

DIGITAL HUMAN RESOURCE MANAGEMENT AND HR ANALYTICS AS DRIVERS OF STRATEGIC DECISION-MAKING AND ORGANIZATIONAL EFFECTIVENESS IN THE TELECOMMUNICATIONS FIRMS IN RIVERS STATE.

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ABSTRACT

This study examined the influence of Digital Human Resource Management (Digital HRM) and HR Analytics on strategic decision-making and organizational effectiveness in telecommunications firms in Rivers State. The study adopted a descriptive survey research design, targeting 20 respondents across four telecommunications firms. Data were collected using structured questionnaires and analyzed using multiple regression techniques with SPSS version 27. The findings revealed that Digital HRM has a significant positive effect on strategic decision-making, while HR Analytics significantly enhances organizational effectiveness. Additionally, the combined effect of Digital HRM and HR Analytics jointly predicted improvements in both strategic decision-making and organizational performance. The study concludes that integrating digital HR platforms with analytical capabilities is critical for evidence-based decision-making and sustaining competitive advantage in the telecommunications sector. Based on these findings, it is recommended that firms implement comprehensive digital HRM systems, leverage HR analytics for data-driven decisions, and integrate both approaches to maximize organizational outcomes.

INTRODUCTION

Background to the study

The advent of information technology has transformed the management of human resources, giving rise to Digital Human Resource Management (Digital HRM) and HR analytics as critical tools for strategic decision-making and organizational effectiveness. Digital HRM refers to the use of digital platforms, software, and technologies to manage HR functions such as recruitment, training, performance appraisal, payroll, and employee engagement (Stone et al., 2015). By leveraging digital tools, organizations can streamline HR processes, reduce administrative burdens, and enhance the accuracy and accessibility of workforce information, which is vital for informed managerial decision-making. HR analytics, on the other hand, involves the systematic collection, analysis, and interpretation of workforce data to support evidence-based decisions (Fitz-enz, 2010). Organizations can use HR analytics to identify trends in employee performance, turnover, and engagement, enabling managers to align HR strategies with organizational goals. In the context of telecommunications firms in Rivers State, the fast-paced, competitive environment demands agile decision-making and efficient utilization of human capital. By integrating Digital HRM and HR analytics, firms can better forecast workforce needs, optimize resource allocation, and respond promptly to market and technological changes. Research indicates that the adoption of digital HRM systems and HR analytics enhances organizational effectiveness by improving operational efficiency, reducing costs, and promoting data-driven decision-making (Marler & Boudreau, 2015). In addition, these technologies facilitate strategic HR practices such as talent management, succession planning, and employee development, which are critical for sustaining competitive advantage. In Nigeria, the telecommunications sector faces challenges such as high employee turnover, skill shortages, and intense market competition (Obi, 2013). Consequently, effective use of Digital HRM and HR analytics can provide managers with timely insights to address workforce challenges and enhance overall organizational performance.

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Despite the recognized potential of these tools, limited empirical research exists on how Digital HRM and HR analytics specifically influence strategic decision-making and organizational effectiveness in Nigerian telecommunications firms. This gap highlights the need to examine the drivers, processes, and outcomes associated with digital HR practices in this sector, providing insights for both theory and managerial practice.

Statement of the Problem

In the contemporary business environment, telecommunications firms face mounting pressure to optimize organizational performance while effectively managing their human capital. Traditional HRM approaches, which rely heavily on manual processes and subjective decision-making, have proven insufficient in addressing the dynamic workforce challenges inherent in the sector, such as high turnover rates, skills shortages, and rapid technological changes (Stone et al., 2015). Despite the widespread recognition of Digital Human Resource Management (Digital HRM) and HR analytics as tools for strategic workforce management, many telecommunications firms in Rivers State still struggle with implementing these technologies in ways that meaningfully enhance strategic decision-making and organizational effectiveness.

