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INFORMATION RETRIEVAL STRATEGIES AND ADMINISTRATIVE EFFICIENCY OF COMMERCIAL BANKS IN PORT HARCOURT, RIVERS STATE.

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Abstract

The study examined the relationship between Information Retrieval Strategies and Administrative Efficiency of Commercial Banks in Port Harcourt, Rivers State. . The objective of the study was to examine the relationship between dimensions of Information Retrieval Strategies such as accessibility and methods , accuracy and relevance, and integration and automation and measures of Administrative Efficiency such as process efficiency , resource utilization , and compliance responsiveness . The cross-sectional survey research design was adopted for this study. The population of this study consisted of one hundred and sixty eight(168) full-time branch managers, operations managers, credit underwriting officers, customer relationship managers, and internal compliance officers, of 24 Commercial Banks in Port Harcourt, Rivers State. . Using census study, the population of 168 respondent remained the study's sample. Structured questionnaire was used as instrument for data collection. After validation by the supervisors and two other experts in Management, Cronbach alpha was used to test the reliability of the instrument. Out of 168 copies of the questionnaire administered, a total of 131 copies were retrieved. Mean and standard deviation were used for the univariate analysis; Pearson product Moment Correlation Coefficient was used for the bivariate analysis, while the multivariate analysis was done using Partial Correlation. Pearson Product moment Correlation Coefficient was used in testing the hypotheses one to three at 0.05 level of significance and Partial Correlation was used in testing hypothesis four. The findings revealed that a significant positive relationship exists between dimensions of Information Retrieval Strategies such as accessibility and methods , accuracy and relevance and integration and automation and measures of Administrative Efficiency such as process efficiency , resource utilization , and compliance responsiveness in Commercial Banks in Port Harcourt, Rivers State. . The study concluded that Banks should implement centralized, cloud-based systems that allow authorized staff to access customer records, KYC documents, and internal memos in real time from any branch.

Keywords: Information retrieval strategies, accessibility and methods , accuracy and relevance, integration and automation, administrative efficiency, process efficiency , resource utilization, compliance responsiveness

Background to the Study

The banking sector in Nigeria has undergone significant changes over the years, with the adoption of technology and the increasing competition among banks to attract and retain customers. In the face of these changes, it has become crucial for banks to effectively manage their information retrieval strategies in order to ensure administrative efficiency (Li & Yu, 2019). Information retrieval strategies refer to the methods and techniques used by organizations to access and retrieve information from various sources. In the context of commercial banks, information

retrieval strategies include the use of databases, information systems, and other tools to access and retrieve relevant information for decision-making and other administrative functions.

Administrative efficiency, on the other hand, is a measure of how well an organization's administrative processes and functions are conducted. It encompasses aspects such as resource utilization, time management, and overall productivity. In today's knowledge-driven economy, information retrieval strategies have become central to organizational success, particularly in the banking sector. Commercial banks rely heavily on timely, accurate, and relevant information to make decisions, manage risks, and deliver efficient services. The ability to retrieve information quickly and effectively is directly linked to administrative efficiency, which encompasses process optimization, resource utilization, compliance, and responsiveness to customer needs (Iwedi, 2024). Empirically, regional investigations confirm that establishing specialized technological retrieval frameworks—such as systematic information recovery strategies—serves as a primary catalyst for bolstering administrative timelines and overall cost-efficiency metrics across local corporate structures (Ikuru & Abali, 2026). Additionally, the implementation of structured cloud-based recovery frameworks directly influences the speed, optimized processing capabilities, and operational timeliness of core staff workflows within these deposit money institutions (Chux-Nyeche & Obele, 2026).

Globally, banks have embraced digital banking technologies and integrated information systems to improve operational efficiency. In Nigeria, the adoption of ICT tools such as core banking applications, electronic databases, and automated retrieval systems has transformed banking operations, enabling faster transactions and improved customer satisfaction (Ukoh, 2023). However, achieving full administrative optimization demands systematic oversight. Regional data indicates that comprehensive information governance—specifically regarding data security protocols and tight regulatory compliance—strongly dictates the baseline organizational performance and transaction integrity of commercial banks in the Niger Delta area (Odu & Zeb-Obipi, 2026). Furthermore, the structural impact of macro-digital shifts, including transactional platform access paths, highlights the distinct relationship between centralized data visibility and localized economic banking performance across local urban centers (Omoku et al., 2022). Yet, challenges such as infrastructural limitations, regulatory compliance, and data management inefficiencies persist, particularly in regions like Rivers State. In the context of commercial banks, administrative efficiency is crucial for ensuring smooth and effective operations, as well as for meeting customer expectations and regulatory requirements. Given the importance of information retrieval strategies and administrative efficiency in the banking sector, it is essential to examine the relationship between the two. This study aims to investigate how information retrieval strategies impact the administrative efficiency of commercial banks in Rivers State, Nigeria.

Previous research has highlighted the significance of information retrieval strategies in enhancing organizational performance and efficiency. For example, Li and Yu (2019) found that effective information retrieval strategies can improve decision-making and overall organizational effectiveness. Similarly, Silva, Santos, and Soares (2017) showed that information retrieval strategies play a vital role in enhancing operational efficiency and competitiveness in the banking sector. Despite the existing literature on information retrieval strategies and administrative efficiency, there is limited research specifically focusing on commercial banks in Nigeria, particularly in Rivers State. By filling this gap, this study seeks to provide valuable insights for bank managers and policymakers on how to improve information retrieval strategies and administrative efficiency in the banking sector.

Statement of the Problem

The banking sector in Nigeria, particularly in Rivers State, is experiencing rapid growth and evolution, with the increasing adoption of technology and the changing regulatory landscape. As commercial banks in the region strive to stay competitive and meet customer demands, the role of information retrieval strategies in enhancing administrative efficiency becomes crucial. Despite significant investments in ICT, many Nigerian banks still struggle with information retrieval bottlenecks that hinder administrative efficiency. Issues such as slow access speed, poor integration of systems, inaccurate or irrelevant data retrieval, and limited automation affect decision-making and service delivery. These inefficiencies not only reduce customer trust but also weaken banks' competitiveness in an increasingly digital financial environment (Benson, 2025).

