly. It should also intensify the use of internet banking facilities, allocate more substantial number of POS to various firms and properly manage their resources since poor resource management negatively affect growth and performance of the bank.

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