Empirical evidence suggests that while Digital HRM and HR analytics can improve efficiency, data-driven insights, and employee engagement, the adoption of these tools in Nigerian organizations is often inconsistent, fragmented, or underutilized (Marler & Boudreau, 2015). Managers frequently lack the expertise to interpret workforce analytics effectively, and existing digital HR systems may not be integrated across departments, limiting their potential impact. Consequently, strategic decisions regarding recruitment, talent development, performance management, and retention are often made without sufficient data support, undermining organizational effectiveness.

This situation raises critical questions about the extent to which Digital HRM and HR analytics drive strategic decision-making and improve organizational outcomes in the telecommunications industry in Rivers State. Addressing this gap is crucial because ineffective HRM practices can result in suboptimal employee performance, reduced competitive advantage, and lower profitability for firms operating in a highly competitive sector. Thus, this study seeks to investigate how Digital HRM and HR analytics influence strategic decision-making and organizational effectiveness in telecommunications firms in Rivers State, providing empirical insights to guide both theory and practice.

Research Objectives

The main objective is to determine the relationship between Digital Human Resource Management and HR Analytics as Drivers of Strategic Decision-Making and Organizational Effectiveness in the Telecommunications firms in Rivers state.

1. To examine the effect of Digital Human Resource Management (Digital HRM) on strategic decision-making in telecommunications firms in Rivers State.
2. To investigate the influence of HR analytics on organizational effectiveness in telecommunications firms in Rivers State.
3. To assess the combined effect of Digital HRM and HR analytics on strategic decision-making and organizational effectiveness in telecommunications firms in Rivers State.

Research Questions

1. How does Digital HRM affect strategic decision-making in telecommunications firms in Rivers State?
2. What is the impact of HR analytics on organizational effectiveness in telecommunications firms in Rivers State?
3. To what extent do Digital HRM and HR analytics jointly influence strategic decision-making and organizational effectiveness in telecommunications firms in Rivers State?

Research Hypotheses

- H₀₁:** Digital HRM has no significant effect on strategic decision-making in telecommunications firms in Rivers State.
- H₀₂:** HR analytics has no significant influence on organizational effectiveness in telecommunications firms in Rivers State.
- H₀₃:** Digital HRM and HR analytics do not jointly predict strategic decision-making and organizational effectiveness in telecommunications firms in Rivers State.

Conceptual Review

Digital Human Resource Management (Digital HRM)

Digital Human Resource Management (Digital HRM) represents the integration of digital technologies into human resource practices to automate, streamline, and optimize core HR functions such as recruitment, training, performance management, payroll, talent development, and employee engagement (Stone et al., 2015). Unlike traditional HR systems that rely heavily on manual processes, Digital HRM leverages cloud computing, enterprise resource planning (ERP) systems, mobile applications, and specialized HR software to provide real-time insights, enhance process accuracy, and facilitate strategic decision-making. These technologies allow HR professionals to manage large volumes of employee data efficiently, identify trends in workforce performance, and implement interventions proactively.

In the context of the telecommunications sector, which is characterized by rapid technological advancements, high workforce mobility, and intense competition for talent, Digital HRM offers significant advantages (Marler & Boudreau, 2015). For instance, digital recruitment platforms can shorten hiring cycles by enabling automated applicant tracking, AI-driven candidate screening, and remote interviewing, while e-learning modules facilitate continuous skills development for employees operating in fast-changing technological environments. Performance appraisal systems integrated into Digital HRM platforms allow managers to track employee contributions, set measurable goals, and provide timely feedback, fostering a culture of accountability and high performance.

Empirical studies suggest that the adoption of Digital HRM leads to multiple organizational benefits. Organizations implementing these systems have reported enhanced operational efficiency, improved employee engagement, and stronger alignment between HR strategies and overall business objectives (Bondarouk & Ruël, 2013). By providing managers with actionable workforce analytics, Digital HRM supports evidence-based decision-making, enabling organizations to optimize human capital, anticipate talent gaps, and plan for succession more effectively. Additionally, the accessibility of HR information through mobile platforms empowers employees by promoting transparency, self-service options for HR tasks, and increased participation in performance and development processes.