The fundamental operational mandate of commercial banks within any regional economic hub is to maintain seamless daily operations, accelerate transaction speed, and fulfill regulatory obligations with absolute precision. In Port Harcourt, Rivers State, the structural center of the Niger Delta's high-value corporate, maritime, and hydrocarbon sectors, commercial banks deal with massive volumes of daily transactional, customer, and compliance data (Nuka & Briggs, 2023). To manage this burden, banks require an optimal operational architecture where the administrative machinery runs without friction. However, a severe mismatch persists between the vast amounts of corporate information stored by these financial institutions and the speed at which branch personnel can retrieve it to make real-time decisions (Hassan & Musa, 2022). Despite extensive capital investments in enterprise resource planning (ERP) platforms, centralized databases, and digital architectures, branches across Port Harcourt are plagued by persistent operational bottlenecks that directly threaten their survival in a highly competitive market (Adebayo & Egberongbe, 2022).

The crux of the problem lies in the structural breakdown of existing Information Retrieval Strategies (IRS), specifically regarding accessibility and methods, accuracy and relevance, and integration and automation (Zilliz, 2024). When bank employees attempt to locate critical files, they frequently confront fragmented data structures, sluggish network paths, and archaic query methods (Al-Hattami, 2024). This lack of immediate data accessibility forces credit officers, customer service representatives, and operations personnel into prolonged, manual document lookups (Mavodza, 2021). Consequently, process efficiency breaks down entirely. Simple operational workflows—such as verifying a corporate client's multi-branch transaction history, resolving complex account discrepancies, or underwriting commercial loans—stall for days rather than concluding in minutes (Al-Hattami, 2024). This structural friction transforms everyday banking from a streamlined digital experience into a slow, reactive struggle against administrative inertia (Adebayo & Egberongbe, 2022).

Furthermore, the systemic failure to guarantee retrieval accuracy and relevance introduces severe informational noise and redundancy into daily branch administration (Unstructured, 2026). In many commercial banking branches in Port Harcourt, search systems routinely yield hundreds of unindexed, irrelevant digital files or failed search queries, forcing staff to manually filter out inaccurate data (Okoye & Asuquo, 2025). This operational defect causes severe human and material resource misallocation. Instead of dedicating human capital to high-value financial analysis, risk mitigation, and consumer relationship management, expensive employee hours are wasted on routine clerical sorting and validating duplicate data streams (Hassan & Musa, 2022; Verlag, 2000). This poor resource utilization inflates branch overhead costs and leads to pervasive staff fatigue, driving up the probability of manual data entry errors that further compromise institutional integrity (Mavodza, 2021).

Compounding these challenges is the acute absence of functional database integration and automated semantic indexing across distinct banking platforms (Elastic, 2025; Ema AI, 2025). Most commercial banks in Nigeria operate on a fragmented hybrid model where legacy paper-based workflows run parallel to disconnected, siloed cloud applications (Nuka & Briggs, 2023). Because these platforms cannot share data smoothly or execute automated retrieval tasks, compliance officers struggle to instantly extract complete transaction trails (Lisedu, 2024). This directly undermines policy compliance. Under the aggressive regulatory oversight of the Central Bank of Nigeria (CBN) and anti-money laundering enforcement frameworks, banks must provide immediate, auditable financial records (Central Bank of Nigeria, 2024). The inability to automatically retrieve and compile these compliance reports leaves branches highly vulnerable to severe regulatory sanctions, massive financial penalties, litigation, and structural loss of corporate reputation (Cihak, 2015; Evans & Lewis, 2021).

While a substantial body of literature evaluates global information systems and generic bank performance indicators, there remains a critical empirical gap regarding how these distinct retrieval dimensions structurally interact with localized branch administration within a regional economic capital like Port Harcourt (Adebayo & Egberongbe, 2022). If these information retrieval gaps remain unaddressed, commercial banks in Rivers State will continue to suffer from delayed operational cycles, ballooning operational costs, and persistent compliance failures.

Existing studies have highlighted the importance of information retrieval strategies for organizations in improving decision-making processes (Li & Yu, 2019) and operational efficiency (Silva et al., 2017). However, there is limited research specifically focusing on the banking sector in Rivers State, Nigeria. This gap in the literature is significant because commercial banks in the region face unique challenges and opportunities that may require tailored information retrieval strategies to enhance their administrative efficiency.

One of the key issues facing commercial banks in Rivers State is the need to effectively manage the vast amount of data and information generated in their daily operations. Without efficient information retrieval strategies, banks may struggle to access timely and accurate information needed for decision-making, resource utilization, and regulatory compliance. This can result in inefficiencies, errors, and missed opportunities, ultimately impacting the overall performance and competitiveness of the banks in the region.

Furthermore, the regulatory environment in Nigeria is constantly evolving, with new requirements and guidelines being introduced to enhance transparency and accountability in the banking sector. Banks in Rivers State need to ensure compliance with these regulations while maintaining operational efficiency. Effective information retrieval strategies can help banks navigate the regulatory landscape more effectively and ensure timely reporting and compliance.

By addressing this research problem, this study aims to fill the existing gap in the literature and provide valuable insights for commercial banks, policymakers, and researchers on the importance of information retrieval strategies in enhancing administrative efficiency and regulatory compliance in the banking sector in Rivers State, Nigeria.

