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Information and Communication Technology Adoption and Bank Profitability: Empirical Evidence from Pola-ris Bank Limited, Nigeria

Adopción de la Tecnología de la Información y la Comunicación y la Rentabilidad Bancaria: Evidencia Empí-rica de Polaris Bank Limited, Nigeria

Abosede Rebecca Olatunbosun[1]

[1]University of Derby, Accounting and Finance. Derby, United Kingdom.

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Corresponding Author
Abosede Rebecca Olatunbosun

ABSTRACT

This study investigated the impact of Information and Communication Technology (ICT) on the profitability of Polaris Bank Limited, focusing on its branches in Osogbo Metropolis, Osun State, Nigeria. The survey re-search design was adopted, with the entire population of sixty-three (63) bank employees across three branches in Osogbo. Data were collected using structured questionnaires and documentary sources, while both descriptive and inferential statistics were employed for analysis. The findings revealed that a variety of ICT tools such as computers, Internet services, ATMs, POS terminals, CCTV systems, and specialized software are available and effectively utilized in the bank's operations. ICT adoption was found to be primarily driven by management policies and customer demand for efficient and convenient services. The study established a strong and statistically significant relationship between ICT use and profitability, as well as between man-agement support and ICT utilization for profitability enhancement. The findings further indicated that ICT enhances operational efficiency, reduces transaction costs, and improves customer satisfaction, thereby con-tributing significantly to the bank's profitability. However, challenges such as the need for continuous staff training, frequent technology updates, and restrictive ICT policies were identified as factors limiting optimal ICT utilization. The study concluded that ICT plays a vital role in improving the operational efficiency and profitability of deposit money banks in Nigeria, particularly when supported by proactive management poli-cies and continuous capacity building.

Keywords: Information and Communication Technology; Profitability; Management Support; Polaris Bank; Banking Op-erations.

RESUMEN

Este estudio investigó el impacto de la Tecnología de la Información y la Comunicación (TIC) en la rentabili-dad de Polaris Bank Limited, centrándose en sus sucursales en la Metrópoli de Osogbo, Estado de Osun, Nige-ria. Se adoptó un diseño de investigación de tipo encuesta, considerando como población total a sesenta y tres (63) empleados bancarios distribuidos en tres sucursales en Osogbo. Los datos se recopilaron mediante cues-tionarios estructurados y fuentes documentales, mientras que para el análisis se emplearon estadísticas des-criptivas e inferenciales. Los resultados revelaron que diversas herramientas TIC, como computadoras, servi-cios de Internet, cajeros automáticos (ATM), terminales de punto de venta (POS), sistemas de CCTV y softwa-re especializado, están disponibles y se utilizan eficazmente en las operaciones del banco. Se determinó que la adopción de TIC está impulsada principalmente por las políticas de la gerencia y la demanda de los clientes por servicios eficientes y convenientes. El estudio estableció una relación fuerte y estadísticamente significa-tiva entre el uso de las TIC y la rentabilidad, así como entre el apoyo de la gerencia y la utilización de las TIC para mejorar la rentabilidad. Además, los hallazgos indicaron que las TIC mejoran la eficiencia operativa, reducen los costos de transacción y aumentan la satisfacción del cliente, contribuyendo significativamente a la rentabilidad del banco. No obstante, se identificaron desafíos como la necesidad de capacitación continua del personal, actualizaciones tecnológicas frecuentes y políticas restrictivas en materia de TIC, los cuales li-mitan su utilización óptima. El estudio concluyó que las TIC desempeñan un papel fundamental en la mejora de la eficiencia operativa y la rentabilidad de los bancos de depósito en Nigeria, especialmente cuando están respaldadas por políticas gerenciales proactivas y un fortalecimiento continuo de capacidades.

Palabras clave: Tecnología de la Información y la Comunicación; Rentabilidad; Apoyo de la Gerencia; Polaris Bank; Opera-ciones Bancarias.

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INTRODUCTION

Banking activities constitute an indispensable component of modern human society, serving as a critical driver of economic stability, growth, and development. Beyond their traditional role in safeguarding money, banks facilitate credit creation, investment, and the safekeeping of valuables such as documents and jewelry.[1,2,3] The history of banking can be traced to ancient civilizations, where temples functioned as the earliest forms of banks. Temples in early societies were considered trustworthy repositories for wealth because priests were regarded as honest custodians. With the rise of international trade among empires, the need for secure and exchangeable mediums of payment led to the development of coinage. Temples in ancient Greece, Rome, and Egypt stored large quantities of coins and even extended loans, functioning much like early financial institutions.[4] However, their accumulated wealth made them targets during wars, prompting the Romans to move banking operations from temples to specialized facilities.