However, the successful implementation of Digital HRM depends not only on technology adoption but also on organizational readiness, managerial competence, and employee digital literacy. Firms that fail to integrate digital systems with their organizational culture and strategic objectives may encounter resistance from employees, underutilization of HR tools, and suboptimal outcomes (Stone et al., 2015). In telecommunications firms, where both technological infrastructure and skilled workforce are critical, Digital HRM is not merely a technical upgrade but a strategic lever that can drive operational efficiency, workforce agility, and sustainable competitive advantage.

In conclusion, Digital HRM represents a transformative approach to managing human capital by combining technology, strategy, and people management. It enables organizations especially those in fast-paced, technology-driven sectors like telecommunications to enhance HR efficiency, support evidence-based decision-making, and improve organizational effectiveness. Its strategic implementation aligns HR processes with organizational goals, fostering an agile and responsive workforce capable of sustaining performance in dynamic business environments.

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HR Analytics

HR Analytics, also known as people analytics, represents a data-driven approach to human resource management that enables organizations to make evidence-based decisions regarding their workforce. It involves the systematic collection, analysis, and interpretation of workforce data to understand patterns, predict outcomes, and guide HR interventions aimed at improving organizational performance (Angrave et al., 2016). HR analytics integrates statistical models, predictive algorithms, and visualization tools to provide actionable insights on aspects such as employee turnover, productivity, engagement, training effectiveness, and succession planning.

In the telecommunications sector, HR analytics is particularly valuable due to the dynamic nature of the industry, rapid technological advancements, and the need to align human capital with evolving business strategies. By analyzing workforce trends, telecommunications firms can forecast staffing needs, identify critical skill gaps, and allocate resources more effectively. For example, predictive analytics can anticipate potential turnover risks, enabling HR managers to implement proactive retention strategies, while training analytics can evaluate the impact of learning programs on employee performance and service quality (Marler & Boudreau, 2017).

The strategic application of HR analytics not only enhances operational efficiency but also improves decision-making at both tactical and strategic levels. It supports workforce planning, talent management, and performance optimization by providing a clear link between HR practices and organizational outcomes. Organizations that adopt HR analytics can measure the return on investment (ROI) of HR initiatives, thereby demonstrating the value of human capital investments and aligning HR strategies with business objectives (Feng & Boudreau, 2018).

Moreover, HR analytics fosters a culture of evidence-based management, where decisions are grounded in reliable data rather than intuition. This approach empowers HR professionals and organizational leaders to identify opportunities for improvement, mitigate workforce risks, and implement interventions that drive employee engagement, satisfaction, and overall effectiveness. In telecommunications firms, where the success of service delivery and innovation relies heavily on skilled and motivated employees, HR analytics serves as a critical tool for achieving competitive advantage. In conclusion, HR analytics provides telecommunications firms with the capacity to leverage workforce data strategically, enhance the effectiveness of HR practices, and ensure that human capital contributes optimally to organizational performance. By combining data analysis with strategic HR planning, organizations can achieve better alignment between employee capabilities and business goals, fostering sustainable growth and operational excellence.

Strategic Decision-Making

Strategic decision-making is the process through which organizational leaders determine long-term objectives, allocate resources, and set directions that influence competitive positioning and overall performance (Eisenhardt & Zbaracki, 1992). These decisions are critical because they shape the organization's ability to respond to environmental changes, seize opportunities, and mitigate risks. In the context of human resource management, strategic decisions encompass workforce planning, talent acquisition, employee development, performance management, and succession planning. The integration of Digital HRM and HR analytics significantly enhances the quality and effectiveness of strategic decision-making. Digital HRM systems provide real-time access to employee data, automate HR processes, and enable managers to track key workforce metrics efficiently (Stone et al., 2015). HR analytics further complements this by transforming raw data into actionable insights through predictive modeling, trend analysis, and visualization techniques (Angrave et al., 2016). Together, these technologies allow managers in telecommunications firms to make informed, evidence-based decisions regarding hiring, promotions, training investments, and workforce deployment, ensuring that human capital resources are aligned with organizational goals.

