

**ADMINISTRATIVE STRATEGY AND PUBLIC SECTOR EFFECTIVENESS: THE DIGITAL INFORMATION MANAGEMENT TRIANGULATION**

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**ABSTRACT**

This study empirically examines the relationship between administrative strategy, digital information management, and public sector effectiveness in Rivers State, Nigeria, against the backdrop of persistent bureaucratic inertia and operational delays within government institutions in the Niger Delta. Using a descriptive correlational survey design, data were collected from a stratified sample of 350 administrative and technical personnel drawn from five public institutions. The study analyzed how strategic dimensions of process automation and data integration influence public sector effectiveness, measured through institutional efficiency and responsiveness. Data were analyzed using multiple regression and path analysis techniques. The findings reveal that administrative strategy significantly predicts institutional efficiency ( $R^2 = 0.617$ ) and responsiveness ( $R^2 = 0.491$ ). In addition, digital information management systems were found to exert a substantial mediating effect, accounting for 56.6 percent of the variance in the relationship between administrative strategy and performance outcomes. The results demonstrate that improvements in public sector effectiveness depend on the alignment of technical infrastructure with a strategic information culture capable of transforming digital investments into actionable administrative outcomes. The study therefore recommends the institutionalization of cohesive digital governance policies and continuous workforce capacity development to enhance the accuracy, timeliness, and quality of administrative decision-making in Rivers State.

**Keywords:** *Administrative Strategy, Digital Information Management, Public Sector Effectiveness, Rivers State, Decision-Making Dynamics.*

**INTRODUCTION**

The contemporary landscape of public administration is increasingly shaped by a decisive departure from rigid, hierarchical bureaucratic arrangements toward flexible, technology-enabled governance frameworks commonly described as Digital Era Governance (Alikornwo, Adiele, & Dornanu, 2025). This shift reflects a deeper structural transformation within the state, where governance processes are reconfigured to align with the demands of speed, transparency, and interconnectivity imposed by the digital age. Digital Era Governance extends beyond the automation of existing procedures; it entails a comprehensive reorientation of administrative logic in which information systems, data

analytics, and digital platforms become central to policy formulation, service delivery, and institutional accountability. In this context, public value creation is no longer assessed solely by adherence to rules and procedures, but by the capacity of administrative systems to respond intelligently to citizen needs through integrated information flows and coordinated decision-making processes (OECD, 2024).

At the global level, digital transformation has emerged as a core determinant of public sector effectiveness, redefining how governments organize knowledge, manage resources, and interact with stakeholders. Scholars increasingly acknowledge that digital technologies enhance not only operational efficiency but also the quality of administrative judgment by enabling evidence-informed decision-making (Aharon & Siev, 2024). The proliferation of big data, interoperable databases, and cloud-based platforms has intensified the strategic importance of information management within public institutions. Consequently, the performance of contemporary public organizations is closely tied to their ability to manage complex data ecosystems while safeguarding information integrity and security (Visa, 2025). These developments highlight a growing consensus that administrative competence in the digital era is inseparable from the strategic governance of information assets, particularly in environments characterized by institutional complexity and resource constraints.

Within the Nigerian administrative milieu, and more specifically in Rivers State, the pursuit of public sector effectiveness is rooted in a long-standing reform agenda aimed at constructing a civil service that is adaptive, efficient, and citizen-oriented (Alikornwo & Nwinyokpugi, 2025). Successive reform initiatives have sought to reduce procedural bottlenecks, strengthen professional capacity, and enhance service delivery outcomes. Rivers State occupies a strategic position within Nigeria as an industrial, commercial, and educational hub, hosting a dense concentration of public institutions whose performance has far-reaching socio-economic implications. These characteristics generate administrative pressures that demand a sophisticated combination of administrative leadership, policy coordination, and digital innovation to sustain institutional effectiveness (Zeb-Obipi & Kpurunee, 2023).

In response to these pressures, the evolution of the Rivers State Civil Service has been accompanied by deliberate efforts to introduce electronic administration tools designed to improve coordination, information sharing, and workflow management across ministries, departments, and agencies (Nwinyokpugi & Alikornwo, 2022). These initiatives reflect an emerging recognition that administrative reform and digitalization must proceed concurrently to achieve meaningful improvements in organizational performance. Recent scholarly contributions emphasize that administrative strategies such as competency-based role allocation, performance-linked incentives, and structured communication protocols yield stronger outcomes when supported by robust office technologies and digital information systems (Ekweozor & Omah, 2025). In this sense, digital tools function not as isolated technical interventions but as enablers of broader strategic intent within public organizations.