The evolution of banking in Nigeria dates back to 1892 with the establishment of the African Banking Corporation in Lagos, which served the interests of British trading companies.[5] Although short-lived, it paved the way for the Bank of British West Africa in 1894, later renamed Standard Bank of Nigeria, and now known as First Bank of Nigeria Limited. Subsequent foreign banks such as Barclays Bank DCO (now Union Bank of Nigeria) and the British and French Bank (now United Bank for Africa, UBA) expanded the banking landscape. The first indigenous effort emerged with the National Bank of Nigeria in 1933, followed by Agbonmagbe Bank (now Wema Bank Plc) in 1945, both established to counteract discriminatory practices of foreign-owned banks.

To regulate the growing sector, the Central Bank of Nigeria (CBN) was established in 1958 as the apex monetary authority responsible for ensuring financial stability and sound banking operations. By December 1994, Nigeria had 124 commercial and merchant banks. The National Deposit Insurance Corporation (NDIC) was later created in 1989 to safeguard depositors and ensure the stability of the banking system. A major reform came in 2004 when the CBN raised the minimum capital base of commercial banks from ₦2 billion to ₦25 billion. This recapitalization led to mergers and acquisitions, reducing the number of banks from 89 to 25 and fostering stronger, more resilient institutions. In addition, the CBN promoted automation and digitalization to align Nigerian banking practices with international standards and to enhance efficiency and profitability.

Among the banks that have emerged from these transformations is Polaris Bank Limited, established on September 21, 2018, by the Central Bank of Nigeria following the acquisition of the assets and liabilities of the defunct Skye Bank.[6] Polaris Bank currently operates over 350 branches nationwide and has integrated Information and Communication Technology (ICT) into virtually every aspect of its operations to achieve efficiency, profitability, and competitive advantage.

Commercial banks play multifaceted roles in modern economies. As noted by Obi-Nwosu et al.[7], their primary function is to accept deposits while also providing loans, facilitating foreign trade, offering agency services, and safeguarding customers' valuables. All these operations are undertaken with the overarching goal of generating profit. In this regard, banking serves not only as a business venture but also as a crucial mechanism for economic growth, capital formation, and social development.

In contemporary times, banking operations have been profoundly transformed by Information and Communication Technology (ICT). ICT enables banks to conduct transactions efficiently, manage large volumes of data, enhance customer service, and improve security. Technologies such as computers, the Internet, mobile banking applications, databases, electronic fund transfer systems, firewalls, and closed-circuit television (CCTV) systems have become integral to modern banking processes. The effectiveness of these tools, however, depends on how strategically they are implemented and utilized. Through ICT, banks can achieve faster service delivery, enhanced accuracy, improved customer satisfaction, and increased profitability.

Recognizing these benefits, banks in Nigeria have continued to invest heavily in ICT infrastructure, software, and staff training. Such investments are intended to enhance operational efficiency and optimize profit margins. However, the success of ICT adoption depends not only on technological investment but also on employee competence, organizational readiness, and customer adaptability.

It is against this background that this study investigated the impact of ICT use on the profitability of Polaris Bank Limited, focusing specifically on its three branches in Osogbo, Osun State. The study examined the types of ICTs available for use, the factors driving their adoption, their effects on profitability, and the challenges faced by the bank in leveraging ICT for enhanced financial performance.

Information and Communication Technology (ICT) has been globally recognized as a critical driver of efficiency, innovation, and profitability in modern business environments.[8] In Nigeria, ICT adoption has significantly transformed the operational landscape of financial institutions, particularly Deposit Money Banks (DMBs), by facilitating faster transactions, improved customer service delivery, and enhanced decision-making processes.[9] Given these advantages, it is expected that banks in the 21st century strategically deploy ICT tools to optimize their operations, improve service quality, and maximize profitability. The increasing adoption of ICT became more evident during the COVID-19 pandemic when banks intensified the use of digital platforms to sustain operations amid lockdowns and social distancing protocols.

Despite these advancements, the actual impact of ICT deployment on the profitability of Polaris Bank remains largely underexplored and empirically unsubstantiated. While ICT integration is presumed to enhance operational efficiency and profitability, the extent to which this is achieved depends on several contextual and organizational factors. Profitability in the banking sector is not solely a product of technology adoption but is also influenced by management policies, regulatory frameworks, and the capacity of employees to effectively utilize available ICT tools in executing their duties.