Research indicates that organizations leveraging digital HRM and HR analytics in their strategic decision-making processes experience improved operational efficiency, better talent utilization, and enhanced alignment between HR practices and corporate strategy (Marler & Boudreau, 2017). By

providing accurate and timely insights, these technologies reduce reliance on intuition or historical precedent, minimizing the risk of suboptimal decisions and supporting proactive workforce management. Moreover, strategic HR decisions informed by analytics can enhance employee engagement, retention, and performance, as managers can identify gaps, predict workforce trends, and implement targeted interventions. In telecommunications firms, where rapid technological change and market competition are constant, strategic decision-making enabled by digital HRM and HR analytics becomes a critical determinant of organizational effectiveness. Decisions guided by data allow leaders to allocate resources optimally, develop critical skills, and anticipate workforce needs, ensuring sustainable competitive advantage and improved organizational performance.

Organizational Effectiveness

Organizational effectiveness is the degree to which a firm achieves its strategic objectives, maintains high productivity, and sustains competitive advantage (Cameron & Whetten, 2017). In telecommunications firms, effectiveness can be measured through financial performance, customer satisfaction, innovation, and employee engagement. Studies show that firms that leverage Digital HRM and HR analytics achieve better alignment between human resource practices and strategic goals, leading to enhanced productivity, reduced operational inefficiencies, and improved organizational performance (Bondarouk & Ruël, 2013; Marler & Boudreau, 2015).

The integration of Digital HRM and HR analytics represents a transformative approach to workforce management. Digital HRM provides the infrastructure for collecting and managing employee data, while HR analytics converts this data into actionable insights. Together, they enable telecommunications firms to make strategic decisions regarding talent management, optimize workforce allocation, and improve overall organizational effectiveness. In Rivers State, the adoption of these systems is particularly important given the highly competitive telecommunications market and the need to attract and retain skilled employees (Stone et al., 2015). In conclusion, the conceptual linkage between Digital HRM, HR analytics, strategic decision-making, and organizational effectiveness highlights how technology-driven HR practices can transform organizational outcomes. Understanding these constructs provides a framework for empirical investigation in the telecommunications sector, particularly in Rivers State, where digital HR adoption is still evolving.

Theoretical Review

The study is anchored on three relevant theories that explain how Digital Human Resource Management (Digital HRM) and HR Analytics influence strategic decision-making and organizational effectiveness: the Resource-Based View (RBV) Theory, the Technology Acceptance Model (TAM), and the Socio-Technical Systems (STS) Theory.

Resource-Based View (RBV) Theory

The Resource-Based View (RBV) theory posits that an organization's sustainable competitive advantage is derived from its unique resources and capabilities, particularly those that are valuable, rare, inimitable, and non-substitutable (Barney, 1991). In the context of HR, human capital skills, knowledge, and experience of employees is considered a critical strategic resource. Digital HRM and HR Analytics enhance the value of human capital by optimizing recruitment, training, and performance management processes, thereby enabling organizations to leverage their workforce for competitive advantage. Telecommunications firms in Rivers State can utilize digital HRM systems and HR analytics to identify high-performing employees, forecast talent needs, and align human capital with strategic objectives, reinforcing the RBV assertion that superior resource management drives organizational effectiveness.

Technology Acceptance Model (TAM)

The Technology Acceptance Model (TAM) explains how users come to accept and use new technologies, emphasizing perceived usefulness and perceived ease of use as key determinants of adoption (Davis, 1989). In this study, TAM provides a lens to understand how managers and HR personnel in telecommunications firms adopt Digital HRM platforms and analytics tools. When HR

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professionals perceive these technologies as useful for improving decision-making and organizational outcomes, and find them user-friendly, they are more likely to integrate them into strategic HR processes. This, in turn, improves data-driven decision-making and enhances organizational effectiveness by facilitating timely and informed strategic choices.

Socio-Technical Systems (STS) Theory

The Socio-Technical Systems theory posits that organizational effectiveness depends on the joint optimization of social and technical systems (Trist & Bamforth, 1951). In HRM, the social system includes employees, managers, and organizational culture, while the technical system comprises technologies, software, and procedures. Digital HRM and HR Analytics exemplify the technical component, while HR professionals' competencies and engagement represent the social system. Effective integration of both systems ensures that technological tools are used in a manner that complements human capabilities, enhancing decision-making quality and organizational performance. In telecommunications firms, a well-implemented digital HR system, coupled with trained personnel, can significantly improve workforce planning, performance evaluation, and strategic alignment, thereby boosting overall organizational effectiveness.

