

INFORMATION AND COMMUNICATION TECHNOLOGY TOOLS AND PERFORMANCE OF ZENITH BANK PLC.

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ABSTRACT

This study impacts of adoption of information and communication technology tools on the performance of Zenith Bank Plc. observed that most DMBs in developing economies are still facing challenges in adopting appropriate and sophisticated ICT tools in their operations and services. Thus, it examined the effect of ICT on organisational performance. The study had a population of 7,544 employees in the six geopolitical zones. The Yamane's simplified formula for sample size determination was employed to arrive at an adjusted sample size of 380. Thus, copies of questionnaire were administered on the respondents using the stratified, purposive and random sampling techniques. 63.95% of the distributed copies of questionnaire were completed and returned. The data gathered were analyzed using the simple percentage (%) while the hypotheses were tested using ANOVA and Multiple Regression techniques via the Statistical Package for Social Sciences (SPSS) version 22. The study found that the adoption and application of Information and Communications Technology tools significantly affected the quality of service delivery and customer retention at Zenith Bank Plc. during the period (2015-2024) under study. Thus, it was concluded that the adoption of ICT has significantly impacted on the performance of Zenith Bank Plc. Thus, the study recommended that contemporary organisations, especially those in highly competitive industries like the deposit money bank in Nigeria should deliberately, consciously, diligently adopt and apply the appropriate ICT tools to enable them remain competitive, so as to continue to grow and expand.

Keywords: Customer, Organisation, Performance, Service, Technology,

INTRODUCTION

Our contemporary society is going through a lot of rapid changes and transformations because of developments and advancements of so many variables or factors in our environments. Some of these transformations are natural while many others are man-made. The most dynamic factor or variable is the technological. These changes are most often very swift and they have affected the activities and performances of most entities including individuals, groups, organisations etc. in the different sectors and industries of all societies including developed or developing ones.

The developments in the technological variable with a major component as Information and Communication Technology (ICT) tools or Information Technology (IT) have become within a short time one of the basic building blocks of a modern society. Information and Communication Technology tools in its simplest form is technology that supports activities such as gathering, processing, storing and presenting data. Many countries now regard understanding ICT tools and mastering its basic concepts as part of the core of advancements and sophistication. Consequently, various governments including the Nigerian governments at the Federal, State and even Local levels have established fully-fledged Ministries for Communication and Technology as

well as related agencies in order to develop and keep pace with the changes in the sector and as advanced by UNESCO and other related bodies and organisations.

ICT tools as major components of the technological variable is being integrated in institutions organisations including commercial banks all over the world to make sure that citizens of the numerous countries that adopt it meet global technological criteria. The knowledge and communication breakthroughs that the world can achieve using ICT tools are so numerous that commercial banks like many other organisations are striving to invest in related tools, techniques and platforms so as to be in tune in happenings and remain competitive and expand.

The importance of ICT tools to contemporary banks cannot be overemphasized. The significance to the different stakeholders including the banks, the customers, the employees etc. cannot be downplayed. Countries, on their parts in an attempt to help raise citizens who are ready to face the challenges of the 21st century where media, manufacturing industries, healthcare, tourism and most importantly commerce have become increasingly technology-oriented (Rabah, 2015).

ICT tools has provided societies, organisations and individuals with a vast array of new communication capabilities, which is almost a complete departure from the old ways of doing things. Individuals, institutions and organisations can now communicate in real-time with others at different locations using technologies such as instant messaging, voice over IP (VoIP) and video-conferencing. Social networking websites like Facebook, Twitter, Tiktok, Instagram, amongst others allow users from all over the world to remain in contact and communicate on a regular basis. This had not been the situation before where people had to write and send mails that would take days and weeks and even months.

Modern ICT tools has created a “global village,” such that people and organisations can communicate, interact and transact with each or one another across the world as if they were living next door. This situation has significantly improved and made easy the way of doing

business. It is for emphasis that this new development is referred to the combination of manufacturing and services industries that capture, transmit and display data and information electronically has affected the way business activities are being carried out (OECD 2012; SAITIS 2003).