The interrelationship between administrative strategy and digital information management is particularly pronounced in the operational realities of public tertiary institutions and government ministries in Rivers State (Adiele & Bestman, 2025). Administrative communication remains the central mechanism through which policies are interpreted, decisions are transmitted, and organizational coherence is maintained. However, the effectiveness of this communication is significantly conditioned by the quality, accessibility, and reliability of underlying information systems (Alikornwo & Nwinyokpugi, 2025). Contemporary digital information systems have therefore evolved from simple repositories of records into strategic resources that shape the consistency, timeliness, and credibility of administrative actions (Adiele & Gbekee-Kalagbor, 2025). By enabling systematic data capture, retrieval, and analysis, these systems support a transition away from intuition-driven and paper-based practices toward decision-making processes grounded in verifiable evidence and institutional memory (Obara & Adiele, 2025).

Notwithstanding these advancements, the quest for comprehensive administrative effectiveness in Rivers State remains constrained by persistent implementation challenges associated with digital transformation (Okafor & Nwachukwu, 2025). Many public institutions operate within hybrid administrative environments where digital initiatives coexist uneasily with entrenched manual practices, resulting in fragmented workflows and suboptimal performance outcomes (Adiele & Bestman, 2025). The efficacy of administrative strategies in such contexts is further shaped by organizational information culture, particularly norms governing data access, sharing, and utilization. Where access to timely and accurate information is limited, administrative processes are prone to delays, coordination failures, and diminished responsiveness (Obara & Adiele, 2025). Against this backdrop, an empirical examination of the interaction between administrative strategy and digital information management becomes imperative for uncovering the mechanisms through which public sector efficiency, coherence, and responsiveness can be strengthened within the Rivers State context (Alikornwo & Nwinyokpugi, 2025).

### **Statement of the Problem**

Administrative inefficiency continues to pose a persistent and systemic challenge for public institutions in Rivers State, manifesting in operational delays, coordination failures, and weakened decision-making capacity (Adiele & Bestman, 2025). These inefficiencies are evident in routine administrative processes where approvals are protracted, interdepartmental communication is poorly synchronized, and institutional responses to emerging issues are slow and inconsistent. Such bottlenecks undermine the credibility of public institutions and constrain their ability to deliver timely and reliable services to citizens. Although successive reform efforts have emphasized modernization and capacity building, the administrative architecture of many ministries, departments, and agencies remains anchored in labor-intensive and paper-based workflows that are ill-suited to the demands of contemporary governance (Okafor & Nwachukwu, 2025).

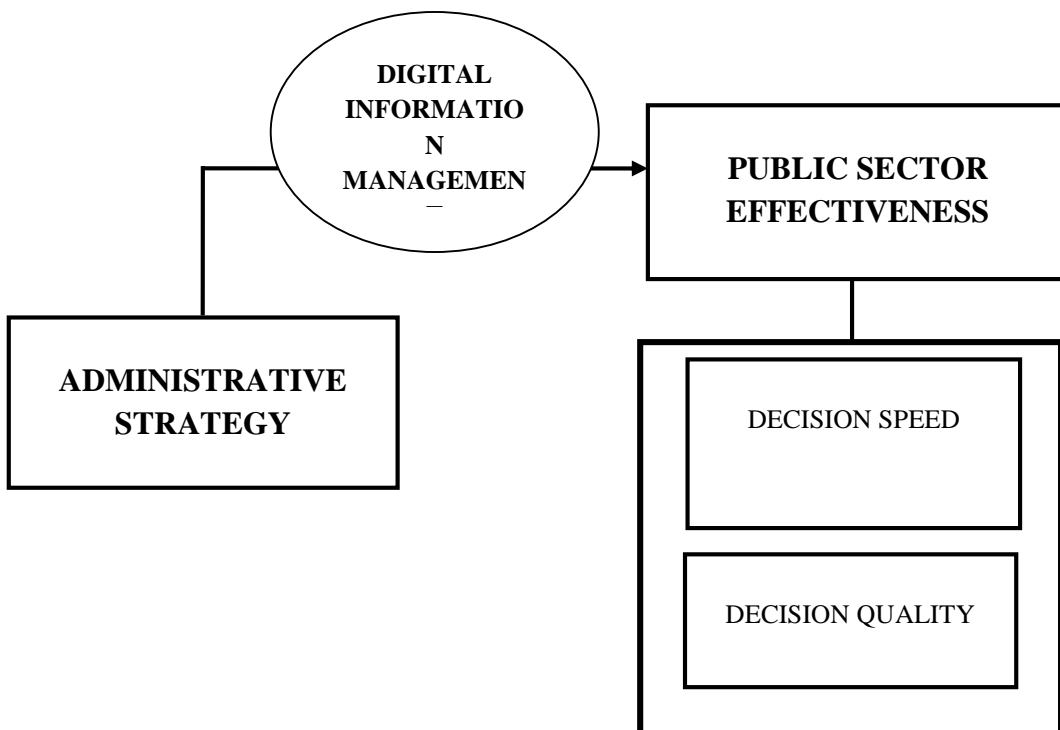
A critical dimension of this problem is the continued reliance on manual record-keeping systems, which significantly hampers data processing speed and increases the likelihood of documentation errors, data loss, and information duplication. In environments where records are dispersed across physical files and unintegrated digital platforms, administrative officers often struggle to retrieve accurate information promptly, leading to repetitive procedures and weakened institutional memory. Many government ministries in Rivers State currently operate within a transitional administrative space where digital tools, such as Enterprise Resource Planning systems, have been introduced but not fully institutionalized. The fragmented nature of these implementations means that digital systems often function alongside manual processes, producing hybrid arrangements that lack the efficiency of fully automated systems and the procedural clarity of traditional methods (Adiele & Bestman, 2025).