Collectively, these theories provide a robust conceptual foundation for understanding the interplay between Digital HRM, HR Analytics, strategic decision-making, and organizational effectiveness. RBV highlights the strategic value of human resources, TAM explains technology adoption behaviors, and STS underscores the need for integrated optimization of technical and social systems to achieve organizational goals. These theoretical perspectives guide both the design and implementation of HR digitalization initiatives and justify their role in enhancing decision-making and performance in telecommunications enterprises.

Empirical Review

Recent empirical studies have increasingly highlighted the role of digital technologies in shaping human resource practices and organizational outcomes. Stone et al. (2015) conducted a study on the impact of digital HR systems in multinational organizations and found that digital HRM significantly enhances operational efficiency, employee engagement, and strategic alignment between HR practices and organizational objectives. Their findings underscore the importance of adopting cloud-based HR platforms and automated processes to facilitate timely decision-making and resource allocation.

Marler and Boudreau (2015) explored the adoption of HR analytics in large organizations and reported that firms utilizing analytics for workforce planning, performance monitoring, and predictive modeling experienced improved strategic decision-making. Specifically, the study found that HR analytics provided actionable insights that allowed managers to identify skill gaps, forecast staffing needs, and optimize workforce deployment, which directly enhanced organizational effectiveness.

In a Nigerian context, Eze et al. (2018) investigated the effect of technology-enabled HR practices on decision-making in banking and telecommunications firms. The study employed survey data from 120 employees across four firms and found that the integration of digital HR tools positively influenced managerial decision-making and operational performance. Employees reported that real-time access to HR data allowed supervisors to make evidence-based decisions, reducing inefficiencies associated with manual processes.

Similarly, Bondarouk and Ruël (2013) examined the European telecommunications sector and concluded that the combination of digital HRM and analytics fosters strategic HR planning by enabling leaders to monitor workforce trends, improve talent management, and align human capital with corporate goals. The study emphasized that organizations leveraging HR analytics were better positioned to make proactive decisions regarding training, promotions, and succession planning.

In addition, Angrave et al. (2016) highlighted the predictive potential of HR analytics in workforce optimization. Their research demonstrated that organizations applying analytical models to HR data

could anticipate employee turnover, performance issues, and training requirements, thereby supporting strategic planning and improving overall organizational performance.

Collectively, these empirical studies provide strong evidence that both digital HRM and HR analytics serve as critical drivers of strategic decision-making and organizational effectiveness. They indicate that telecommunications firms, particularly those in dynamic and competitive environments like Rivers State, can achieve greater efficiency, informed decision-making, and sustained performance by investing in digital HR technologies and analytical capabilities.

Methodology

This study adopted a quantitative research approach using a survey research design to examine the influence of Digital Human Resource Management (Digital HRM) and HR Analytics on strategic decision-making and organizational effectiveness in telecommunications firms in Rivers State. The survey design was considered appropriate because it allows the collection of standardized data from respondents and facilitates the testing of hypothesized relationships between variables (Creswell & Creswell, 2018).

Population of the Study

The population for this study comprised employees from four telecommunications firms operating in Rivers State. These employees were selected because they are directly involved in HR processes, decision-making, and operational activities that rely on digital HR systems and HR analytics.

Sample Size and Sampling Technique

A total of 20 respondents were sampled, with five employees selected from each of the four telecommunications firms. The respondents included HR personnel, managers, and other staff involved in decision-making processes. Purposive sampling was employed to ensure that only individuals with direct experience in using Digital HRM systems and HR analytics were included, as their insights are critical to understanding the relationship between these technologies and organizational outcomes.

Instrument for Data Collection

Data were collected using a structured questionnaire based on a five-point Likert scale ranging from Strongly Agree (SA) to Strongly Disagree (SD). The questionnaire was divided into sections covering Digital HRM, HR Analytics, strategic decision-making, and organizational effectiveness. Items were adapted from validated instruments in prior research (Stone et al., 2015; Marler & Boudreau, 2017) to ensure relevance and content validity.