Organisations in different sectors and industries like the commercial or Deposit Money Banks (DMBs) in different countries of the globe, whether developed or developing have adopted, adjusted and adapted different ICT tools factors including hard and software in order to remain competitive, survive and expand by improving in their performances in different areas. The organisations in this highly competitive industry in Nigeria and in other countries of the world have adopted related ICT tools, mediums or platforms such as the Points of Sales (POS), Mobile Banking, Automated Teller Machine (ATM), Online Banking and Bankers Automated Clearing Services in order to enhance their performances with respect to quality-of-service delivery, new products development, and customer retention.

Almost all business performances and activities across all sectors and industries including budgeting, accounting, sales, marketing, hiring of employees, customer services manufacturing, assembling, calculating, data processing, data transmission, duplicating, text processing, document reproduction, document transmission, record keeping and record retrieval, amongst several others have been significantly affected by the recent improvement in ICT tools related variables including hard and software. Business activities in the banking sector that are service related are the most affected because their outputs (products) are not physical but intangible.

Despite the adoption of the ICT tools to improve banking operations through the use of the different relevant platforms, hard and software, Nigerian Deposit Money Banks (DMBs) such as Zenith Bank Plc. are still facing the challenges of continually modernising or updating their operations so as to increase performances (Peace, et al 2018). The most significant shortcoming in the banking industry today is a wide spread failure on the part of senior management to grasp

with the improvement of technology and incorporate it into their strategic plans (Roger, 2016). The recent naira redesigned policy of the Federal Government exposed their inadequacies as online banks were taking over the businesses.

The various deposit money banks (DMBs) in developing economies like Nigeria are grappling with the challenges of keeping pace with continuous improvement in the different ICT tools hard and software. They are also faced with the dearth of relevant supporting public infrastructures, insufficient funds and personnel lacking contemporary and advanced banking related ICT skills. The Nigerian society or environment is dominated with outdated and also insufficient supporting public infrastructure and policies.

These organisations like many others in developing economies are lagging behind their peers and contemporaries in advanced economies in the adoption and deployment of these facilities that should make them competitive globally. They lack the wherewithal including the drive, the passion and the resources to acquire or possess and deploy sophisticated ICT tools, platforms and devices such as the Points of Sales (POS), Mobile Banking, Automated Teller Machine (ATM), and Online Banking facilities that will not only enhance competitiveness with their contemporaries in advanced economies, but also enhance their performances with respect to quality of service delivery, new products development, and customer retention. They still possess and deploy outdated or obsolete versions of these ICT hard and software components in comparison to their contemporaries. They are concerned with the short run costs instead of focusing on the long run positive effects on their performances.

Furthermore, instances when they decide to adopt and deploy these items, they do so at very slow pace. These reservations and additional cost worries have affected the rate and pace at which they adopt these technologies. In most cases, the regulatory bodies in the country may have to force these organisations to adopt the simplest of these technologies. The Nigerian banking sector, just like many others in the developing economies are still dominated with untimely and poor quality

service delivery, poor efforts at customer attraction and retention due to the lack of advanced of sophisticated ICT tools, devices, platforms and relevant devices such as the Points of Sales (POS), Mobile Banking, Automated Teller Machine (ATM), and Online Banking that will not only enhance competitiveness. Consequent upon the statement of problem, the following research questions were drawn:

- i. To what extent has the adoption and application of ICT tools improved service delivery of Zenith Bank Plc.?
- ii. To what degree has the adoption and application of ICT tools impacted customer retention of Zenith Bank Plc.?

LITERATURE REVIEW AND THEORETICAL FRAMEWORK

Concept of Information and Communication Technology (ICT)

Information Communication Technology (ICT), which is a collection of three concepts as a common concept that refers to the technologies employed for gathering, storing, processing and communicating information in various formats (The Library and Information Science Academy, 2022). It is a combination of computer programming and communication technology for collecting, processing, storing and disseminating Information. ICT tools is a synergy between computers and communication devices and forms an important part of the modern world (Rogers, 2016).

Information and Communication Technology tools first appeared in the mid-1980s and was defined as all kinds of electronic systems used for broadcasting telecommunications and mediated communications (The Library and Information Science Network, 2014). Information and Communication Technology tools are technologies that provide access to information through telecommunication and that it is similar to Information Technology (IT), but focuses primarily on communication technologies such as the Internet, wireless networks, cell phones, and other communication media (The Organisation

for Economic Cooperation and Development, 2012).