Existing literature suggests that ICT usage enhances employee productivity and job satisfaction, which may, in turn, contribute to improved profitability.[10] However, other studies[11] have highlighted persistent challenges such as limited ICT competencies among bank employees, inadequate access to continuous on-the-job training, and infrastructural constraints such as slow internet connectivity. These challenges can lead to delays in service delivery, staff frustration, customer dissatisfaction, and ultimately, reduced operational efficiency and profitability. Given these gaps, there is a compelling need to empirically examine the relationship

between ICT utilization and profitability in Polaris Bank Limited. Specifically, this study seeks to determine how the availability and effective use of ICT resources, management support, and staff ICT competencies influence the profitability of Polaris Bank branches in Osogbo Metropolis, Osun State, Nigeria.

METHOD

The study adopted the survey research design. This design was considered appropriate because it allowed for the collection of data from a relatively large number of participants across different locations within a defined period.[12] The survey approach was particularly suitable for obtaining employees' views and experiences regarding the use of Information and Communication Technologies (ICTs) in banking operations, profitability, and service delivery at Polaris Bank. The design also facilitated the use of standardized instruments, which enhanced data comparability and objectivity. The population of the study consisted of all employees of Polaris Bank working in the three branches located within Osogbo Metropolis, Osun State, Nigeria. Preliminary investigation revealed that the Alekuwodo Branch had 24 employees, the Station Road Branch had 18 employees, and the Fakunle Branch had 21 employees, bringing the total population to 63 staff members. Given the relatively small size of the population, the study employed a total enumeration technique, which involved including all employees in the study rather than selecting a sample. This approach minimized sampling errors, ensured comprehensive coverage, and enhanced the credibility and generalizability of the findings within the study context. Data were collected using a structured questionnaire, complemented by documentary analysis. The questionnaire was self-designed based on insights from previous empirical studies and aligned with the research objectives. In addition, documentary sources were used to obtain secondary data on the bank's profitability over five years. These data provided an empirical basis for analyzing the relationship between ICT usage and financial performance.

The face and content validity of the instrument were established through expert review by the project supervisor and two senior academics in the field of Library and Information Science and Business Management. Their input ensured that the items adequately covered all aspects of the research objectives and were clearly worded for respondent understanding. To ascertain the reliability of the instrument, a pilot study was conducted using 10 staff members from a nearby Polaris Bank branch not included in the main study. The data from the pilot test were subjected to reliability analysis using Cronbach's Alpha Coefficient. The resulting coefficient ($\alpha \geq 0,70$) was considered satisfactory, confirming the internal consistency and reliability of the questionnaire. Instruments yielding coefficients below this threshold were revised before the main administration. Data collection was conducted through direct administration of the questionnaire to respondents in the three selected branches. The researchers personally visited each branch to ensure proper understanding of the items and to increase the response rate. Due to the busy nature of banking operations, several visits were made over a period of two weeks to allow respondents adequate time to complete the questionnaires. Completed copies were retrieved on subsequent visits to ensure a high rate of return and data accuracy. Documentary data on the bank's profitability were retrieved from internal records and relevant financial statements, with necessary permissions obtained to ensure compliance with organizational confidentiality policies.

Both descriptive and inferential statistical techniques were employed in the data analysis. Descriptive statistics such as frequency counts, means, and percentages were used to summarize respondents' demographic characteristics and their responses to research questions. To test the study's hypotheses and determine relationships between ICT use and profitability, the Pearson Product Moment Correlation (PPMC) was employed. This method was suitable for examining the degree and direction of association between continuous variables. All analyses were conducted using the International Business Machines Statistical Package for Social Sciences (IBM SPSS), version 26. Results were presented using tables and charts to aid clarity, interpretation, and visual understanding of patterns emerging from the data. Ethical standards were maintained throughout the study. Participants were informed about the purpose of the research, assured of confidentiality, and participation was voluntary. The researcher ensured that data obtained were used solely for academic purposes, and anonymity was preserved in reporting the findings.

RESULTS

From the 63 sets of questionnaires that were administered, 38 (representing 60,32, %) were duly completed and returned, which formed the basis for analysis.