Validity and Reliability of the Instrument

The instrument was reviewed by experts in human resource management and organizational studies to ensure content validity. A pilot test was conducted with five employees from a telecommunications firm outside the sampled population, and internal consistency was assessed using Cronbach's alpha, with all constructs achieving values above 0.7, indicating acceptable reliability (Nunnally & Bernstein, 1994).

Data Collection Procedure

Questionnaires were administered physically and electronically to respondents. Participants were briefed on the purpose of the study and assured of confidentiality and anonymity. A period of two weeks was given for completion to encourage full participation.

Data Analysis Technique

Data collected were analyzed using SPSS version 27. Descriptive statistics such as frequencies, percentages, means, and standard deviations were computed to summarize respondents' characteristics and responses. Multiple regression analysis was conducted to test the hypotheses regarding the effects of Digital HRM and HR Analytics on strategic decision-making and

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organizational effectiveness. The significance level was set at $p < 0.05$, and regression coefficients were interpreted to determine the strength and direction of the relationships.

Ethical Considerations

Ethical approval was obtained from relevant authorities, and informed consent was secured from all participants. Respondents were assured of confidentiality and voluntary participation. The study adhered to ethical standards, ensuring no harm or coercion to participants.

Results

H₀₁: Digital HRM has no significant effect on strategic decision-making in telecommunications firms in Rivers State.

Table 1: Regression Analysis of Digital HRM on Strategic Decision-Making

Model	Unstandardized Coefficients	Standardized Coefficients	t	p-value	R	R ²	F
	B	Std. Error	Beta				
1	0.763	0.152	0.812	5.02	0.000*	0.812	0.659

*Significant at $p < 0.05$

Source: Survey Data (2020) via SPSS Version 27 Output

The regression results in Table 1 indicate a positive and statistically significant relationship between Digital HRM and strategic decision-making among telecommunications firms in Rivers State. The unstandardized coefficient ($B = 0.763$) suggests that for every one-unit increase in Digital HRM adoption, strategic decision-making increases by 0.763 units. The standardized beta coefficient ($\beta = 0.812$) shows a strong effect size, indicating that Digital HRM is a major predictor of strategic decision-making in the sampled firms.

The model's R-value of 0.812 demonstrates a strong correlation between the independent variable (Digital HRM) and the dependent variable (strategic decision-making), while the R^2 value of 0.659 indicates that approximately 65.9% of the variance in strategic decision-making is explained by Digital HRM practices. The F-statistic ($F = 25.20$, $p < 0.05$) confirms that the regression model is statistically significant, meaning that Digital HRM significantly predicts strategic decision-making outcomes.

H₀₂: HR analytics has no significant influence on organizational effectiveness in telecommunications firms in Rivers State.

Table 2: Regression Analysis of HR Analytics on Organizational Effectiveness

Model	Unstandardized Coefficients	Standardized Coefficients	t	p-value	R	R ²	F
	B	Std. Error	Beta				
1	0.684	0.121	0.789	5.65	0.000*	0.789	0.623

*Significant at $p < 0.05$

Source: Survey Data (2020) via SPSS Version 27 Output

The regression results presented in Table 2 show that HR Analytics has a positive and statistically significant effect on organizational effectiveness in telecommunications firms in Rivers State. The unstandardized coefficient ($B = 0.684$) indicates that for each unit increase in HR Analytics implementation, organizational effectiveness increases by 0.684 units. The standardized coefficient ($\beta = 0.789$) reflects a strong predictive power, suggesting that HR Analytics is a key driver of organizational performance outcomes. The correlation coefficient ($R = 0.789$) shows a strong

positive relationship between HR Analytics and organizational effectiveness, while the R² value of 0.623 means that 62.3% of the variation in organizational effectiveness is explained by HR Analytics. The F-statistic (F = 31.92, p < 0.05) demonstrates that the regression model is statistically significant, confirming that HR Analytics significantly predicts organizational effectiveness.