Quiet specifically, ICT simply refers to the gathering, storing, manipulating and transferring information (Peace, et al 2018). It is the automation of the process, controls and information production using computers, telecommunication, software and ancillary equipment such as Automated Teller Machine and Debit Cards (Peace, et al 2018). ICT plays an important role in the new millennium businesses since its adoption and usage in the different activities generates a higher level of process innovation (Quinn et al, 2019). Information and Communication Technology tools is in recent times the highway on which the success of every entity including organisations, societies and nations relies and cruises (Wiredu et al., 2020).

ICT Banking adoption is a complex and multifaceted process that includes the diligent consideration of customers' personal, social, psychological, utilitarian and behavioural aspects (Yousafzai, 2012). For emphasis, four related components of ICT including the Points of Sales (POS), Mobile Banking, Automated Teller Machine (ATM), and Online Banking have been purposively chosen to examine the extent of their combined and separate impacts on each of quality of service delivery, and customer retention as performance indicators of the case study.

Concepts of Organisational Performance

There is no common ground or agreement on the definitions, dimensions and measurements of organisational performance despite its importance (Taouab et al 2019), but a few have been adopted for this study. Organisational performance is the outcome or result of the business' activity in relation to its expected target (Ojobi et al, 2020). It is also perceived as the evaluation of the organisation's progress processes, services and outcomes compared to its stated goals and objectives in order to achieve sustainability by continuous development (Al-Hmouze, 2016).

This variable is the analysis of an organisation's performance in relation to goals and objectives (Aisha & Abdullahi, 2024; Lawal & Abdullahi, 2024). The source also disclosed that how well an

organisation has performed should be in line with its goals and objectives. Business or organisational performance is the strategic outcomes that organisations use to realize its goals, success or not (Sefiani et al, 2013). A seemingly obsolete but still useful definition by the pair of Georgopoulos and Tannenbaum (1957) described it as the extent to which a business fulfils its objectives.

Performance index requires a relationship between inputs, process, outputs and outcomes, and should be conducted with the objective that the resources are being managed rightly. Thus, for performance to be easily measured there must be standards for measurements especially by way of measurable objectives, visions, and missions (Nnajiofor et al., 2024). Thus, in line with that business performance was defined as the set of financial and non-financial variables that reveal the extent of the achievement of the business organisation's objectives and results (Lebens et al 2006). That simply meant that business organisations can have financial and non financial objectives, missions or standards for measuring or assessing their performances. Thus, for the purpose of this study two non financial performance standards or variables including quality of service delivery and customer retention were adopted especially because of the lack of access to relevant information especially in developing economies like Nigeria and in line the submission by Richard et al (2009).

The theoretical base

This study that examined the impacts of adoption of ICT tools on the Performance of Zenith Bank Plc. was hinged on two theories including the Technology Acceptance Theory (TAT) and the Resource-based view Theory (RBV). Davis, et al (1989) proposed the Technology Acceptance Theory (TAT) to explain the conceptual model of users' intention or acceptance degree towards information system or new technology. The TAT is hinged on the foundations of perceived usefulness and perceived ease of use. Perceived usefulness refers to the individual's belief to improve the degree of job performance through the use of a new particular technology and information system.

The resource-based view (RBV) posits that organisations compete on the basis of “unique” resources that are considered to be valuable, rare, difficult to either imitate or to be substituted by other resources. The theory originated from the area of strategic management research and widely attracts attention as a suitable theory to examine the value delivered by ICT resources (Melville et al 2014). The RBV theory rationalizes a business’ superior or competitive performance to its owned or possessed resources and capabilities. The view argues that sustained competitive advantage, survival, growth and expansion are hinged partly on the kind, type or quality and quantity of resources (including ICT) at the disposal of, or possessed by that organisation like Zenith Bank Plc.