Table 1. Distribution of respondents according to demographic variables

Variables	Frequency	Percentage
Gender		
Male	22	57,9
Female	16	42,1
Total	38	100,00
Highest Educational Qualification		
PhD	0	0
MPhil, MSc, MA, MBA	5	13,2
BSc, BA, HND	27	71,1
ND or NCE	6	15,8
Total	38	100,00

Age (in years)		
18-30	18	47,4
31-40	18	47,4
41-50	2	5,3
Total	38	100,00
Years of working experience at Polaris Bank		
<1-5 years	20	52,6
6-10 years	14	36,8
11-15 years	4	10,5
16 years and above	0	0
Total	38	100,00

From table 1, it is evident that 57,9 % of the respondents were male while the remaining 42,1 % were female. Also, majority of the respondents had first Degree (BSc, BA and HND) as their highest educational qualification, followed by 15,8 % that had ND or NCE. Similarly, 13,2 % claimed to have MPhil, MSc, MA, MBA as their highest qualifications. This shows that the respondents have diverse educational qualifications. Furthermore, the respondents were asked about their age. 47,4 % of respondents reported being ages 18-30 and 31-40, respectively, followed by 5,3 % who reported being 41-50 years old. Also, the respondents have different years of working experience at Polaris Bank, which made them familiar with the operations of the bank and qualified them to respond to the questionnaire as expected. The majority (52,6 %) of respondents claimed to have between 1-5 years of working experience, followed by 36,8 % with between 6-10 years of experience, and 10,5 % with between 11-15 years of experience.

Respondents were asked to identify various ICT that are available for use by both the employees of the bank and the customers. The result is presented in figure 1.

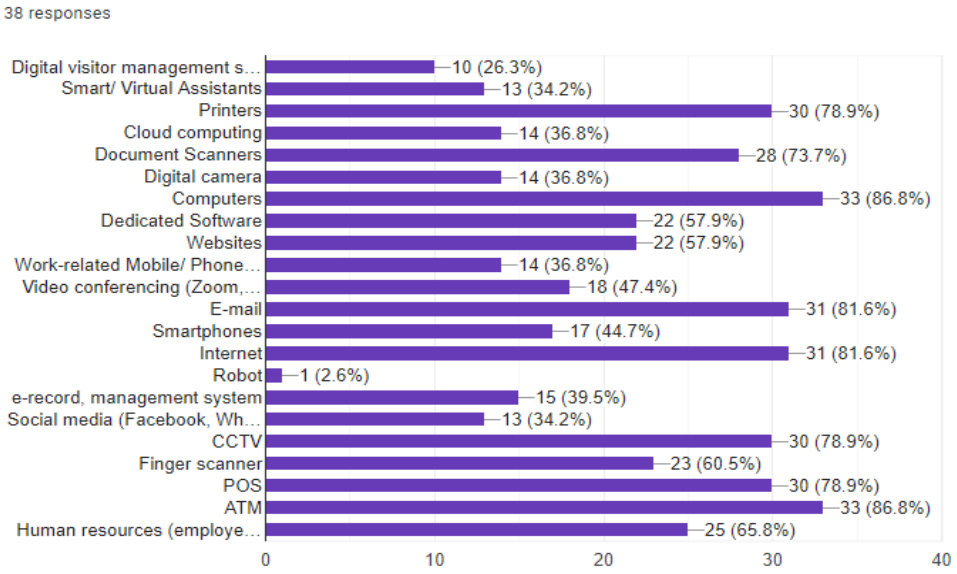


Figure 1. ICTs available for use by the staff and customers of Polaris Bank

Figure 1 presents various ICT tools and facilities available to the employees and customers of Polaris Bank Branches in Osogbo Metropolis. It is evident from the Figure that 86,8 % of the respondents claimed that the most commonly available ICTs are computers and ATM, respectively, while 81,6 % claimed that e-mail and internet were mostly available. Also, 78,9 % of the respondents claimed that computer printers, CCTV and POS were part of ICTs available for use. Furthermore, some 57,9 % of the respondents claimed that dedicated software and websites are available for use. The least response rate were digital visitor management systems (26,3 %) and robot (2,6 %).

Table 2. Drivers for the use of ICT for profitability in Polaris Bank

SN	What drives the use of ICT for profitability in your bank?	Agree	Disagree
1	Bank policy/ management decision	38 (100,0 %)	0
2	COVID-19	16 (42,1 %)	22 (57,9 %)
3	Personal decision	13 (34,2 %)	25 (65,8 %)
4	Customers' demands	29 (76,4 %)	9 (23,7 %)

From table 2, it is evident that bank policy/ management decision (100 %) was the major driver of ICT use for bank profitability. This was distantly followed by customers' demands for ICT related services (76,4 %); COVID-19 (42,1 %) and employees' personal decision (34,2 %).