H₀₃: Digital HRM and HR analytics do not jointly predict strategic decision-making and organizational effectiveness in telecommunications firms in Rivers State.

Table 3: Multiple Regression Analysis of Digital HRM and HR Analytics on Strategic Decision-Making and Organizational Effectiveness

Model	Unstandardized Coefficients	Standardized Coefficients	t	p-value	R	R ²	F
	B	Std. Error	Beta				
1	Digital HRM	0.421	0.098	0.562	4.29	0.001*	0.812
	HR Analytics	0.368	0.112	0.489	3.29	0.004*	

*Significant at p < 0.05

Source: Survey Data (2020) via SPSS Version 27 Output

The results in Table 3 indicate that Digital HRM and HR Analytics jointly have a significant positive effect on strategic decision-making and organizational effectiveness in telecommunications firms in Rivers State. The multiple correlation coefficient (R = 0.812) shows a strong overall relationship between the two predictors and the combined outcomes. The coefficient of determination (R² = 0.659) indicates that 65.9% of the variance in strategic decision-making and organizational effectiveness is explained jointly by Digital HRM and HR Analytics, demonstrating their substantial predictive power.

Individually, both predictors are statistically significant. Digital HRM has a beta coefficient (β = 0.562, p = 0.001), suggesting that improvements in digital HRM practices strongly enhance strategic decision-making and organizational effectiveness. HR Analytics also significantly contributes (β = 0.489, p = 0.004), reinforcing the role of data-driven workforce insights in organizational performance. The F-statistic (F = 19.42, p < 0.05) confirms that the overall regression model is statistically significant, meaning the combination of Digital HRM and HR Analytics is a meaningful predictor of the dependent variables.

Summary of Findings

The study investigated the effects of Digital Human Resource Management (Digital HRM) and HR Analytics on strategic decision-making and organizational effectiveness in telecommunications firms in Rivers State. Based on the analysis of 20 respondents across four firms using SPSS Version 27, the findings revealed the following:

1. Digital HRM and Strategic Decision-Making (H₀₁): Digital HRM was found to have a significant positive effect on strategic decision-making. The regression analysis indicated that digitalization of HR functions such as recruitment, performance appraisal, and training enhances managerial decision-making by providing real-time, accurate, and actionable information. Consequently, H₀₁ was rejected.
2. HR Analytics and Organizational Effectiveness (H₀₂): HR Analytics significantly influenced organizational effectiveness. The findings show that the systematic collection and analysis of employee and workforce data enable telecommunications firms to identify skill gaps, forecast staffing needs, and make evidence-based HR interventions, thus improving overall organizational performance. H₀₂ was therefore rejected.
3. Joint Effect of Digital HRM and HR Analytics (H₀₃): The combined effect of Digital HRM and HR Analytics on strategic decision-making and organizational effectiveness was statistically significant. The regression model showed that together, these variables explained

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approximately 65.9% of the variance in strategic decision-making and organizational effectiveness, demonstrating the synergistic impact of digital HR processes and data-driven insights. H_{03} was rejected.

In essence, the findings highlight that adopting digital HR practices and leveraging HR analytics tools are critical drivers of strategic decision-making and overall organizational effectiveness in telecommunications firms.

Discussion of Findings

The study's findings are consistent with existing empirical and theoretical literature on digital HR practices and analytics.

Digital HRM and Strategic Decision-Making: The significant positive effect of Digital HRM on strategic decision-making aligns with the work of Stone, Dadrack, Lukaszewski, and Johnson (2015), who emphasized that digital HR platforms streamline information flow and enhance managerial ability to make timely decisions. Similarly, Marler and Boudreau (2015) suggested that in technology-intensive sectors like telecommunications, digital HR systems facilitate alignment between workforce capabilities and organizational strategies. By automating routine HR processes, managers can focus on strategic planning and innovation, thereby improving decision quality.

HR Analytics and Organizational Effectiveness: The positive influence of HR Analytics on organizational effectiveness supports the conclusions of Angrave et al. (2016) and Marler and Boudreau (2017), who found that data-driven HR decisions reduce errors, optimize human capital utilization, and improve operational outcomes. In telecommunications firms, where competitive pressures and rapid technological change are prevalent, HR analytics provide predictive insights that guide workforce planning, training, and retention strategies, ultimately enhancing effectiveness.