Conceptual Framework

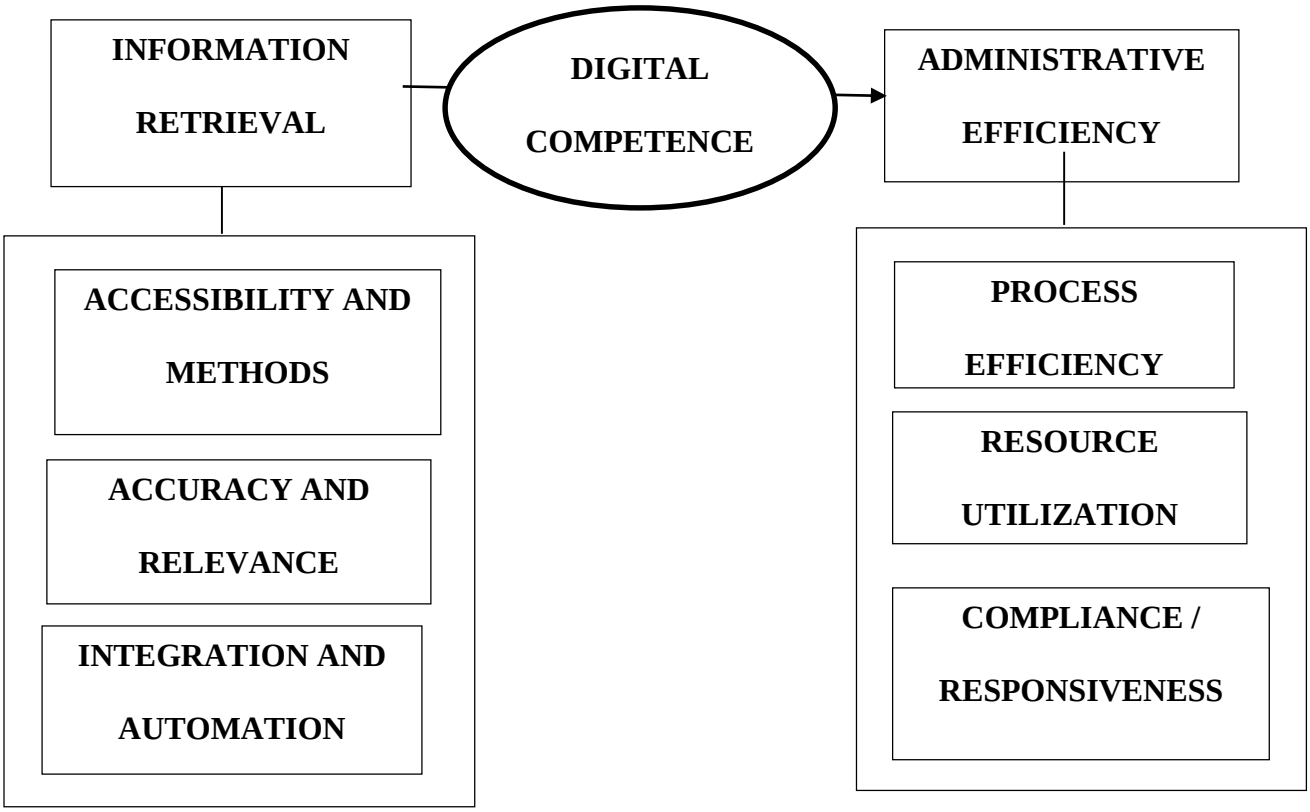


Figure 1.1 Conceptual Framework showing the relationship between Information Retrieval Strategies and Administrative Efficiency of Commercial Banks in Port Harcourt, Rivers State.
Source: Researcher's conceptualization, (2026).

Aim/Objectives of the Study

The main aim of this study was to examine the influence of information retrieval strategies and administrative efficiency of Commercial Banks in Port Harcourt, Rivers State.
Specifically, the study objectives were:

1. To determine how accessibility and methods relates with Process Efficiency of commercial banks in Port Harcourt, Rivers State.
2. To determine how Accuracy and Relevance relates with resource Utilization of commercial banks in Port Harcourt, Rivers State.
3. To determine how integration and automation relates with Compliance/Responsiveness of commercial banks in Port Harcourt, Rivers State.
4. To determine how Digital Competence relates with information Retrieval Strategies and administrative efficiency of Commercial Banks in Port Harcourt, Rivers State.

Research Questions

The following research questions guided the study:

1. How does accessibility and methods relates with Process Efficiency of commercial banks in Port Harcourt, Rivers State?

2. How does Accuracy and Relevance relates with resource Utilization of commercial banks in Port Harcourt, Rivers State?
3. How does integration and automation relates with Compliance/Responsiveness of commercial banks in Port Harcourt, Rivers State?
4. How does Digital Competence relates with information Retrieval Strategies and administrative efficiency of Commercial Banks in Port Harcourt, Rivers State?

Research Hypotheses

The following hypotheses were formulated to guide the study:

Ho_1: There is no significant relationship between accessibility and methods and Process Efficiency of commercial banks in Port Harcourt, Rivers State.

Ho_2: There is no significant relationship between Accuracy and Relevance and resource Utilization of commercial banks in Port Harcourt, Rivers State.

Ho_3: There is no significant relationship between integration and automation and Compliance/Responsiveness of commercial banks in Port Harcourt, Rivers State.

Ho_4: Digital Competence has no significant relationship on information Retrieval Strategies and administrative efficiency of Commercial Banks in Port Harcourt, Rivers State.

Conceptual Review

Concept of Information Retrieval Strategies

Information Retrieval (IR) strategies encompass the structured workflows, system tools, and protocol architectures utilized to extract relevant data from complex repositories. Historically, banking networks relied on manual, slow-moving file records, creating systemic transaction friction. Modern IR systems use advanced indexing, natural language processing (NLP), and algorithmic query patterns to convert vast repositories into actionable institutional insight.

Information retrieval strategies refer to the methods and techniques used to search for and retrieve relevant information from large volumes of data or information sources (Fang & Zhai, 2021). These strategies are crucial in today's digital age for efficiently finding and accessing the information needed to make informed decisions and solve complex problems. One popular information retrieval strategy is keyword searching, which involves entering specific keywords or phrases into a search engine to retrieve relevant documents or resources (Baeza-Yates & Ribeiro-Neto, 2011). Keyword searching is widely used in web search engines like Google to quickly find information on the internet. Boolean operators are another common information retrieval strategy that allow users to combine keywords using operators such as AND, OR, and NOT to refine search results (Manning, Raghavan, & Schütze, 2008). These operators help users retrieve more precise and relevant information by specifying the relationships between keywords.

Other advanced information retrieval strategies include natural language processing, semantic search, and relevance feedback. Natural language processing involves analyzing and extracting meaning from human language to improve search accuracy (Jurafsky & Martin, 2019). Semantic search focuses on understanding the context and meaning of information to retrieve relevant results (Rajaraman & Ullman, 2011). Relevance feedback uses user feedback to enhance search results over time by incorporating user preferences and relevance judgments (Rocchio, 1971). Overall, information retrieval strategies play a vital role in efficiently searching and accessing relevant information from diverse sources. By utilizing a combination of strategies such as keyword searching, Boolean operators, and advanced techniques like natural language processing and relevance feedback, individuals and organizations can effectively find and utilize the information they need.