Table 3. Impact of ICT use on Polaris Bank Profitability

SN	Impact of ICT use on bank profitability	SA	A	D	SD	Mean
1	ICT helps in improving efficiency and effectiveness of services offered to customers	34 (89,5 %)	4 (10,5 %)	-	-	3,8947
2	ICT helps to maximise business or operational channels provided by banks	27 (71,1)	10 (28,9 %)	1 (2,6 %)	-	3,6842
3	Banks make more profits with the deployments of POS and ATM terminals	26 (68,4 %)	11 (29,0 %)	1 (2,6 %)	-	3,6579
4	Banks make more profits with charges made from customers using ICT related channels	24 (63,2 %)	13 (34,2 %)	1 (2,6 %)	-	3,6053
5	Banks can reduce their operational cost by applying the use of ICT	23 (60,5 %)	12 (31,6 %)	3 (7,9 %)	-	3,5263
6	ICT facilitates timely information and knowledge sharing among employees which is useful for maximizing profits	24 (63,2 %)	13 (34,2 %)	1 (2,6 %)	-	3,6053
7	ICT use enhances quality service delivery to customers	24 (63,2 %)	14 (36,8 %)	-	-	3,6316
8	ICT helps to gather information that can be used to maximize profitability	23 (60,5 %)	15 (39,5 %)	-	-	3,6053
9	ICT enhances bank-customers relationship	21 (55,2 %)	15 (39,5 %)	2 (5,3 %)	-	3,5000
10	ICT is a major tool for marketing banks services to customers	22 (57,9 %)	11 (28,9 %)	5 (13,2 %)	-	3,4474
11	Use of ICT improves my collaboration/ team works with my colleagues	19 (50,0 %)	18 (47,4 %)	1 (2,6 %)	-	3,4737
12	There is a positive relationship between ICT use and banks profitability	20 (52,6 %)	17 (44,7 %)	1 (2,6 %)	-	3,5000

From table 3, it is evident that majority (89,5 %) of the respondents strongly agreed that ICT helps in improving efficiency and effectiveness of services offered to customers; ICT helps to maximise business or operational channels provided by banks (71,1 %); and also, banks make more profits with the deployments of POS and ATM terminals (68,4 %). Also, Some 60,5 % and 63,2 % strongly agreed that banks can reduce their operational cost by applying the use of ICT and also that ICT facilitates timely information and knowledge sharing among employees which is useful for maximizing profits, respectively.

Furthermore, the data also revealed that 60,5 % of the respondents strongly agreed that ICT helps to gather information that can be used to maximize profitability, while 52,6 % also strongly believed that there is a positive relationship between ICT use and banks profitability. However, some 13,2 % of the respondents disagreed that ICT is a major tool for marketing banks services to customers. Also, the mean score for each item which clearly shows that they are above 3,00 indicate that use of ICT has positive impacts on bank profitability.

Table 4. Challenges faced in using ICT for enhancing profitability

SN	What challenges do you face in using ICT's for enhancing profitability?	Frequency (%)
1	Inadequate ICT facilities	3 (7,9 %)
2	Need for more training	14 (36,8 %)
3	Lack of organizational/ management support	0
4	Unfavourable digital technology policy from management	5 (13,2 %)
5	Frequent technology updates makes it difficult to catch up	6 (15,8 %)
6	Techno stress	1 (2,6 %)
7	Not allowed to use personal ICT devices for official duties	7 (18,4 %)
8	Outdated or aged tools	1 (2,6 %)
9	None of the above	1 (2,6 %)

From table 4, it is evident that majority of 36,8 % claimed that the need for more training was the major challenge they experienced. This is followed by 18,4 % that claimed not being allowed to use their personal ICT devices for official duties. Also, some 15,8 % claimed that frequent technology updates makes it difficult to catch up; while 13,2 % claimed that unfavourable digital

technology policy from management constituted as a challenge to them.

Table 5. Correlation between ICT use and Polaris Bank profitability

		Use_ICT	More_profit_Charges_Made
Use_ICT	Pearson Correlation	1	0,619**
	Sig. (2-tailed)		0,001
	N	38	38
More_profit_Charges_Made	Pearson Correlation	0,619**	1
	Sig. (2-tailed)	0,000	
	N	38	38

Note: **Correlation is significant at the 0,05 level (2-tailed)

The result presented in table 5 indicates that there is a high correlation (r=0,619, p=0,001 <0,05) between ICT use and Polaris Bank profitability. This result is significant since the p-value is less than 5 % significance level. Therefore, the null hypothesis is rejected and the alternative hypothesis is accepted and it then can be concluded that there is significant relationship between ICT use and profitability in Polaris Bank, Osogbo.