These structural limitations are further intensified by a weak culture of information utilization within public institutions. Even where data is available, it is not consistently transformed into actionable knowledge that can inform administrative judgment and strategic choices. Decision-making processes are therefore frequently characterized by delays, inconsistencies, and reliance on personal discretion rather than systematically analyzed information (Obara & Adiele, 2025). The absence of standardized information flows and shared data repositories restricts collaborative problem-solving and diminishes the capacity of administrators to anticipate challenges or evaluate policy outcomes effectively. As a result, administrative strategies that are sound in principle often fail to translate into measurable improvements in institutional performance.

While existing scholarship has examined digital transformation and administrative reform within the Nigerian public sector, a significant empirical gap remains concerning the specific mediating role of Information Management Systems in linking administrative strategy to institutional effectiveness in Rivers State. Many studies have approached digitalization as a standalone technical intervention or

have concentrated on leadership styles and policy frameworks without sufficient attention to the information infrastructures through which strategies are operationalized (Alikornwo & Nwinyokpugi, 2025). This fragmented analytical focus limits understanding of how administrative intent is converted into practice through process automation, data integration, and information-sharing mechanisms.

The lack of empirical clarity on how Information Management Systems interact with administrative strategies obscures the pathways through which outcomes such as decision speed, record accuracy, and organizational responsiveness are shaped. Prior studies have seldom examined how information culture and process automation jointly influence administrative effectiveness within a subnational context such as Rivers State (Alikornwo et al., 2025). In the absence of such evidence, public sector managers risk committing substantial resources to digital technologies that remain poorly aligned with institutional strategies and operational realities (Alikornwo & Adiele, 2024). This misalignment reinforces inefficiency rather than resolving it, thereby underscoring the need for a focused empirical investigation into the strategic and mediating functions of Information Management Systems within the public administration of Rivers State.



**Figure 1:** Conceptual framework of Administrative Strategy and Public Sector Effectiveness in Rivers State, Nigeria.

## LITERATURE REVIEW

### Administrative Strategy

Administrative strategy within the public sector is broadly understood as the intentional and systematic alignment of institutional objectives, human capital, operational processes, and technological infrastructure to ensure the effective fulfillment of public mandates. It represents a conscious effort by public organizations to translate policy intentions into coordinated administrative action through structured planning and resource deployment. In the context of Rivers State, administrative strategy reflects an evolving response to growing environmental complexity, fiscal

pressures, and rising citizen expectations for efficient and transparent governance. This strategic orientation emphasizes not only what public institutions seek to achieve, but also how internal administrative arrangements are configured to support sustainable performance and organizational continuity (Alikornwo & Adiele, 2024). Within Rivers State, administrative strategy increasingly incorporates electronic administrative indicators as functional proxies for maintaining operational stability and institutional effectiveness across both governmental and manufacturing-related public establishments. These indicators serve as measurable signals of administrative capacity, such as workflow efficiency, information turnaround time, and coordination effectiveness across departments. Their adoption reflects a recognition that contemporary public administration requires more than formal rules and hierarchical control; it demands adaptive systems that can process information rapidly and support informed managerial action. In this sense, administrative strategy becomes a practical framework through which public institutions seek to balance regulatory obligations with innovation-driven efficiency (Alikornwo & Adiele, 2024).