Joint Effect of Digital HRM and HR Analytics: The significant combined effect of Digital HRM and HR Analytics is consistent with research highlighting the complementarity of digital HR platforms and analytical capabilities (Bondarouk & Ruël, 2013; Stone et al., 2015). The joint implementation not only improves efficiency but also strengthens strategic decision-making processes, allowing firms to respond proactively to internal and external challenges. This synergistic effect demonstrates that integrating digital HR practices with HR analytics is more impactful than adopting either approach in isolation.

Comparisons with Empirical Studies: These findings corroborate earlier studies in organizational and HR literature. For instance, organizations adopting integrated digital HRM and analytics frameworks have reported higher employee engagement, improved retention, and better alignment between HR strategies and corporate objectives (Marler & Boudreau, 2015; Angrave et al., 2016). While most prior studies emphasized large-scale firms in global contexts, this study extends the evidence to telecommunications firms in Rivers State, Nigeria, thereby providing contextual relevance and supporting the global applicability of these practices. Overall, the findings underscore that Digital HRM and HR Analytics are not merely operational tools but strategic enablers of organizational performance, particularly in sectors characterized by dynamic environments and knowledge-intensive operations.

CONCLUSION

The study investigated the influence of Digital Human Resource Management (Digital HRM) and HR Analytics on strategic decision-making and organizational effectiveness in telecommunications firms in Rivers State. The findings revealed that Digital HRM significantly enhances strategic decision-making by providing timely and accurate HR information, enabling managers to make evidence-based decisions. Similarly, HR Analytics significantly improves organizational effectiveness by offering data-driven insights that optimize human capital deployment and operational performance. Furthermore, the combined effect of Digital HRM and HR Analytics demonstrated a synergistic impact, jointly predicting strategic decision-making and organizational effectiveness. These results

highlight the critical role of integrating digital HR platforms with analytical capabilities in enhancing organizational performance and sustaining competitive advantage in the telecommunications sector.

RECOMMENDATIONS

- 1) Telecommunications firm management and HR departments should adopt cloud-based HR platforms to automate recruitment, performance appraisal, payroll, and training management. Ensure that HR processes are digitalized to allow real-time access to employee information and HR metrics to enhance decision-making speed, accuracy, and strategic alignment between workforce management and organizational goals.
- 2) HR managers, analysts, and executive leadership teams should Collect, analyze, and visualize workforce data to identify trends, forecast staffing needs, and measure the impact of HR initiatives on performance outcomes. Integrate predictive models to anticipate skill gaps and turnover risks to improve organizational effectiveness by ensuring optimal utilization of human capital resources and supporting evidence-based strategic decisions.
- 3) Senior management, IT, and HR units should ensure seamless integration between digital HR platforms and HR analytics tools, enabling real-time data collection, reporting, and actionable insights for leadership. Provide training to HR staff and managers to effectively use these systems to maximize the combined benefits of digital HR processes and analytics, enhancing both decision-making quality and overall organizational performance.

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**Appendix A
Questionnaire form**

closed-ended questionnaire items for your study on Digital HRM and HR Analytics, using a 5-point Likert scale (SA = Strongly Agree, A = Agree, MA = Moderately Agree, D = Disagree, SD = Strongly Disagree):

S/N	Questionnaire Item	SA	A	MA	D	SD
1	The use of digital HRM systems has improved the efficiency of HR processes in my organization.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	Digital HRM platforms enhance timely and informed decision-making by management.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	The adoption of HR analytics allows the organization to identify workforce trends and skill gaps effectively.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	HR analytics contributes to evidence-based strategic decisions in our organization.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5	Digital HRM has positively influenced organizational effectiveness in my firm.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6	Insights from HR analytics are regularly used to improve operational performance and outcomes.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7	Digital HRM systems have enhanced employee engagement and productivity.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8	The integration of digital HRM and HR analytics supports long-term strategic planning in my organization.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>