Table 6. Correlation between management support and use of ICT for profitability in Polaris Bank, Osogbo

		Mgt_support_ICT	More_profit_Charges_Made
Mgt_support_ICT	Pearson Correlation	1	0,808**
	Sig. (2-tailed)		0,001
	N	38	38
More_profit_Charges_Made	Pearson Correlation	0,808**	1
	Sig. (2-tailed)	0,000	
	N	38	38

Note: **Correlation is significant at the 0,05 level (2-tailed)

The result presented in table 6 indicates that there is a very high correlation (r=0,808, p=0,001 <0,05) between management support and use of ICT for profitability in Polaris Bank, Osogbo. This result is significant since the p-value is less than 5 % significance level. Therefore, the null hypothesis is rejected and the alternative hypothesis is accepted and it then can be concluded that there is a significant relationship between management support and use of ICT for profitability in Polaris Bank, Osogbo.

DISCUSSION

The findings of this study revealed that Polaris Bank has extensively deployed a wide range of Information and Communication Technology (ICT) tools to facilitate both staff operations and customer services. These include computers, Internet facilities, automated teller machines (ATMs), e-mails, point-of-sale (POS) terminals, closed-circuit television (CCTV), and specialized banking software. This aligns with the observation of Madugba et al.[13], Madu et al.[14], and Uzor et al.[15]. However, the low usage of advanced digital technologies such as robotics and digital visitor-management systems indicates that the bank, like many others in Nigeria[9].

The study further found that the key drivers of ICT adoption for profitability in Polaris Bank are primarily management policies and strategic decisions, supported by customer demand for faster and more convenient banking services. The result corroborates Akani et al.[16], Ashiru et al.[17] and Bako et al.[18]. However, the limited influence of personal decisions and the COVID-19 pandemic in driving ICT usage contrasts with Chatterjee[19], who found that external pressures and employee-driven innovations play an increasingly significant role in ICT diffusion. The present finding therefore suggests that, within the Nigerian banking context, ICT adoption remains largely top-down and policy-driven rather than employee-initiated, a structure reinforced by the regulatory and hierarchical nature of the banking sector. The strong influence of customer demand aligns with van Olatunbosun[20], who posited that customer expectations for efficiency and accessibility are powerful forces driving digital transformation in African financial institutions.

In terms of profitability, the study revealed that ICT use has significantly improved operational efficiency, customer service delivery, and revenue generation in Polaris Bank. Respondents affirmed that ICT enhances the effectiveness of service delivery, expands business channels, reduces operational costs, and strengthens the bank–customer relationship. This finding supports the conclusion of Adeyinka et al.[21], who reported a significant positive relationship between ICT transactions and the profitability of Nigerian banks. It also agrees with Nwakoby et al.[11], who found that electronic banking significantly boosts banks' profits by

lowering transaction costs and expanding their customer base. The finding is also consistent with Gupta et al.[22] and Thakur et al.[4], Deshi et al.[23], and Madugba et al.[13]. The correlation analysis in this study confirmed a strong and statistically significant relationship between ICT use and bank profitability, reinforcing the proposition that ICT functions as a critical determinant of financial success in modern banking.

Despite these positive outcomes, the study also identified several challenges affecting the effective use of ICT to enhance profitability in Polaris Bank. The most common challenges reported were the need for more training, frequent technology updates that are difficult to keep up with, and restrictions on the use of personal devices for official purposes. These findings are consistent with Bako et al.[18] and Ilelaboye et al.[9], who found that insufficient ICT training and limited infrastructural investment impede the effectiveness of ICT-driven initiatives in Nigerian deposit money banks. The finding also aligns with Akintoye et al.[24], Uzor et al.[15], and Madu et al.[14]. The persistence of these constraints in Polaris Bank indicates that while ICT offers tremendous opportunities, its full potential can only be realized through continuous capacity building, infrastructural improvement, and supportive management policies.

The study also found a very strong and statistically significant relationship between management support and the use of ICT for profitability in Polaris Bank. This finding reinforces the position of Ashiru et al.[17] and Akani et al.[16], who emphasized that managerial commitment and leadership are essential enablers of financial innovation and ICT performance in banks. It also aligns with Bako et al.[18], who argued that ICT contributes meaningfully to organizational performance only when management provides adequate support and fosters a culture of innovation. This result underscores the importance of managerial involvement in ensuring that ICT policies are properly implemented, staff are adequately trained, and technological tools are continuously updated to meet operational demands.