At the operational level, administrative strategy is enacted through interrelated dimensions that collectively shape how public organizations function on a daily basis. Prominent among these dimensions are process automation, data integration, and leadership vision, each of which plays a distinct but complementary role in strengthening administrative capacity (Alikornwo, Adiele, & Dornanu, 2025). Process automation targets the rationalization of internal procedures by embedding digital tools into routine administrative tasks, thereby reducing procedural delays and minimizing human error. Data integration addresses the long-standing challenge of fragmented information systems by promoting interoperability and shared access to organizational data. Leadership vision provides the directional coherence required to align technological investments with institutional priorities and long-term development goals. Process automation specifically refers to the application of software applications and digital platforms to manage repetitive, time-consuming, and rule-based administrative functions. In public institutions, these functions often include document processing, payroll administration, procurement tracking, and record management. By automating such processes, public organizations can significantly reduce administrative workload, shorten processing cycles, and reallocate human resources toward analytical and supervisory roles that require judgment and discretion (OECD, 2024). In Rivers State, the strategic relevance of process automation lies in its capacity to address chronic inefficiencies associated with manual workflows, particularly in ministries and agencies with high transaction volumes.

Data integration constitutes another critical pillar of administrative strategy, focusing on the consolidation and harmonization of information flows across organizational units. Public institutions traditionally operate in silos, where departments maintain separate databases and reporting systems that inhibit coordination and timely decision-making. Data integration seeks to overcome this limitation by establishing shared platforms or service layers that connect disparate data sources into a unified information environment. Such integration reduces duplication, enhances data consistency, and accelerates information retrieval, thereby enabling administrators to gain a holistic view of organizational operations (Visa, 2025). For Rivers State public institutions, integrated data systems support coordinated planning, improve monitoring and evaluation practices, and strengthen accountability mechanisms across agencies. Contemporary international scholarship increasingly underscores that process automation and data integration are no longer discretionary innovations but foundational components of digital public infrastructure. These tools underpin the capacity of governments to deliver inclusive, reliable, and responsive services in complex socio-economic environments (World Economic Forum, 2025). Their strategic significance extends beyond efficiency gains to encompass broader governance objectives such as transparency, policy coherence, and institutional resilience. Within this framework, administrative strategy functions as the connective tissue linking technological capability with organizational purpose, ensuring that digital tools are deployed in ways that reinforce, rather than fragment, public sector effectiveness in Rivers State.

### **Public Sector Effectiveness**

Public sector effectiveness denotes the extent to which public institutions are able to accomplish their legally assigned and socially expected objectives while conserving resources and maintaining relevance to the needs of their constituencies. It integrates two core principles of public administration: efficiency, which emphasizes the prudent use of financial, human, and material resources with minimal waste, and responsiveness, which reflects the ability of institutions to adapt their actions to evolving societal demands in a timely and appropriate manner. In contemporary governance settings, effectiveness has emerged as a critical benchmark for evaluating public organizations, particularly as citizens increasingly demand visible results, accountability, and value for public expenditure.

In this study, public sector effectiveness is examined through the lens of decision-making dynamics, with a specific focus on decision speed and decision quality as key analytical subthemes (Alikornwo & Nwinyokpugi, 2025). Decision-making constitutes the central mechanism through which administrative intent is translated into action, shaping policy implementation, service delivery, and organizational performance. By concentrating on these two dimensions, the study provides a structured and empirically grounded framework for assessing how administrative strategies influence tangible governance outcomes within public institutions.

#### ***Decision Speed***

Decision speed refers to the promptness and timeliness with which administrative judgments are reached and implemented, ensuring that institutional responses remain relevant to emerging challenges and operational demands (Obara & Adiele, 2025). In the public sector, slow decision-making often results from procedural complexity, fragmented information systems, and prolonged approval hierarchies, all of which undermine institutional agility. Timely decisions enable public organizations to respond proactively to policy issues, service delivery demands, and environmental changes, thereby strengthening administrative credibility and effectiveness.

Within the digital governance context, decision speed is significantly enhanced by the adoption of automated workflows, integrated information systems, and real-time data access. These digital enablers reduce processing delays by streamlining approval chains, eliminating repetitive manual tasks, and providing administrators with immediate access to relevant information (Scupola & Mergel, 2022). As a result, administrative actions can be initiated and executed more swiftly, allowing public institutions to address issues before they escalate into systemic problems.