Dimensions of Information Retrieval Strategies

Accessibility and Methods

Accessibility refers to the design of products, services, environments, and technologies that are usable and inclusive for individuals with disabilities (Negroponte, 1995). In today's digital age, ensuring accessibility is crucial for creating an inclusive society and providing equal opportunities for all individuals to access and use information and communication technologies (ICTs) (World Health Organization, 2020). There are several methods and strategies that can be implemented to enhance accessibility for individuals with disabilities in various contexts. One common method is the use of assistive technologies, such as screen readers, magnifiers, and alternative input devices, that help individuals with visual impairments, motor disabilities, or other challenges access digital content and interact with ICTs (W3C, 2018). Another important method is the use of accessible design principles in the development of websites, applications, and digital interfaces. Accessible design focuses on creating user interfaces that are perceivable, operable, understandable, and robust for all users, including those with disabilities (Salam, 2019). This includes providing text alternatives for images, using proper heading structures, ensuring keyboard access, and optimizing color contrast for better readability.

In addition, incorporating inclusive design practices can help improve accessibility by considering diverse user needs and preferences from the outset of the design process (Microsoft, 2021). User-centered design approaches, such as conducting user research, usability testing, and user feedback sessions with individuals with disabilities, can help identify barriers and opportunities for improving accessibility in products and services. Furthermore, adopting standards and guidelines, such as the Web Content Accessibility Guidelines (WCAG), can provide a framework for ensuring accessibility compliance and best practices in web development (W3C, 2018). Following these guidelines can help developers create accessible content and interfaces that are compatible with assistive technologies and enhance the user experience for individuals with disabilities. By implementing methods such as assistive technologies, accessible design principles, inclusive design practices, and adherence to standards and guidelines, organizations can create more inclusive and accessible digital experiences for all users. Accessibility specifies how easily and rapidly an authorized employee can locate institutional data, while methods refer to the technical protocols—such as cloud platforms, semantic queries, or local indexing systems—used to target that data (Popoola, 2012). Seamless access paths minimize internal communication bottlenecks between teller lines and back-office clearing units. Cloud architecture deployment allows decentralized branch networks across Rivers State to locate uniform customer data instantly, bypassing geographical separation (Chux-Nyeche & Obele, 2026). Strict encryption frameworks shield banking lookups from external threats while keeping access pathways smooth for authorized personnel.

Accuracy and Relevance

Accuracy defines the level of precision and correctness within retrieved data files, whereas relevance measures how closely the matching information satisfies an analyst's immediate decision parameters (Nuka & Peters, 2026).Accuracy and relevance remain vital aspects of information quality in the digital age, where misinformation and biased content can easily spread. To ensure that information is accurate and relevant, individuals must cultivate critical thinking skills and engage in information literacy practices. In a study by Sillence, Briggs, Harris, and Fishwick (2007), the authors emphasize the importance of accuracy in online health information. They found that individuals tend to trust and rely on information that appears accurate and credible, highlighting the impact of accuracy on user decision-making and behavior. Additionally,

the authors stress the need for health information to be up-to-date and based on reliable sources to ensure its accuracy.

Regarding relevance, a study by Vieira and Calheiros (2019) explores the role of relevance assessment in digital libraries. The authors argue that relevance is a subjective concept that depends on the needs and interests of the user. They suggest that digital libraries should provide personalized and contextually relevant information to enhance user satisfaction and engagement. To enhance accuracy and relevance in academic research, researchers must adhere to rigorous standards of scholarship and citation practices. As highlighted by McKnight and Taylor (2018), accurately citing sources and verifying data are essential for maintaining the reliability and integrity of research findings. Moreover, ensuring that research is relevant to the research question and contributes meaningfully to the existing literature is crucial for advancing knowledge in the field. By critically evaluating information sources, verifying data, and ensuring content is tailored to the needs of the audience, individuals can navigate the vast digital landscape effectively and make informed judgments.

Integration and Automation

Integration measures how effectively data search systems sync across disparate back-office platforms, and automation reflects the use of system-driven workflows to pull records without manual employee data entry (Uzor & Obi, 2024). Integration and automation have become key factors in enhancing efficiency and productivity in various industries. Integration refers to the process of combining different systems or processes to work together seamlessly, while automation involves using technology to perform tasks with minimal human intervention. This integration and automation trend is gaining momentum in the digital age, as organizations seek to streamline operations, reduce manual errors, and improve overall performance. According to a study by Spathis, Constantinides, Bada, and Xenos (2020), integration plays a crucial role in supply chain management by connecting various stakeholders, such as suppliers, manufacturers, and distributors. The authors highlight the benefits of integrating supply chain processes, including improved visibility, coordination, and responsiveness to customer demands. By integrating systems and data across the supply chain, organizations can optimize inventory management, reduce costs, and enhance overall collaboration among partners.

Automation, on the other hand, has transformed manufacturing processes, with the adoption of robotics and artificial intelligence (AI) technologies. In a report by McKinsey & Company (2021), automation is identified as a key driver of productivity and innovation in manufacturing industries. The report emphasizes the impact of automation on improving operational efficiency, increasing output quality, and enabling flexible production processes. By automating repetitive tasks and decision-making processes, manufacturers can achieve higher levels of accuracy and consistency in their operations. The integration and automation of financial systems have also revolutionized the way businesses manage their finances. According to a study by PricewaterhouseCoopers (PwC) (2019), integrating financial systems and implementing automation solutions can help organizations streamline financial processes, enhance reporting accuracy, and strengthen compliance with regulatory requirements. Automation tools, such as robotic process automation (RPA) and financial management software, enable finance teams to automate routine tasks, such as invoice processing, budgeting, and financial analysis, allowing them to focus on strategic decision-making.

Concept of Administrative Efficiency

Administrative efficiency represents the optimization of internal back-office functions to support daily front-line bank operations. In the competitive financial sector of Rivers State, it serves as a core indicator of organizational resilience and profitability. Administrative efficiency is a critical aspect of organizational management, encompassing strategies, practices, and technologies that aim to streamline administrative processes, reduce costs, and improve overall performance. In today's fast-paced and competitive business environment, organizations are increasingly focused on achieving administrative efficiency to drive productivity and enhance operational effectiveness. According to a study by Sadiq, Khan, and Bin Tahira (2021), administrative efficiency is essential for achieving organizational objectives, such as cost reduction, improved service delivery, and enhanced stakeholder satisfaction. The authors highlight the importance of adopting efficient administrative processes, such as workflow automation, digitization of documents, and utilization of data analytics, to optimize resource utilization and minimize operational bottlenecks. By enhancing administrative efficiency, organizations can allocate resources more effectively, reduce administrative overhead costs, and enhance resource utilization quality.