Empirical review of related studies

Thuy, (2021) conducted a related studied on Information and Communication Technology tools and bank performance at Vietnam by gathering data from 20 DMBs from 2007-2019 period using copies of questionnaire and interviews as well as PLS-SEM as tool for data analysis and found that the adoption of ICT tools impacted on the ratio of equity to total assets and the ratio of deposits to loans by the banks. Del Gaudio et al (2021), they investigated the effect of ICT on the profits and risk of financial distress of the European Union banking industry over the period of 10 years (1995-2015) and discovered that ICT tools exerted positive role in improving different performance measures.

Ldama et al (2021) studied the relationship between ICT tools and performance of Deposit Money Bank in Nigeria by administrating copies of questionnaire on employees of First Bank Plc. and Unity Bank. The study identified some human, operational, and technical challenges confront the implementation of ICT in organisation. The result showed significant relationship between variables and the finding revealed that ICT infrastructures including digital devices and internet facility were regularly maintained in the banks as well as web portal network for e-filling of customer.

Agu et al (2020) used panel data of 35 African banks during 2013-2015 period using generalized

method of moment (GMM) method, to investigate the impact of ICT tools on bank performance. The result revealed that ICT is negatively associated with bank performance except for ATMs per 100,000 adults and ATM per 1,000km², which had positive impact on ROE and NIM. The findings suggested that ICT largely affects bank performance negatively in the short run, but very beneficial to improving bank performance in the long run.

Amaduche, et al (2020) in a similar study examined the impact of electronic banking on the operations and performance of DMBs in Nigeria using FBN, UBA and GTB as the case studies. Copies of questionnaire were administered and the Pearson correlation statistical technique via the SPSS was adopted for data analysis. The results indicated the imperativeness of e-banking tools to the different DMBs’ operations and performance and that they present significant prospects and opportunities to the organisations’ operations. Wiredu, et al (2020) did a related study on impact of ICT tools on Rural Banks Management in Ghana by using on Atiwa-Rural Bank Limited. Using SPSS and Microsoft Excel statistical techniques results showed that the case study lacked the desired technologies to support its operations but also had the advantages of limitation of customers’ waiting time, fast business with customers, attraction of a large customer base, etc. resulting in increase of revenue.

Peace, et al (2018) examined the impact of ICT on banks performance in Nigeria between the periods 2006 to 2015. The log-linear regression model was used to test the impact of various forms of ICT on the banks return on equity (ROE). The results showed that the adoption of various forms of ICT tools had greatly influenced the quality of banking operations, performance and has specifically increased banks return on equity (RoE).

After the review of previous related studies, especially those by Thuy, (2021); Del Gaudio et al (2021); Ldama et al (2021); Agu et al (2020); Amaduche, et al (2020); Wiredu, et al (2020); Peace, et al (2018); and some others, this study discovered that rarely any earlier study on impact of ICT tools on organisational performance was

conducted using Zenith Bank Plc. in the last ten (10) years from 2012 to 2021. Furthermore, the study discovered that rarely any previous study was conducted at the adopted locations focusing on examining the combined and separate impacts of very common related ICT tools identified by Oluwagbemi, et al (2011) including the Point of Sales (POS), Mobile Banking (MB), Automated Teller Machine (ATM), and Online Banking (OB) on each of such non financial performance components as service delivery (SD) and customer retention (CR) identified by Richard, et al (2019). Consequently, this study chose to fill this study gap in order to contribute to knowledge.

METHODOLOGY

This study adopted a combination of research designs including the ex-post facto, descriptive, the survey, and the case study. Using the stratified, purposive, and random sampling techniques, copies of questionnaire were administered on a sample size of 380 sample size arrived at using the Yamane's technique on a population of 7,544 employees of the case study. The collated data were then analyzed using descriptive and inferential statistical techniques including simple percentage (%), Multiple Regression, and ANOVA techniques. Furthermore, the multiple regression models for Zenith Bank Plc. in the study was specified as follows:

$$S_{DL} = \alpha + \beta_1 (P_{OS}) + \beta_2 (M_{BK}) + \beta_3 (A_{TM}) + \beta_4 (O_{NL}) + \epsilon I \dots\dots\dots 1$$

$$C_{RT} = \alpha + \beta_1 (P_{OS}) + \beta_2 (M_{BK}) + \beta_3 (A_{TM}) + \beta_4 (O_{NL}) + \epsilon I \dots\dots\dots 2$$