#### ***Decision Quality***

Decision quality captures the degree to which administrative decisions are accurate, coherent, and aligned with established policy frameworks and institutional objectives (Obara & Adiele, 2025). High-quality decisions are those that are grounded in reliable evidence, informed by comprehensive data analysis, and capable of producing intended outcomes without generating avoidable negative consequences. In the public sector, decision quality is particularly significant because administrative choices often have far-reaching social, economic, and political implications.

Data-driven decision-making constitutes a central determinant of decision quality in contemporary public administration. Decisions supported by accurate records, integrated databases, and systematic analytical processes are more likely to reflect organizational realities and policy priorities than those based primarily on intuition or personal discretion (Alikornwo & Nwinyokpugi, 2025). Robust information management practices therefore enhance the consistency, transparency, and defensibility of administrative judgments. By strengthening decision quality alongside decision speed, public institutions can achieve a balanced form of effectiveness that combines timely action with substantive policy coherence.

## **Digital Information Management**

Digital Information Management (DIM), frequently operationalized through Information Management Systems, constitutes the technical and organizational backbone through which administrative communication, coordination, and strategic intent are translated into operational reality. It encompasses the integrated set of technologies, processes, and institutional practices deployed to capture, process, store, retrieve, and disseminate information within and across organizational units (Adiele & Bestman, 2025). In contemporary public administration, DIM extends beyond the mechanistic handling of records to include the governance of information flows, data integrity, access protocols, and analytical capacity. As such, it functions as a critical enabler of coherence, transparency, and continuity in administrative operations.

Within Rivers State public tertiary institutions and government establishments, Information Management Systems have been identified as pivotal to maintaining consistent, accurate, and readily accessible documentation in real time (Adiele & Bestman, 2025). These systems support a wide range of administrative functions, including personnel management, academic and financial records, procurement, and interdepartmental reporting. By digitizing and standardizing records, IMS reduce the risks associated with document loss, duplication, and inconsistency that are prevalent in manual record-keeping environments. Real-time accessibility further strengthens administrative responsiveness by enabling officers and managers to retrieve critical information without procedural delays, thereby improving coordination and institutional memory.

The conceptualization of DIM as a mediating mechanism underscores the argument that administrative strategy does not exert its influence on public sector effectiveness in isolation. Rather, the extent to which strategic initiatives translate into improved performance is significantly conditioned by the strength, integration, and reliability of the underlying digital infrastructure (Alikornwo & Nwinyokpugi, 2025). Administrative strategies such as process automation, competency-based task allocation, and performance monitoring rely heavily on accurate and timely information flows. Where Information Management Systems are fragmented, poorly maintained, or underutilized, these strategies are constrained, resulting in limited gains in efficiency and responsiveness.

Empirical insights suggest that effective administrative communication only yields high-quality and timely decisions when supported by automated workflow orchestration, interoperable databases, and centralized data repositories (Alikornwo & Nwinyokpugi, 2025). Automated workflows ensure that information moves seamlessly across approval stages without unnecessary human intervention, while centralized data stores provide a single source of institutional truth that enhances decision accuracy and consistency. In the absence of such digital support structures, administrative communication is prone to distortion, delay, and selective interpretation.

Consequently, the integration of Digital Information Management into the administrative framework emerges as a strategic necessity rather than a discretionary technological upgrade. For public institutions in Rivers State seeking to improve operational performance, strengthen decision-making dynamics, and enhance overall effectiveness, investments in IMS must be aligned with administrative objectives and embedded within organizational routines (Alikornwo & Adiele, 2024). DIM therefore represents the critical linkage between administrative strategy and public sector effectiveness, mediating how strategic intentions are operationalized and how governance outcomes are ultimately realized.

## **Theoretical Framework**

### ***Technological Determinism***

Technological Determinism is most commonly associated with the works of Thorstein Veblen and was later popularized by scholars such as Marshall McLuhan, who argued that technological innovations fundamentally shape organizational structures, social relations, and patterns of human

behavior. The core assumption of this theory is that technology acts as the primary catalyst for institutional change, influencing how organizations function, communicate, and make decisions. Within public administration, technological determinism suggests that the introduction of advanced digital systems restructures administrative processes by redefining workflows, reducing procedural rigidity, and enhancing operational efficiency.