One key aspect of administrative efficiency is the adoption of technology solutions, such as enterprise resource planning (ERP) systems, customer relationship management (CRM) software, and workflow automation tools. In a report by Gartner (2020), technology is identified as a key enabler of administrative efficiency, allowing organizations to streamline processes, improve decision-making, and enhance data-driven insights. By leveraging technology solutions, organizations can automate routine administrative tasks, improve collaboration among team members, and enhance overall operational efficiency. Furthermore, administrative efficiency extends beyond internal processes to encompass external interactions with stakeholders, such as customers, suppliers, and regulatory bodies. In a study by Cho and Park (2018), administrative efficiency is defined as the ability of organizations to meet stakeholder needs efficiently and effectively. The authors emphasize the importance of aligning administrative processes with stakeholder expectations, utilizing feedback mechanisms, and continuously improving service delivery to enhance overall administrative efficiency.

Measures of Administrative Efficiency

Process Efficiency

Process efficiency refers to the ability of an organization to carry out tasks and operations in a timely, cost-effective, and productive manner. It involves optimizing processes, workflows, and resources to minimize waste, reduce redundancy, and enhance overall performance. In today's dynamic business environment, organizations are increasingly focused on improving process efficiency to drive productivity, innovation, and competitive advantage. Process efficiency evaluates the speed, fluidity, and seamless execution of standard administrative operational paths (Alabi, 2025). Shorter customer turnaround times decrease internal processing congestion and minimize queue bottlenecks, standardized electronic routing eliminates administrative friction points by automatically passing tasks to the next approver and Agile file discovery systems speed up loan review, risk rating, and account approvals (Bello & Ivy, 2025). According to Hammer and Champy (1993), process efficiency is a key concept in the realm of business process reengineering. The authors emphasize the importance of rethinking and redesigning existing processes to streamline operations, eliminate inefficiencies, and drive administrative efficiency improvements. By identifying bottlenecks, redundancies, and inefficiencies in processes, organizations can implement changes to enhance process efficiency, reduce cycle times, and improve quality.

One essential aspect of process efficiency is the use of process optimization techniques and methodologies, such as Lean Six Sigma, Total Quality Management (TQM), and Kaizen. In a study by Antony et al. (2016), the authors highlight the effectiveness of Lean Six Sigma in improving process efficiency by reducing defects, minimizing variability, and enhancing overall process efficiency. By implementing Lean Six Sigma principles, organizations can identify root causes of inefficiencies, implement data-driven solutions, and continuously monitor and improve processes. Furthermore, the adoption of digital technologies and automation plays a crucial role in enhancing process efficiency. In a report by McKinsey (2020), digital process optimization is identified as a key driver of efficiency gains, enabling organizations to automate repetitive tasks, streamline workflows, and drive operational excellence. By leveraging technologies such as robotic process automation (RPA), artificial intelligence (AI), and machine learning, organizations can accelerate processes, reduce manual interventions, and improve decision-making. Process efficiency also extends to cross-functional collaboration and communication within organizations. In a study by Kumar and Sharma (2019), effective communication and collaboration are highlighted as essential components of process efficiency, enabling teams to work together seamlessly, share knowledge, and drive process improvements. By fostering a culture of collaboration, organizations can break down silos, enhance information sharing, and improve cross-functional process alignment.

Resource Utilization

Resource utilization refers to the efficient allocation and management of resources within an organization to achieve optimal outcomes and maximize productivity. It involves identifying, allocating, and utilizing resources—such as human capital, physical assets, technology, and financial capital—effectively to support organizational goals and objectives. Resource utilization tracks how effectively a bank balances its capital, labor hour allocations, and operational infrastructure (Ibanichuka & Ozioma, 2025). Lower cost-to-income ratios confirm lean administrative overhead costs and highly optimized workflows. Reduced manual labor hours allow bank employees to pivot away from administrative searching toward high-value corporate account management (Amanawa, 2023). Minimized paper record systems lower physical storage overhead and document courier maintenance costs across regional branches (Eze & Okoye, 2019). In today's competitive business landscape, resource utilization is critical for organizations to drive efficiency, cost-effectiveness, and sustainable growth. According to Akgün and Keskin (2009), resource utilization is a key factor in enhancing administrative efficiency and competitiveness. The authors emphasize that effective resource allocation and utilization can lead to improved efficiency, reduced costs, and better decision-making. By strategically managing resources, organizations can optimize their operations, innovate, and adapt to changing market conditions. One fundamental aspect of resource utilization is capacity planning, which involves determining the level of resources needed to meet demand and achieve production targets. A study by Garg and Deshmukh (2006) highlights the importance of capacity planning in optimizing resource utilization and minimizing waste. By forecasting demand, analyzing production capacity, and adjusting resource allocation accordingly, organizations can enhance efficiency, reduce lead times, and improve customer satisfaction. Moreover, the adoption of technology and data analytics plays a critical role in improving resource utilization. In a report by Deloitte (2021), digital transformation is identified as a key driver of resource optimization, enabling organizations to leverage data and analytics to make informed decisions, automate processes, and optimize resource allocation. By harnessing technologies such as cloud computing, artificial intelligence, and predictive analytics, organizations can enhance resource utilization, drive operational efficiency, and gain a competitive edge. Resource utilization also encompasses workforce

management practices aimed at maximizing the productivity and engagement of employees. By investing in employee development, promoting work-life balance, and fostering a culture of empowerment, organizations can enhance employee productivity, retention, and overall performance.

Compliance Responsiveness

Compliance responsiveness refers to an organization's ability to promptly and effectively address regulatory requirements, standards, and policies in a timely manner. It involves staying informed about changes in regulations, ensuring adherence to laws and industry standards, and responding diligently to compliance issues or violations. Compliance responsiveness measures how quickly and reliably a financial institution conforms to regulatory shifts from the Central Bank of Nigeria (CBN) or the Nigeria Deposit Insurance Corporation (NDIC). On-demand audit trails provide clear data lineages for internal investigations and external regulatory examiners. Instant regulatory report parsing accelerates suspicious transaction monitoring and anti-money laundering assessments. Dynamic system adaptations protect regional bank operations from costly compliance fines and severe administrative penalties (Olanrewaju, 2026). In today's complex regulatory environment, compliance responsiveness is essential for organizations to mitigate risks, maintain credibility, and uphold ethical standards. According to Fabozzi and Ma (2003), compliance responsiveness is crucial for financial institutions to comply with regulatory requirements and maintain transparency in their operations. The authors emphasize the importance of promptly addressing compliance issues, implementing robust controls, and fostering a culture of compliance to ensure long-term sustainability and trust with stakeholders. Failure to respond effectively to compliance requirements can result in financial penalties, legal consequences, and reputational damage.