Where:

S_{DL} represented the Organisation's Service Delivery;

C_{RT} represented the Organisation's Customer Retention;

α is the intercept/slope;

$\beta_1, \beta_2, \beta_3$ and β_4 represented the regression coefficients or slopes that explained the extent, and the degree of the impacts of the different adopted indices of the study's independent variable, ICT tools identified by Oluwagbemi, et al (2011) including the Point of Sales (P_{OS}), Mobile Banking (M_{BK}), Automated Teller Machine (A_{TM}), and Online Banking (O_{NL}).

ϵI is the stochastic error term.

RESULTS AND DISCUSSIONS

4.1 The response rate and bio statistics of the respondents

Table 4.1a Respondents' Academic Qualifications

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid OND & Below First Degree	84	34.6	34.6	34.6
First Degree & Equivalents (HND; BSc; BA; BEd; etc.)	91	37.4	37.4	72.0
Professional & Others not captured	10	4.1	4.1	76.1
Post Graduate Diploma & Equivalents (PGDBA; PGDBAF; etc.)	43	17.7	17.7	93.8
Post Graduate Degrees (MSc; MBA; LLM; PhD; etc.	15	6.2	6.2	100.0

Total	243	100.0	100.0
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Source: Computed from field data using SPSS version 22

Table 4.1a of the study revealed the academic qualifications of the respondents. The table disclosed 34.6% were holders of Ordinary National Diploma (OND) certificates whilst 91 of them representing 37.4% were holders of first

degree certificates and equivalents and the remaining were holders of postgraduate academic qualifications. The study had an overall valid response rate of 243 from the 380 copies administered.

Table 4.1b: Respondents' Working Experience

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Less Than 5 Years	27	11.1	11.1	11.1
> 5 Years, but less than and equal to 10 Years	92	37.9	37.9	49.0
> 10 Years, but less than and equal to 15 Years	85	35.0	35.0	84.0
> 15 Years, but less than and equal to 20 Years	27	11.1	11.1	95.1
Above 20 Years	12	4.9	4.9	100.0
Total	243	100.0	100.0	

Source: Computed from field data using SPSS version 22

Table 4.1b is another table that revealed the respondents' related working experience. The table revealed that 11.1% of the respondents had less than and equals to 5 years related and relevant experiences while 37.9% had above 5 years, but less than and equals to 10 years relevant experience. Furthermore, 35% had above 10 years, but less than and equals to 15 years relevant experience while another 11.1% had above 15 years, but less than and equals to 20 years relevant

experience and 4.9% had over 20 years relevant and related experience.

Tests of hypotheses

Test of Hypothesis One

H₀₁: The adoption and application of ICT tools has not significantly improved service delivery at Zenith Bank Plc.

Table 4.2a: Model Summary^b

Model	R	R Square	Adjusted Square	R Std. Error of the Estimate	Durbin-Watson
1	.653 ^a	.426	.433	.40411	1.570

a. Predictors: (Constant), POS, ATM, MBK, ONL

b. Dependent Variable: SDL

Source: Computed from field data using SPSS version 22

Table 4.2a showed the model summary table with respect hypothesis one and objective one. The R^2 value 42.6% simply indicated that all the adopted indices of the independent variable (ICT) for this study were collectively responsible for 42.6% variations in the quality-of-Service Delivery

(SDL) as an index of the dependent variable (Organisational Performance) at the organisation during the period (2015-2024) under study while the outstanding 57.4% were caused by other variables not captured in this study.

Table 4.2b: ANOVA^a

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	1.431	4	.358	.019	.071 ^b
	Residual	38.866	238	.163		
	Total	40.297	242			

a. Dependent Variable: SDL

b. Predictors: (Constant), POS, ATM, MBK, ONL

Source: Computed from field data using SPSS version 22

The ANOVA table 4.2b revealed the computed statistical significance at a significance level of 0.1000. The table showed a calculated f-statistic value of .019 at a level of significance of 0.071, which is within the acceptable level of significance (0.1). Thus, this value (0.019)

indicated statistical significance between the main variables and/or amongst their indices. Consequently, the stated null hypothesis one (**H₀₁**) that the adoption and application of ICT tools has not significantly improved service delivery at Zenith Bank Plc. is rejected.

