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Relationship Between the Adoption of Electronic Human Resources Management Systems and Achievement of Human Resource Management Goals in the Nigerian Banking Sector

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ABSTRACT: This study investigates the effect of electronic human resource management (e-HRM) systems on achieving HRM goals in Nigeria's banking sector. We examined how HR managers' adaptability to automated tasks, integration of e-HR analytics, and e-HRM practices relate to operational efficiency, HR efficiency, and the HR manager's effectiveness, respectively. Our research also examined the role of organisational culture in shaping the relationship between e-HRM practices and the HR manager's effectiveness. Using a survey of 256 employees from Nigerian deposit money banks with international operations, and testing the hypotheses using Pearson product- moment correlation and hierarchical multiple regression, we found a strong positive correlation between HR managers' adaptability to automated tasks and operational efficiency ($r = .620$, $p < .001$), and an even stronger positive correlation between e-HR analytics integration and HR efficiency ($r = .822$, $p < .001$). Organisational culture also significantly predicted HR managers' effectiveness over and above e-HRM practices, explaining an additional 29.0% of the variance ($\Delta R^2 = .290$, $p < .001$) and emerging as the stronger of the two predictors ($\beta = .463$ versus $\beta = .333$ for e-HRM practices). The study concludes that HR managers' adaptability, e-HR analytics capability, and a supportive organisational culture are each central to translating e-HRM adoption into improved operational efficiency, HR efficiency, and HR manager effectiveness in the Nigerian banking sector. Based on these findings, the study recommends that Nigerian banks invest in strengthening HR managers' adaptability to e-HRM systems, build robust e-HR analytics capability, and deliberately cultivate a supportive, adaptive organisational culture, in order to fully realise the benefits of e-HRM and achieve HRM goals and organisational success.

KEYWORDS: e-HR analytics, HR managers' adaptability, HR managers' effectiveness, operational efficiency, organisational culture

1. INTRODUCTION

Technological advancement has transformed workplace operations, including Human Resource Management (HRM) processes (Abuhantash, 2023; De Alwis et al., 2022). Electronic Human Resource Management (e-HRM) has emerged from this integration of technology into HRM functions, reshaping traditional HR practices and HR managers' roles (Abuhantash, 2023; Milon, Alam, & Pias, 2022). E-HRM streamlines HR processes and improves operational efficiency, competitiveness, employee engagement, customer service, and decision-making (Abuhantash, 2023), spanning digital platforms for recruitment, talent management, performance management, and training and development (Muktamar & Nurnaningsih, 2024; Milon et al., 2022). Initially limited to administrative tasks such as payroll and benefits, e-HRM's scope has since expanded into strategic functions including recruitment, onboarding, and talent management (Abuhantash, 2023; Siam & Alhaderi, 2019).

Technological growth has since produced e-HRM tools such as artificial intelligence, cloud-based solutions, mobile accessibility, and data analytics (Abuhantash, 2023; Duffey, 2019), transforming operations across sectors, including Nigerian banking. As adoption grows, measuring e-HRM's effectiveness in achieving HRM goals becomes important particularly since HR managers' ability to adapt to these technologies, especially in developing countries, remains a persistent challenge (Ayari et al., 2022). Digitalisation promises greater efficiency, accuracy, and strategic alignment, but its success depends on organisational readiness, technological infrastructure, and user adoption (Mushumba & Nyirenda, 2025).

In Nigeria, banking has undergone substantial transformation driven by globalisation, technological advancement, regulatory change, and evolving customer expectations. Effective HRM is essential for attracting, retaining, and developing a workforce capable of navigating this landscape. To stay competitive, banks must align HR functions with strategic objectives, enhance employee engagement, and drive continuous improvement prompting heavy investment in e-banking and e-HRM systems. Yet e-HRM adoption in Nigerian banking is still evolving, and its impact on HRM goal achievement warrants closer investigation (Alebiosu et al., 2023; Umar, Yammama, & Shaibu, 2020; De Alwis, Andrlić, & Šostar, 2022; Aduku, Hassan, & Nafiu, 2021). Organisational change is, in fact, a recurring feature of this environment (Aduku et al., 2021), and HRM practices remain shaped by social norms that influence workplace behaviour (dela Cruz & Cabaluna, 2022).

Before e-HRM, banking was among the most stressful workplaces: manual operations made tasks slow and error-prone, and processes such as payroll, benefits administration, and performance evaluation were laborious and often delayed. Employees' performance suffered from inadequate feedback, limited growth opportunities, poor training, and inefficient communication (D'Angelo, Gazzaroli, Corvino, & Gozzoli, 2022), leaving them disconnected from organisational goals while HR managers bogged down by administration struggled to focus on strategic initiatives or deliver timely support and data-driven insight. E-HRM changed this by automating routine tasks, improving data accuracy and analytics, enhancing engagement, streamlining processes, and enabling better decisions bringing efficiency gains, lower administrative costs, higher productivity, better talent management, and faster, better-informed decisions.