One key aspect of compliance responsiveness is regulatory monitoring and risk assessment. A study by Flanagan and Nunnally (2013) highlights the significance of proactively monitoring regulatory changes, conducting risk assessments, and establishing compliance frameworks to enhance responsiveness to evolving regulations. By staying abreast of regulatory developments, organizations can adapt their compliance programs, policies, and practices to align with emerging requirements and mitigate compliance risks. Technology also plays a critical role in improving compliance responsiveness. In a report by KPMG (2021), digital transformation is identified as a key enabler of compliance management, allowing organizations to automate compliance processes, enhance monitoring capabilities, and facilitate timely response to regulatory changes. By leveraging technologies such as artificial intelligence, robotic process automation, and data analytics, organizations can streamline compliance activities, improve transparency, and mitigate compliance-related challenges. Moreover, employee training and awareness are essential components of compliance responsiveness. In a study by Herath and Rao (2009), the authors highlight the importance of developing a compliance culture, providing ongoing training, and promoting ethical behavior to enhance organizational responsiveness to compliance requirements. By educating employees, promoting ethical conduct, and fostering a culture of accountability, organizations can empower their workforce to detect and address compliance issues proactively.

Moderating Variable: Digital Competence

Digital competence is a critical skill set that individuals and organizations must possess in order to effectively navigate and utilize digital technologies in today's rapidly evolving digital landscape. It encompasses a range of skills, knowledge, and attitudes that enable individuals to navigate

digital tools, applications, and platforms, as well as critically evaluate and use digital information and content. As the digital economy continues to expand and transform various industries, digital competence has become increasingly important for personal and professional success. According to Erstad and Voogt (2019), digital competence is defined as "the ability to access, analyze, evaluate, create, and communicate information in digital environments". This definition underscores the multifaceted nature of digital competence, which involves not only technical skills but also critical thinking, problem-solving, and communication skills. Individuals with high levels of digital competence are able to effectively leverage digital technologies to enhance productivity, communication, and collaboration, both in personal and professional contexts. In a study by Hargittai (2016), the author emphasizes the importance of digital competence in the digital age, highlighting those individuals who possess higher levels of digital skills are better equipped to access and utilize online information, engage in online communication, and navigate digital platforms effectively. Digital competence is therefore crucial for participation in today's digital society, where digital technologies have become integral to various aspects of daily life, work, and education.

Organizations also recognize the significance of digital competence in driving digital transformation and innovation. A report by McKinsey (2021) indicates that digital skills and competencies are key factors in enabling organizations to adapt to digital disruption, enhance operational efficiency, and drive growth in the digital economy. By investing in digital competence development initiatives, organizations can equip their employees with the skills needed to leverage digital technologies, drive digital initiatives, and remain competitive in a rapidly changing business environment. Moreover, the COVID-19 pandemic has underscored the importance of digital competence, as remote work and digital collaboration have become essential for business continuity. A study by Chui et al. (2020) highlights that organizations that prioritize digital competence and digital skills training are better able to navigate the challenges of remote work, adapt to virtual collaboration tools, and maintain productivity in a digital work environment. Digital competence is therefore a critical factor in ensuring organizational resilience and agility in times of crisis.

Theoretical Review

Technology Acceptance Model (TAM)

The Technology Acceptance Model, originally proposed by Davis in his 1986 dissertation and later formalized in 1989, explains and predict how individuals perceive and adopt new information technologies. TAM posits that an individual's intention to use a technology is influenced by their perceived usefulness (PU) and perceived ease of use (PEOU) of the technology. In other words, individuals are more likely to accept and use a technology if they believe it will be beneficial to them and if they perceive that it is easy to use.

Perceived usefulness refers to the extent to which an individual believes that using a particular technology will enhance their performance or make their job easier. If individuals see a technology as useful in improving their productivity, efficiency, or effectiveness, they are more likely to adopt it.

Perceived ease of use, on the other hand, refers to the degree to which an individual believes that using the technology will be effortless and free from complexity. When individuals perceive a technology as easy to use and user-friendly, they are more likely to embrace it. The model has been used to understand and predict the acceptance and adoption of a wide range of technologies, such as mobile applications, e-commerce platforms, virtual learning environments, and electronic health records.

Within commercial banking, if administrative employees believe that an advanced information retrieval strategy simplifies their daily work (PEOU) and accelerates transaction clearing (PU), they adopt the system more quickly (Bello & Ivy, 2025). This link shows that user-friendly retrieval design directly improves process efficiency.

Justification: TAM is highly justified for this study because the success of information retrieval strategies depends directly on human adoption. If a commercial bank implements advanced database infrastructure, but users find the interface confusing or slow, the system fails to deliver value.

Implications: For banking executives in Rivers State, this implies that information retrieval tools must not only be technically sound but also intuitive. Training programs must emphasize how these systems reduce manual search stress. Increasing user acceptance directly boosts back-office process efficiency and reduces employee turnaround time.

Technological Determinism Theory

Popularized by Thorstein Veblen and expanded by Marshall McLuhan, Technological Determinism, argued that technology is not simply a tool or instrument used by society, but rather a driving force that shapes values, beliefs, and social structures. He believed that technological innovations act as catalysts for social change, leading to shifts in power dynamics, economic systems, and cultural norms. Veblen's ideas emphasized the transformative impact of technology on society and the economy, highlighting its role in shaping human behavior and societal institutions.

Building on Veblen's work, Marshall McLuhan, a media theorist, further developed the concept of technological determinism. McLuhan famously stated that "the medium is the message," emphasizing that the form and characteristics of communication technologies shape the way in which information is transmitted and received, influencing individual perceptions and societal behaviors. McLuhan's work focused on the impact of media technologies, such as television and the internet, on human consciousness, culture, and social interactions.