Applied to public sector administration, the theory implies that the adoption of robust digital information systems naturally leads to improved performance by automating routine tasks, minimizing clerical errors, and accelerating information processing (Adiele & Bestman, 2025). In this framework, technology is viewed not merely as a support tool but as a transformative force that reshapes administrative logic and institutional behavior. For public institutions in Rivers State that are transitioning from traditional paper-based bureaucracies to electronic office environments, technological determinism provides a useful explanatory lens. It helps to clarify why digital platforms such as electronic records management systems and workflow automation tools are often expected to produce efficiency gains, even in the absence of deep organizational restructuring (Adiele & Bestman, 2025). The theory therefore underpins arguments that improvements in administrative effectiveness can be directly attributed to the quality and sophistication of technological infrastructure deployed within public institutions.

### ***Resource-Based Theory (RBT)***

Resource-Based Theory is primarily attributed to Edith Penrose, whose foundational work on the growth of the firm emphasized the strategic importance of internal resources, and was later formalized by scholars such as Jay Barney. RBT posits that organizational performance is determined by the ability to identify, develop, and deploy resources that are valuable, rare, difficult to imitate, and non-substitutable. Unlike externally oriented theories of competition, RBT focuses on internal capabilities as the primary source of sustained performance advantages.

In public sector organizations, RBT shifts attention toward intangible assets such as institutional knowledge, information systems, professional competencies, and organizational routines. In the digital era, information and knowledge management capabilities have emerged as some of the most critical strategic resources for institutional advancement (Adiele & Gbekee-Kalagbor, 2025). Information Management Systems, when effectively configured and utilized, become repositories of organizational knowledge that enhance coordination, learning, and decision quality. For public universities and government institutions in Rivers State, RBT suggests that effectiveness is closely linked to the capacity to acquire, share, and apply information across administrative units. Institutions that are able to leverage their information assets more effectively are better positioned to improve decision-making dynamics, enhance service delivery, and sustain operational relevance within an increasingly competitive and performance-driven public sector environment (Adiele & Gbekee-Kalagbor, 2025).

### ***Information Culture Theory***

Information Culture Theory draws heavily from the works of scholars such as Choo, Davenport, and Marchand, who emphasized the role of organizational values, norms, and behaviors in shaping how information is created, shared, and utilized. The theory argues that the mere availability of information technologies does not guarantee improved organizational performance. Rather, effectiveness depends on the presence of an information culture that encourages responsible information sharing, prioritizes data accuracy, and supports evidence-based decision-making.

Within public administration, Information Culture Theory provides a critical interpretive framework for understanding variations in administrative outcomes across institutions with similar technological capacities. It posits that administrative decision-making quality is contingent on shared beliefs and practices that value documentation integrity, transparency, and analytical reasoning (Obara &

Adiele, 2025). Where organizational culture discourages openness or restricts access to information, digital systems are underutilized, and decisions tend to rely on personal discretion rather than empirical evidence. In Rivers State public institutions, this theory helps to explain why technological interventions may yield limited results when they are not supported by a culture that values data-driven practices. Information Culture Theory therefore complements technology-centered explanations by highlighting the behavioral and normative conditions necessary for Digital Information Management systems to effectively mediate the relationship between administrative strategy and public sector effectiveness (Obara & Adiele, 2025).

### **Empirical Review**

Empirical studies within the Nigerian public sector and broader international contexts provide substantial evidence on the role of digital transformation, administrative strategy, and human resource management in enhancing organizational effectiveness. Alikornwo and Adiele (2024) established a strong positive correlation between digital transformation and administrative performance. Their findings indicated that electronic administrative indicators are critical for sustaining operations in both manufacturing businesses and public agencies by improving workflow coordination and reducing procedural bottlenecks. This underscores the centrality of digital tools in ensuring that institutional processes are timely, reliable, and consistent.

Similarly, Adiele and Bestman (2025) found that digital systems account for approximately 61.7 percent of the observed variance in administrative efficiency within public tertiary institutions in Rivers State. Their research demonstrates that technological adoption significantly improves record accuracy, accelerates information processing, and enhances overall process responsiveness. Together, these studies suggest that investments in digital infrastructure are not only complementary to administrative strategies but are also essential for the practical realization of organizational objectives in the public sector (Adiele & Bestman, 2025).

Beyond technological interventions, human resource strategies have been highlighted as critical determinants of organizational performance. Ekweozor and Omah (2025) emphasized that strategic talent management and structured recruitment processes are essential for fostering workforce resilience and operational efficiency in Rivers State. Their work indicates that administrative effectiveness depends not only on digital tools but also on the deliberate alignment of human resource practices with organizational goals. In a similar vein, Zeb-Obipi and Kpurunee (2023) argued that human resource policies constitute the "livewire" of organizational effectiveness. They observed that employee involvement and reward systems are powerful mechanisms for enhancing staff retention, motivation, and performance in Port Harcourt. Supporting this view, Amadi, Zeb-Obipi, Lebura, and Poi (2021) found that participatory management practices and performance-based incentives significantly contribute to sustaining workforce commitment and institutional productivity.