These gains, however, have not materialised evenly. E-HRM's effectiveness is often undermined by HR managers' struggles to adapt, particularly in developing countries like Nigeria, where inadequate training and support cause errors and inefficiencies, and technical glitches, system incompatibilities, and resistance to change further disrupt processes and lower morale. Implementation is also hampered by limited infrastructure, digital literacy gaps, inadequate technical support, economic volatility, high non-performing loans, cybersecurity threats, and funding constraints conditions that help explain persistent suboptimal HR operations, low productivity, inefficient decision-making, and reduced HR manager effectiveness, all eroding competitiveness. The consequences are tangible: weak talent acquisition and retention from poorly optimised systems; unreliable performance data from technical shortcomings; and insufficient employee development from inadequate training. In short, e-HRM holds genuine promise for realising HRM goals, but that promise is far from guaranteed, its successful implementation remains an open challenge this study takes up directly.

Several studies have examined e-HRM adoption and its effects, though mostly outside Nigerian banking. Ayari et al. (2022) examined HR digital transformation and organisational performance in Bahrain during COVID-19, using a quantitative survey of HR executives and employees across multiple sectors; their findings centred on funding, IT infrastructure, technical support, and organisational culture as adoption drivers, but the study sat in a Gulf-state, multi-sector context, unanchored in TAM, RBV, or OCT. In Nigeria but outside banking, Alebiosu et al. (2023) investigated HR information systems and employee behavioural outcomes among manufacturing firms, drawing on diffusion of innovation theory, extending understanding of Nigerian manufacturing HRIS adoption, but not addressing banking or HRM-goal achievement. Outside Africa, Waheed et al. (2020) examined predictors of e-HRM adoption among Pakistani SME manufacturers, finding adoption depended on employee attitude, resource availability, and conventional HRM practices, again confined to a different sector and country, with no TAM, RBV, or OCT grounding.

These studies offer valuable insight but differ from the present study geographically (none focus on Nigerian Deposit Money Banks), sectorally (manufacturing, mixed-sector, or Gulf-region banking rather than Nigerian banking), methodologically (general HR-staff samples rather than a purposively selected sample of banks with international operations), and theoretically (diffusion of innovation or organisational-factor frameworks rather than TAM, RBV, and OCT). Critically, none examines the effect of e-HRM strategies- HR managers' adaptability, e-HR analytics, and e-HRM practices on HRM goal achievement within Nigerian DMBs. This study addresses that gap by examining the correlation between HR managers' adaptability to automated routine tasks and operational efficiency; assessing the extent to which e-HR analytics integration affects HR efficiency; and examining the incremental effect of organisational culture, over and above e-HRM practices, on HR managers' effectiveness within the Nigerian banking sector.

Objective of the study

The objectives of this study include, to:

i. Examine the correlation between the HR manager's adaptability to automated routine tasks and operational efficiency in Nigerian banking sector.
ii. Investigate the relationship between the integration of e- HR Analytics and HR efficiency in the Nigerian banking sector
iii. Examine the incremental effect of organisational culture, over and above e-HRM practices, on the effectiveness of HR managers.

Research Questions

These research questions were raised:

i. What is the correlation between HR managers' adaptability to automated routine tasks and operational efficiency in Nigerian banking sector?
ii. What is the relationship between integration of e- HR Analytics and HR efficiency in the Nigerian banking sector?
iii. To what extent does organisational culture explain additional variance in the effectiveness of HR managers, beyond e-HRM practices?

2. LITERATURE AND HYPOTHESES FORMULATION

E-HRM and HRM Goals

Electronic Human Resource Management (E-HRM) revolutionises human capital management by leveraging technology to optimise HR processes and inform strategic decision-making (Peretz, 2024; Papadionysiou & Myloni, 2023). By automating routine tasks, improving data accuracy, and enhancing communication, e-HRM allows HR managers to focus on strategic initiatives such as talent management and leadership development (De Alwis, Andrlić, & Šostar, 2022; Vares, Kargar Shouraki, & Yazdi, 2024). This alignment of HRM practices with organisational objectives is crucial for achieving sustained competitive advantage, particularly in dynamic sectors like Nigerian banking (Peretz, 2024).

The impact of e-HRM on organisational performance is significant, with effective deployment improving HRM efficiency and driving organisational goals (Vlastaridou, Nikou, Kouroupaki, & Glykas, 2022). By automating and streamlining HR processes, e-HRM enhances efficiency, reduces costs, and fosters a more productive workforce, enabling organisations to gain a competitive edge and achieve HRM objectives (Abuhantash, 2023; Umar, Yammama, & Shaibu, 2020). E-HRM systems also facilitate talent acquisition and retention through online recruitment platforms and self-service portals (Abuhantash, 2023), while promoting employee well-being and engagement by supporting remote work arrangements and improving productivity, thereby contributing to organisational goal achievement (Kess-Momoh, Tula, Bello, Omotoye, & Daraojimba, 2024). The integration of AI technologies further enhances operational performance and transforms HRM activities (Prasad, Hamraaia, Sharma, Sahana, & Pereira, 2024): AI-driven talent management enables better decision-making, fosters positive employee outcomes, and supports organisational success (Faqihi & Miah, 2023; Prasad et al., 2024).