Technological Determinism Theory asserts that technology has the power to reshape social structures, communication patterns, and cultural practices. It suggests that the introduction of new technologies can lead to unintended consequences and profound changes in society, often driving innovation and progress while also posing challenges and disruptions.

Critics of Technological Determinism Theory argue that it oversimplifies the complex relationship between technology and society, neglecting the role of human agency, social context, and power dynamics in shaping technological development and adoption. They argue that technology is not inherently deterministic, but rather shaped by social factors, cultural norms, and human intentions. Despite these criticisms, Technological Determinism Theory remains a valuable perspective for understanding the profound impact of technology on society and culture. By highlighting the role of technology in shaping social change and human behavior, this theory offers valuable insights into the complex interplay between technology, society, and culture.

For commercial banks operating in Rivers State, this theory implies that old, manual file systems lock a branch into slow administrative habits. Introducing fast, automated information retrieval strategies forces the organization to modernize its structures, directly improving compliance and resource management.

Justification: This theory is justified because banking structures historically mirror their core operating tools. The shift from bulky ledger books to centralized databases forced commercial banks to transition from siloed physical archives to streamlined digital operations.

Implications: The study implies that technology acts as the primary driver for organizational restructuring. Banks cannot achieve modern administrative efficiency using outdated retrieval frameworks. Investing in automated information retrieval forces an institutional evolution, automatically aligning worker behavior with optimal resource utilization.

Dynamic Capabilities Theory

Propounded by Teece, Pisano, and Shuen (1997), Dynamic Capabilities Theory focuses on a firm's ability to adapt, innovate, and learn in response to changes in its external environment. Teece, in particular, has been instrumental in expanding and popularizing this theory. Dynamic capabilities are the firm's capacity to integrate, build, and reconfigure internal and external competences to address rapidly changing environments. These capabilities enable a firm to sense and seize new opportunities, respond effectively to threats, and continually renew and reconfigure its resources and processes. In essence, dynamic capabilities theory emphasizes a firm's ability to "sense, seize, and transform" in order to create and sustain a competitive advantage.

Banks that continuously adapt their information search methods can quickly pivot during sudden market disruptions, regulatory changes, or economic shifts, ensuring long-term operational resilience. By adopting a dynamic capabilities perspective, firms can position themselves to thrive in the face of uncertainty, disruption, and change, ultimately driving sustained success and growth.

Justification: This framework is highly justified because the Nigerian financial sector experiences constant regulatory and environmental adjustments from authorities like the CBN. Fixed, unyielding administrative structures cannot survive sudden reporting updates or shifting market dynamics.

Implications: The implication for commercial banks is that information retrieval must be treated as a flexible asset rather than a static IT installation. Systems must change dynamically alongside shifting regulatory compliance demands. Banks that build this flexible capability achieve superior compliance responsiveness and maintain a distinct competitive advantage over rigid competitors.

METHODOLOGY

This study adopted a cross sectional survey research design The population of the study comprises of twenty -four (24) commercial banks operating in Port Harcourt, Rivers State, Nigeria. The commercial banks constituted the study population because the study focuses on the administrative efficiency of the banks (at the organizational level). Considering the manageable size of the population, the entire population of 24 commercial banks was used without sampling. Data were gathered through a 4-point Likert scale questionnaire titled 'Information retrieval strategies and administrative efficiency Questionnaire' (IRSAEQ). Validity was verified by measurement experts, and a Cronbach Alpha reliability test yielded an acceptable index of 0.86. Out of one hundred and sixty-eight (168) copies of the questionnaire distributed, 131 complete and valid copies were retrieved. Data analysis was performed using descriptive statistics for research questions and Pearson Product Moment Correlation Coefficient (r) via SPSS to test hypotheses at a 0.05 level of significance.

Results and Data Analysis

Ho_1: There is no significant relationship between accessibility and methods and Process Efficiency of commercial banks in Port Harcourt, Rivers State.

Table 1: Correlations Matrix of accessibility and methods and process efficiency

		process efficiency	accessibility and methods
Pearson's Rho	Correlation Coefficient	**1.000**	**.677****
	Sig. (2-tailed)	.	.000
	N	131	131

**. Correlation is significant at the 0.01 level (2-tailed).

Source: SPSS Output, (2026).

On table 1 accessibility and methods and process efficiency showed that the probability value (pv) = 0.000 which is less than 0.05, hence from the decision rule, null hypotheses is rejected indicating that there is a significant relationship between accessibility and methods and process efficiency. This shows that accessibility and methods, if applied in commercial banks will have a significant positive relationship on process efficiency.

$H0_2$ There is no significant relationship between Accuracy and Relevance and resource Utilization of commercial banks in Port Harcourt, Rivers State.

Table 2: Correlation Matrix of Accuracy and Relevance, and resource Utilization

		Accuracy and Relevance	Resource Utilization
Pearson's Rho	Correlation Coefficient	**1.000**	**.656****
	Sig. (2-tailed)	.	.000
	N	131	131

**. Correlation is significant at the 0.01 level (2-tailed).

Source: SPSS Output, (2026)

Table 2 on the above hypothesis showed that the probability value pv = 0.000 < 0.05, hence from the decision rule, null hypothesis is rejected indicating that there is a significant relationship between accuracy and relevance and resource utilization. This shows that the accuracy and relevance has a significant positive relationship on the resource utilization.

H_{03} There is no significant relationship between integration and automation and Compliance/Responsiveness of commercial banks in Port Harcourt, Rivers State.

Table 3: Correlations Matrix of integration and automation and Compliance/Responsiveness

		Integration and automation	Compliance/Responsiveness
Pearson's Rho	Correlation Coefficient	**1.000**	**.774****
	Sig. (2-tailed)	.	.000
	N	131	131

**. Correlation is significant at the 0.01 level (2-tailed).

Source: SPSS Output

Table 3 on the above hypothesis showed that the probability value pv = 0.000 < 0.05, hence from the decision rule, null hypothesis is rejected indicating that there is a significant relationship between Integration and automation and compliance responsiveness. This shows that the Integration and automation has a significant positive relationship on compliance responsiveness.

HO_4: Digital competence has no significant relationship on information retrieval strategies and administrative efficiency of commercial banks in Port Harcourt, Rivers State.