Table 4.2c: Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.697	.272		6.236	.000
	POS	.037	.030	.123	1.887	.060
	ATM	.031	.029	.073	1.078	.282
	MBK	.056	.034	.049	.758	.449
	ONL	.066	.032	.137	2.068	.040

a. Dependent Variable: SDL

Source: Computed from field data using SPSS version 22

$$S_{DL} = \alpha + \beta_1 (P_{OS}) + \beta_2 (A_{TM}) + \beta_3 (M_{BK}) + \beta_4 (O_{NL}) + \epsilon I \dots \dots \dots 1$$

$$S_{DL} = 1.697 + .037P_{OS} + .031A_{TM} + .056M_{BK} + .066O_{NL}$$

Table 4.2c displayed the extent of impacts of each index of the ICT tools on service delivery (S_{DL}) as an index of the organisational performance. The function $S_{DL} = 1.697 + .037P_{OS} + .031A_{TM} + .056M_{BK} + .066O_{NL}$ indicated that for every 1% variation in the quality of the organisation's service delivery there were 3.7% increase in the adoptions and applications of Point of Sale (P_{OS}) devices; 3.1% increase in the adoptions and applications of Automated Teller Machines (A_{TM}); 5.6% increase in the adoptions and applications of Mobile Banking (M_{BK}) solutions; and 6.6% increase in the adoptions and

applications of Online Banking (O_{NL}) solutions at the organisation during the period (2015-2024) under study. That also indicated that

the adoptions and applications of Automated Teller Machines (A_{TM}) had the most impact, while the adoptions and applications of Online Banking (O_{NL}) had the least impact on the quality of the organisation's service delivery (S_{DL}) because the organisation needs to increase less of ATM and more ONL in order to increase the rate of changes in the dependent variable (S_{DL}).

Test of Hypothesis 2

H₀₂: The adoption and application of ICT tools has not significantly impacted on the customer retention at Zenith Bank Plc.

Table 4.2d: Model Summary^b

Model	R	R Square	Adjusted Square	R Std. Error of the Estimate	Durbin-Watson
1	.761 ^a	.579	.623	.34109	1.715

a. Predictors: (Constant), POS, ATM, MBK, ONL

b. Dependent Variable: CRT

Source: Computed from field data using SPSS version 22

Table 4.2d disclosed the model summary table with respect hypothesis two and objective two. The R^2 value 57.9% simply indicated that all the adopted indices of the independent variable (ICT) for this study were collectively responsible for 57.9% variations in the Customer Retention (C_{RT})

as an index of the dependent variable (Organisational Performance) at the organisation during the period (2015-2024) under study while the outstanding 42.1% were caused by other variables not captured in this study.

Table 4.2e: ANOVA^a

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	4.665	4	1.166	.025	.000 ^b

Residual	27.689	238	.116		
Total	32.354	242			

a. Dependent Variable: CRT

b. Predictors: (Constant), POS, ATM, MBK, ONL

Source: Computed from field data using SPSS version 22

The ANOVA table 4.2e revealed the computed statistical significance at a significance level of 0.1000. The table showed a calculated f-statistic value of .025 at a level of significance of 0.000, which is within the acceptable level of significance (0.1). Thus, this value (0.025)

indicated statistical significance between the main variables and/or amongst their indices. Consequently, the stated null hypothesis two (H_{02}) that the adoption and application of ICT tools has not significantly improved customer retention at Zenith Bank Plc. is rejected.