International studies further validate these findings and offer comparative insights. Scupola and Mergel (2022) demonstrated that public sector digitalization in Denmark led to reduced expenditures and increased efficiency through improved data coherence and inter-agency information sharing. In Indonesia, Sam et al. (2025) highlighted that technologies such as artificial intelligence can streamline bureaucratic processes, although their effectiveness is limited by the maturity of digital infrastructure and technical capacity. Aharon and Siev (2024) further emphasized that digital transformation empowers public administrations to streamline service delivery, enhance transparency, and improve the overall citizen experience, illustrating the broader governance benefits of technological adoption.

Other significant contributions include Kyaw Thet Khaing (2025), who examined the shift from centralized to decentralized administrative systems and its impact on the roles and responsibilities of administrative officers. Wally (2025) explored transformative pathways in European regions,

concluding that institutions with strong capacities for coordinated planning are better positioned to act as intermediaries for socio-ecological change. These global trends suggest that challenges similar to those in Rivers State—such as fragmented implementation of digital systems—are common and can be mitigated through visionary leadership, strategic alignment, and collaborative institutional practices (OECD, 2024).

Based on these empirical insights, the study tested the following null hypotheses at a 0.05 level of significance:

**H<sub>01</sub>:** Administrative strategy does not have a significant influence on decision speed in public institutions in Rivers State.

**H<sub>02</sub>:** There is no significant relationship between administrative strategy and decision quality in public institutions in Rivers State.

**H<sub>03</sub>:** Digital information management does not significantly mediate the relationship between administrative strategy and public sector effectiveness in Rivers State.

## METHODOLOGY

This study adopted a descriptive correlational survey design to empirically investigate the relationships among administrative strategy, digital information management, and public sector effectiveness. The research population comprised 350 administrative and IT personnel drawn from five public tertiary institutions and ministries in Rivers State, specifically Rivers State University, Ignatius Ajuru University of Education, Ken Saro-Wiwa Polytechnic, Captain Elechi Amadi Polytechnic, and the University of Port Harcourt. A stratified random sampling technique was employed to select 210 respondents proportionally across key functional departments, including examinations and records, bursary, and academic planning units, ensuring representativeness across administrative roles. Data were collected using a structured questionnaire, the Administrative Strategy and Effectiveness Scale, which utilized a 5-point Likert scale to capture perceptions of process automation, data integration, information management practices, and indicators of institutional effectiveness. The instrument demonstrated strong reliability, yielding a Cronbach’s Alpha coefficient of 0.89. Data analysis was conducted using descriptive statistics, including means and standard deviations, to summarize trends, while multiple regression and path analysis were employed to test the stated hypotheses at a 0.05 significance level, allowing for the assessment of both direct and mediating effects among the study variables.

## RESULTS

### Hypothesis One: Administrative Strategy and Decision Speed

The first hypothesis examined the predictive influence of administrative strategy on decision speed.

**Table 1: Regression Analysis of Administrative Strategy on Decision Speed**

Predictor Variable	Criterion Variable	Beta Coefficient	t-value	p-value	Decision
Administrative Strategy	Decision Speed	0.487	5.621	< 0.001	Significant

**Model Summary:** R = 0.785, R-squared = 0.617, F = 34.12, p < 0.001

The results indicate that administrative strategy explains 61.7 percent of the variance in Decision Speed (Adiele & Bestman, 2025). Decision speed ( $\beta = 0.487$ ) is strongly and positively influenced by administrative strategy, showing that process automation and data integration substantially enhance internal operational outcomes. Therefore, the first null hypothesis is rejected, confirming that administrative strategy significantly improves Decision Speed in Rivers State public institutions.

**Hypothesis Two: Administrative Strategy and Decision Quality**

The second hypothesis tested the relationship between administrative strategy and decision quality.

**Table 2: Regression Analysis of Administrative Strategy on Decision Quality**

Predictor Variable	Criterion Variable	Beta Coefficient	t-value	p-value	Decision
Administrative Strategy	Decision Quality	0.352	4.120	< 0.001	Significant

**Model Summary:** R = 0.701, R-squared = 0.491, F = 28.56, p < 0.001

Administrative strategy accounts for 49.1 percent of the variance in decision quality (Ekweozor, 2025). Decision Quality is significantly predicted by administrative strategy, indicating that structured planning and strategic initiatives directly enhance the ability of institutions to respond to external demands. As a result, the second null hypothesis is rejected, confirming a significant positive relationship between strategy and decision quality.