CONCLUSIONS

This study examined the impact of Information and Communication Technology (ICT) on the profitability of Polaris Bank Limited, with specific reference to its branches in Osogbo, Osun State, Nigeria. The study established that ICT has become an indispensable element of banking operations, driving efficiency, service quality, and customer satisfaction. The findings revealed that a wide range of ICT tools such as computers, Internet facilities, ATMs, POS terminals, CCTV systems, and dedicated banking software are available and effectively utilized by both staff and customers of Polaris Bank. The adoption and use of these technologies were found to be largely driven by management policies and customer demands, demonstrating that institutional leadership and organizational strategies are central to ICT integration and profitability in the banking sector. The study further found a strong and statistically significant relationship between ICT use and the profitability of Polaris Bank, indicating that ICT enhances efficiency, reduces operational costs, and facilitates service innovation that contributes to financial performance. Additionally, the study revealed a significant positive correlation between management support and ICT use for profitability, underscoring the importance of leadership commitment and policy direction in sustaining technological advancement. However, despite these positive outcomes, the study identified several challenges confronting ICT utilization in Polaris Bank. These include the need for continuous staff training, frequent technological updates that are difficult to adapt to, and certain policy restrictions that limit the flexibility of ICT use. These challenges highlight that while ICT adoption has improved operational outcomes, continuous capacity building, supportive managerial policies, and infrastructural enhancement are essential for maximizing its profitability potential. Based on the findings of this study, the following recommendations were made:

1. The Central Bank of Nigeria should continue to promote digital transformation across Nigerian banks through regulatory frameworks that encourage ICT adoption and innovation. It should also partner with commercial banks to develop training programs that build ICT competencies among banking professionals, ensuring that human capital development keeps pace with technological evolution.
2. Employees of Polaris Bank should take personal initiative to improve their ICT literacy and adaptability to technological innovations. This can be achieved through self-development, online courses, and participation in institutional training.
3. The Nigerian government, through the Ministry of Communications, Innovation and Digital Economy, should provide infrastructural support such as stable electricity and reliable Internet connectivity to enhance ICT efficiency in the banking sector.
4. Customers should be continuously sensitized through digital literacy campaigns and awareness programs on the benefits, safety, and convenience of ICT-driven banking services. Improved customer understanding will enhance adoption and reduce resistance to digital banking channels.

The study has some limitations. First, the study was geographically limited to three branches of Polaris Bank located within the Osogbo Metropolis of Osun State, Nigeria. While this provided a manageable scope for in-depth analysis, it also restricted the generalizability of the findings to other branches of the bank across Nigeria or to other deposit money banks operating in different regions. Banking operations, technological infrastructures, and management practices may differ across locations, and these variations could influence how ICT affects profitability in other contexts. Second, the study relied primarily on self-reported data collected through questionnaires. Although efforts were made to ensure honesty and accuracy in responses, the possibility of response bias cannot be entirely ruled out, as some participants may have provided socially desirable answers or withheld certain information due to confidentiality concerns associated with the banking industry. Third, the study focused mainly on ICT adoption, management support, and profitability but did not include other potential moderating variables such as organizational culture, staff motivation, or external economic factors that could influence profitability outcomes. Future research incorporating these variables

may provide a more holistic understanding of the dynamics between ICT usage and bank performance. Additionally, the relatively small population size limited the application of more complex statistical models that could have deepened the analytical rigor of the findings. The study also covered only a short period of observation; hence, it did not account for possible long-term effects or changes in ICT investment and profitability trends over time. Despite these limitations, the findings provide valuable insights into the influence of ICT on banking performance and offer a strong foundation for future research and policy decisions.

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CONFLICT OF INTEREST

The author declares that there is no conflict of interest.

AUTHORSHIP CONTRIBUTION

Conceptualization: Abosede Rebecca Olatunbosun.
Data curation: Abosede Rebecca Olatunbosun.
Formal analysis: Abosede Rebecca Olatunbosun.
Drafting - original draft: Abosede Rebecca Olatunbosun.
Writing - proofreading and editing: Abosede Rebecca Olatunbosun.

BIBLIOGRAPHIC REFERENCES

1. Olatunbosun IE, Olatunbosun AR. Artificial Intelligence and Risk Management in Financial Institutions: Evidence from the UK Banking Sector. EthAIca. 2025a;4:436. https://doi.org/10.56294/ai2025436

2. Olatunbosun IE. Cybersecurity Implications of Nigeria's Momo PSB Breach: Organizational Responses, Policy Adaptation and User Trust. Global Journal of Research in Engineering & Computer Sciences. 2025a;5(6):1-9. https://doi.org/10.5281/zenodo.17574348

3. Olatunbosun IE. Digital Financial Inclusion, Gender Inequality, and Sustainable Growth in the United Kingdom: Evidence From 1990–2024. Abstract Book of the World Conference on Management, Business, and Finance. 2025b;3(2):4-4. https://proudpen.com/proceedings/index.php/worldmbf/article/view/1053

4. Thakur S, Rastogi S, Parashar N, Tejasmayee P, Kappal JM. The impact of ICT on the profitability of Indian banks: The moderating role of NPA. Journal of Risk and Financial Management. 2023;16(4):211.