Table 4.2f: Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.360	.230		1.567	.118
	POS	.074	.025	-.082	-1.339	.182
	ATM	.048	.024	.073	1.145	.254
	MBK	.046	.029	.076	1.234	.219
	ONL	.042	.027	.330	5.264	.000

a. Dependent Variable: CRT

Source: Computed from field data using SPSS version 22

$$C_{RT} = \alpha + \beta_1 (P_{OS}) + \beta_2 (M_{BK}) + \beta_3 (A_{TM}) + \beta_4 (O_{NL}) + \epsilon$$

$$C_{RT} = 1.36 + .074P_{OS} + .048A_{TM} + .046M_{BK} + .042O_{NL}$$

Table 4.2c displayed the extent of impacts of each index of the ICT tools on customer retention (C_{RT}) as an index of the organisational performance. The function $C_{RT} = 1.36 + .074P_{OS} + .048A_{TM} + .046M_{BK} + .042O_{NL}$ showed that for every 1% variation in the rate of customer retention (C_{RT}) at the case study there were 7.4% increase in the adoptions and applications of Point of Sale (P_{OS})

devices; 4.8% increase in the adoptions and applications of Automated Teller Machines (A_{TM}); 4.6% increase in the adoptions and applications of Mobile Banking (M_{BK}) solutions; and 4.2% increase in the adoptions and applications of Online Banking (O_{NL}) solutions at the organisation during the period (2015-2024) under study. That also indicated that

the adoptions and applications of Online Banking (O_{NL}) had the most impact, while the adoptions and applications of Point of Sale (P_{OS}) had the least impact on customer retention (C_{RT}) because the organisation needs to increase less of ONL and more POS in order to increase the rate of changes in the dependent variable (C_{RT}).

Major findings

This study that observed that despite the adoption of the ICT tools to improve banking operations through the use of the different relevant platforms, hard and software, Nigerian Deposit Money Banks (DMBs) are still facing the challenges of continually modernising or updating their operations so as to increase performances. Thus, examined the impact of ICT tools on organisational performance with particular focus some selected components at Zenith Bank Plc. between 2015-2024.

Specifically, the study respectively evaluated and assessed the extent and the degree to which ICT tools had impacted on the organisation's quality of service delivery and customer retention as components of performance during the period covered by the study by using descriptive and inferential statistical techniques to examine responses gathered from administered and collected copies of questionnaire. Subsequently, the study discovered the following:

With respect to the specific research question, objective, and hypothesis one (H_{01}), the R^2 value of 0.426 simply indicated that, all the adopted indices of the independent variable tools, for this study including the adoptions and applications of Point of Sale devices; Automated Teller Machines; Mobile Banking solutions; and Online Banking solutions were collectively responsible for 42.6% variations in the quality-of-Service Delivery (S_{DL}) as an index of the dependent variable (Organisational Performance) at the organisation during the period (2015-2024) under study while the outstanding 57.4% were caused by other variables not captured in this study. The study also found that the adoptions and applications of Automated Teller Machines had the most impact, while the adoptions and applications of Online Banking had the least impact on the quality of the organisation's service delivery because the organisation needs to increase less of ATM and more ONL in order to increase the rate of changes in the dependent variable (service delivery).

With respect to the specific research question, objective, and hypothesis two (H_{02}), the R^2 value

of 0.579 simply indicated that, all the adopted indices of the independent variable tools, for this study including the adoptions and applications of Point of Sale devices; Automated Teller Machines; Mobile Banking solutions; and Online Banking solutions were collectively responsible for 57.9% variations in the rate of customer retention as an index of the dependent variable (Organisational Performance) at the organisation during the period (2015-2024) under study while the outstanding 42.1% were caused by other variables not captured in this study. The study also found that the adoptions and applications of Online Banking had the most impact, while the adoptions and applications of Point of Sale had the least impact on customer retention because the organisation needs to increase less of ONL and more POS in order to increase the rate of changes in the dependent variable (customer retention).

CONCLUSION AND RECOMMENDATIONS

Overall, the results of the examined responses revealed that the adoptions and applications of the different components or platforms of ICT significantly and positively impacted on the performance of Zenith Bank Plc. This finding is consistent with several previous studies including Thuy, (2021); Del Gaudio et al (2021); Ldama et al (2021); Amaduche, et al (2020); Wiredu, et al (2020); Peace, et al (2018); and many more, but inconsistent with the finding by Agu et al (2020). Thus, the study recommended that contemporary organisations, especially those in highly competitive industries like the deposit money bank in Nigeria should deliberately, consciously, diligently adopt and apply the appropriate ICT tools to enable them remain competitive, so as to continue to grow and expand.

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