**Hypothesis Three: Mediating Role of Digital Information Management**

The third hypothesis evaluated whether Digital Information Management, operationalized through Information Management Systems (IMS), mediates the relationship between administrative strategy and public sector effectiveness.

**Table 3: Mediation Analysis of Digital Information Management Systems (IMS)**

Path Analysis	Direct Effect	Indirect Effect	Total Effect	Variance Accounted For (VAF)	Decision
Strategy → IMS → Effectiveness	0.245	0.320	0.565	56.6%	Substantial Mediation

The path analysis shows that IMS plays a substantial mediating role in the relationship between administrative strategy and public sector effectiveness (Alikornwo & Nwinyokpugi, 2025). With a VAF of 56.6 percent, more than half of the effect of administrative strategy on effectiveness is transmitted through digital information systems. This indicates that strategic initiatives improve institutional performance primarily when supported by robust digital information management. Consequently, the third null hypothesis is rejected, confirming the mediating influence of IMS in enhancing public sector outcomes.

**Discussion of Findings**

The findings of this study provide strong empirical support for the influence of administrative strategy and digital information management on public sector effectiveness in Rivers State. The analysis of Hypothesis One revealed that administrative strategy significantly predicts decision speed, accounting for 61.7 percent of the variance (Adiele & Bestman, 2025). The positive beta coefficient ( $\beta = 0.487$ ) indicates that strategic interventions, including process automation and data integration, substantially enhance the timeliness of decision-making within public institutions. This confirms that deliberate administrative planning and the systematic deployment of digital tools are critical for accelerating internal workflows, reducing delays, and improving operational efficiency. The results align with global governance trends that emphasize the use of technology to streamline processes and reduce bureaucratic bottlenecks (OECD, 2024).

Hypothesis Two examined the effect of administrative strategy on decision quality, which is a key dimension of institutional responsiveness. The results indicate that administrative strategy explains 49.1 percent of the variance in decision quality, with a significant positive beta coefficient ( $\beta = 0.352$ ). This suggests that strategic planning and structured administrative interventions directly enhance the accuracy, relevance, and reliability of decisions. By providing clear procedures,

standardized workflows, and integrated information, administrative strategy enables public institutions to meet stakeholder expectations more effectively and respond appropriately to dynamic operational challenges. This finding is consistent with prior studies highlighting the role of strategic information culture in promoting accurate and timely administrative outcomes (Obara & Adiele, 2025).

The analysis of Hypothesis Three highlights the critical mediating role of Digital Information Management (IMS) in translating administrative strategy into effective public sector performance. The path analysis showed that IMS mediates 56.6 percent of the total effect of administrative strategy on effectiveness, indicating substantial mediation (Alikornwo & Nwinyokpugi, 2025). This finding underscores that the impact of strategic initiatives is significantly enhanced when supported by robust and well-integrated information systems. In practical terms, administrative strategies such as workflow standardization and data integration are insufficient if not complemented by digital infrastructures that facilitate real-time access, storage, and dissemination of information. The result confirms that IMS functions as the technical conduit through which strategic intent is operationalized, enhancing both the speed and quality of decision-making in public institutions. Collectively, these findings demonstrate that administrative strategy is a key determinant of both internal efficiency and external responsiveness, while Digital Information Management amplifies its effects. Public sector managers in Rivers State are therefore encouraged to adopt an integrated approach that aligns strategic planning with digital system deployment, ensuring that technological investments directly support operational objectives and institutional resilience (Alikornwo & Adiele, 2024). The study contributes to the understanding that technology alone is not sufficient; its effectiveness depends on how strategically it is embedded within administrative processes and organizational culture.

## CONCLUSION AND RECOMMENDATIONS

The study concludes that administrative strategy significantly enhances decision speed and decision quality in Rivers State public institutions, and that digital information management systems substantially mediate this relationship, amplifying the impact of strategic initiatives on overall effectiveness. The findings underscore that the integration of technology with structured administrative processes is essential for achieving timely, accurate, and responsive public sector performance.

Based on these results, it is recommended as follows:

1. That Management of Institutions strengthens and integrates digital information systems to support efficient operations.
2. That Management of Public Institutions aligns administrative processes with strategic objectives to improve both internal and external performance.
3. That Management of Public Institutions continuously develops staff capacity to effectively utilize digital tools in decision-making and service delivery.

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