5. Chukwuekwu O. The Effect of Electronic Banking on the Performance of Deposit Money Banks Listed in Nigeria. Journal of Business and Econometrics Studies. 2024;1(3):1-10.

6. Olannye-Okonofua D. Internal Communication and Corporate Restructuring: An Evaluation on Employees' Performance in Polaris Bank of Nigeria. International Journal of Humanities Social Science and Management. 2023;3(1):498-513.

7. Obi-Nwosu VO, Onuoha OC, Okoye NJ. Electronic Banking and Growth of Deposit Money Banks Operations: Nigeria Experience. Asian Journal of Economics, Business and Accounting. 2021;21(8):124-135.

8. Olatunbosun IE, Olatunbosun AR. Artificial Intelligence for Fraud Detection and Portfolio Optimization: Insights from UK Financial Institutions. EthAIca. 2025b;4:437. https://doi.org/10.56294/ai2025437

9. Ilelaboye CS, Alade ME, Oluwajuyigbe G. Information Quality and Credit Risks in Deposit Money Banks: The Mediating Role of Information Technology. African Banking and Finance Review Journal. 2024;18(18):16-35.

10. Omofowa MS, Omofowa S, Nwachukwu C, Le V. E-banking service quality and customer satisfaction: evidence from deposit money bank in South-South Nigeria. Management. 2021;18:288-302.

11. Nwakoby NP, Okoye JN, Ezejiofor RA, Anukwu CC, Ihediwa A. Electronic banking and profitability: Empirical evidence from selected banks in Nigeria. Journal of Economics and Business. 2020;3(2).

12. Oladokun BD, Osahon Igbinovia M, Orubebe ED, Olatunbosun IE. Exploring Academic Librarians' Perception towards Artificial Intelligence in Nigerian Polytechnics. EthAIca. 2025;4:438. https://doi.org/10.56294/ai2025438

13. Madugba J, Egbide BC, Jossy DW, Agburuga UT, Chibunna OO. Effect of electronic banking on financial performance of deposit money banks in Nigeria. Banks and Bank Systems. 2021;16(3):71-83.

14. Madu JE, Okoduwa P, Nwuba CO. Electronic banking mechanisms and customer satisfaction in a cashless policy era: study of deposit money banks. European Journal of Marketing and Management Sciences. 2023;6(6):1-20.

15. Uzor KN, Nwanna IO, Echekoba FN, Ananwude AC. Effect of information and communication technology on the efficiency of deposit money banks in Nigeria. Journal of Innovations and Sustainability. 2022;6(2):08-08.

16. Akani HW, Tony-Obiosa RL. Effects of financial innovations on the profitability of deposit money banks in Nigeria. European Journal of Accounting, Auditing and Finance Research. 2020;8(1):52-73.

17. Ashiru O, Balogun G, Paseda O. Financial innovation and bank financial performance: Evidence from Nigerian deposit money banks. Research in Globalization. 2023;6:100120.

18. Bako A, Suleiman AS, Mashi MS. E-recruitment and organizational performance of deposit money banks in Katsina State: A moderating role of information and communication technology. Journal of Management. 2024;5(2):1-18.

19. Chatterjee A. Financial inclusion, information and communication technology diffusion, and economic growth: a panel data analysis. Information Technology for Development. 2020;26(3):607-635.

20. Olatunbosun IE. Blockchain for Accountability: A Systematic Review of Anti-Corruption Mechanisms in Nigeria's Public Finance Management. International Journal of Accounting and Financial Risk Management. 2025b;6(2):22-34. https://doi.org/10.5281/zenodo.17875946

21. Adeyinka AJ, Daniel AA, Adeniyi DJ. An Assessment of the Relationship Between the Volume and Value of ICT Transactions in the Nigerian Deposit Money Banks: 2007-2017. Financial Markets, Institutions and Risks. 2019;3(1):30-42.

22. Gupta SD, Raychaudhuri A, Haldar SK. Information technology and profitability: evidence from Indian banking sector. International Journal of Emerging Markets. 2018;13(5):1070-1087.

23. Deshi NN, Edmond HJ. Effect of Information and Communication Technology (ICT) investments on profitability of listed deposit money banks in Sub-Saharan Africa. SSR Journal of Multidisciplinary (SSRJM). 2025;2(2):61-73.

24. Akintoye R, Ogunode O, Ajayi M, Joshua AA. Cyber security and financial innovation of selected deposit money banks in Nigeria. Universal Journal of Accounting and Finance. 2022;10(3):643-652.