Table 4: Correlations on Digital competence and Information retrieval strategies and administrative efficiency

		Digital competence	Information retrieval strategies	Administrative Efficiency
Pearson's Rho	Correlation Coefficient	**1.000**	**0.417**	**0.341**
	Sig. (2-tailed)	.	.000	.000
	N	131	131	131

**. Correlation is significant at the 0.01 level (2-tailed).

Source: SPSS Output

Table 4 above reveals r value of 0.417 at a significant level of 0.00 signifying a correlation between information retrieval strategies and administrative efficiency; this shows a positive relationship which is significant. The partial relationship controlling for Digital competence is a strong positive association given the r-value 0.417 which is high. Furthermore, the significance value of 0.00 which is less than the alpha level of 0.05 implies that the relationship between information retrieval strategies and administrative efficiency is moderated by the influence of the Digital competence of the organization. This implies that the extent to which Digital competence elements such as managerial support is adopted by the organization, the more information retrieval strategies adopted will in turn enhance administrative efficiency of commercial banks in Port Harcourt Rivers State.

Discussion of Findings

For the first finding that is, accessibility and methods and process efficiency, R=0.677. This represents a high correlation indicating a strong substantial relationship. By interpretation, there is a strong positive relationship between accesibility and methods and process efficiency of commercial banks in Rivers state. This finding aligns with the real empirical conclusions of Agboola (2006), who established that the implementation of electronic information management systems in Nigerian banks directly reduced transaction processing times and accelerated service delivery. When retrieval methods are archaic, confusing, or restricted by poor network paths, employees face substantial cognitive barriers. This degradation in access creates severe structural delays, a reality that mirrors the findings of Woherem (2000), who argued that sub-optimized technology infrastructures in the Nigerian banking sector inevitably create administrative friction and paralyze routine workflows. Regarding resource utilization, the empirical data provides strong evidence that information accuracy protects against the severe waste of expensive human capital and organizational material assets. In branches burdened by poorly indexed archives or low-precision database architectures, an excessive number of employee hours are lost to manual data

validation, cross-checking duplicate files, and sorting through search errors. The findings of this study prove that high information relevance optimizes branch resource allocations by allowing personnel to instantly act on data rather than spending corporate time auditing it. This outcome directly corroborates a real-world regional study conducted by Idih and Chiemeke (2026) on banking institutions in Rivers State, which demonstrated that implementing cloud-based data recovery and precise retrieval systems significantly eliminates manual redundancies and enhances core workflow productivity. the findings highlight a vital positive relationship between integration and automation and the third measure of administrative efficiency, policy compliance. Under the aggressive electronic monitoring frameworks and data reporting guidelines enforced by the Central Bank of Nigeria (2024), deposit money banks are legally mandated to maintain instant, transparent, and auditable transaction pathways. When information systems lack structural integration, compliance officers are forced to manually reconcile disjointed transaction trails during regulatory windows, exposing the branch to late-filing penalties, financial disclosure errors, and regulatory friction. The data confirms that automated, integrated retrieval systems dynamically synthesize anti-money laundering and auditing records on demand, thereby shielding the institution from severe litigation risks and reputational damage. The test of hypothesis ten revealed that there is a moderating role of Digital competences in the relationship between information retrieval strategies and administrative efficiency of commercial banks in Port Harcourt, Rivers state.

This reality means that advanced automated retrieval tools do not automatically guarantee process speed, optimal resource utilization, or policy compliance on their own. Instead, their capacity to drive these efficiency outcomes expands when employee digital proficiency is high and contracts when staff digital literacy is low. This baseline reality strongly aligns with the empirical conclusions of Mekuri-Ndimele and Oke (2024), who conducted a study on commercial banks in Rivers State and found that while digital infrastructure is a strong predictor of information management effectiveness, organizations must ensure their employees possess high digital proficiency to fully leverage the potential of those technologies and maintain a competitive advantage.

When bank employees possess robust digital capabilities—including keyboard query command mastery, understanding advanced metadata taxonomy, and structured database handling protocols—their capacity to maximize information accessibility, accuracy, and platform integration scales up instantly. This interactive dynamic is further supported by Ordua and Ignatius (2025), who demonstrated that sharp digital competencies among administrative managers serve as a powerful tool for mitigating operational challenges, reducing data handling delays, and smoothing internal corporate communication paths.

CONCLUSION

Specifically, this study concludes that data accessibility and retrieval methods serve as the initial foundation for building branch agility. Providing authorized banking personnel with flexible, immediate search pathways directly shortens transaction cycles and accelerates process efficiency. Furthermore, the capacity of internal systems to ensure high accuracy and relevance in search outputs serves as a critical defense against structural resource waste. When database frameworks isolate contextually precise files on the first attempt, branches optimize their human capital utilization, preventing expensive labor hours from being lost to duplicate lookups and manual cross-checking. Similarly, cross-platform integration and automated semantic indexing are essential for establishing ironclad regulatory and policy compliance. Fully integrated databases allow risk management teams to effortlessly synthesize auditable financial records, shielding the

branch from the catastrophic penalties and reputational damage associated with late or disjointed statutory reporting.

Finally, this study concludes that technological infrastructure alone cannot guarantee organizational peak performance. Digital competence acts as an indispensable human catalyst that moderates the strength of these informational systems. Advanced automated retrieval tools yield their maximum positive return on process speed, resource allocation, and regulatory compliance only when paired with a digitally proficient, technologically literate workforce. Ultimately, commercial banks in Rivers State can only bridge the gap between heavy information volume and rapid administrative execution by continuously synchronizing their digital retrieval strategies with aggressive human capital training.

RECOMMENDATIONS

Based on the findings of this study, the following recommendations are proposed for enhancing the digital office integration and economic development of tertiary institutions in Rivers State:

1. Banks should implement centralized, cloud-based systems that allow authorized staff to access customer records, KYC documents, and internal memos in real time from any branch. This will reduce delays and improve service delivery across Port Harcourt branches.
2. Banks should upgrade to search systems with natural language processing and establish a dedicated data governance unit. This will ensure staff retrieve accurate, current, and relevant information while minimizing errors from outdated or duplicate records.
3. Management should ensure seamless integration of all operational systems into a single interface. This will eliminate the need to switch between multiple applications and enable faster, more coordinated customer service.
4. The IT and Operations Departments should leverage Robotic Process Automation for tasks such as daily reports, transaction listings, and compliance documentation. This will reduce manual workload and allow staff to focus on core banking activities.

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