E-HRM systems support various HRM objectives, including recruitment, training, performance management, employee onboarding, compensation, benefits administration, payroll management, and employee relations, ultimately improving HRM effectiveness and efficiency (Destriani, Adhitama, Sensuse, Hidayat, & Purwaningsih, 2024). E-HRM systems also support strategic HRM functions such as talent management, succession planning, workforce planning, employee engagement and retention, and HR analytics and metrics (Destriani et al., 2024; Faqihi & Miah, 2023).

Overview of the Nigerian Banking Sector

The Nigerian banking sector plays a central role in the economy, and has witnessed significant growth and transformation in recent years, driven by technological advancement and innovative digital solutions (Lottu et al., 2023). The Central Bank of Nigeria's cashless policy has been a key driver of financial inclusion, promoting digital payments and reducing the risks of cash handling (Central Bank of Nigeria, 2019). Fintech solutions have aided this inclusion drive, though progress remains constrained by poor system interoperability, data-privacy concerns, and urban concentration (Ogunode & Akintoye, 2023). Nigerian fintech companies such as Flutterwave, Paystack, OPay, and Interswitch have attracted significant funding and international recognition, contributing to a more robust digital financial ecosystem (Kola-Oyeneyin et al., 2020).

The sector nonetheless faces significant challenges, including economic volatility from oil-revenue dependence, which exposes Nigerian DMBs to oil-price fluctuations and rising non-performing loans (Osuma et al., 2019), cybersecurity threats to customer data and trust (Ogunode et al., 2022), and uneven fintech uptake across institutions (Kyari & Akinwale, 2020). Despite these challenges, the sector remains resilient, with the Central Bank of Nigeria's (2024) May 2024 report confirming sustained growth and a Capital Adequacy Ratio of 12.17%, exceeding the 10% regulatory benchmark.

Strategic Implications of HRM in the Banking Sector

In the banking sector, strategic HRM ensures banks have the right people with the right skills in the right roles, creating competitive advantage and driving growth (Pahuja et al., 2024; Barbulescu et al., 2024). Effective talent acquisition, recruitment, and HRM practices that align with organisational goals significantly influence bank staff performance and adaptability to changing market and technological conditions (Kareska, 2023; dela Cruz & Cabaluna, 2022; Prapraite, 2022; Tanasescu et al., 2024).

HR Managers' Adaptability to Automated Routine Tasks and Operational Efficiency

In the Nigerian banking sector, the adaptability of HR managers to automated routine tasks is crucial for enhancing operational efficiency. Research has shown that e-HRM practices, such as self-service portals and digital tools, can significantly improve employee engagement and productivity (Abuhantash, 2023; Alebiosu, Salau, Atolagbe, & Dada, 2023; Milon, Alam, & Pias, 2022). By leveraging these technologies, HR managers can streamline HR processes, reduce administrative burdens, and focus on strategic initiatives that drive employee experience and engagement (Kess-Momoh et al., 2024). Digitised HRM practices further enable transparent communication, skill development, and personalised feedback, leading to higher levels of employee commitment and performance (Kess-Momoh et al., 2024; Zhang, Iqbal, Tian, & Akhtar, 2024).

HR managers' adaptability to e-HRM systems may be key to boosting effectiveness in banking, though challenges such as digital divides, varying levels of technological literacy, and resistance to change can hold them back (Prasad et al., 2024). Embracing continuous learning and skill-building in areas like data analytics and digital communication can help HR managers stay ahead, ultimately enhancing employee effectiveness and organisational performance. The functionality of an e-HRM system requires, and could increase, HR managers' adaptability to automated routine tasks, which could in turn improve operational efficiency. Based on this argument, the following hypothesis was formulated:

***Ho₁:** There is no significant correlation between HR managers' adaptability to automated routine tasks and operational efficiency in the Nigerian banking sector.*

Integration of e-HR Analytics and HR Efficiency

The integration of e-HR analytics and metrics is vital for enhancing HR efficiency in the Nigerian banking sector. Recent studies have shown that e-HRM systems, particularly those leveraging AI, can significantly affect workforce performance and talent management (Pillutla, 2025; Destriani et al., 2024). By providing real-time analytics and streamlining administrative tasks, e-HRM enables strategic workforce planning, improved decision-making, and increased job satisfaction and retention (Marr, 2020; Abuhantash, 2023; Prasad et al., 2024), with predictive analytics helping identify effective strategies for improving performance (Prasad et al., 2024).

The effective use of e-HRM can have operational, relational, and transformational consequences. Operational e-HRM focuses on improving organisational efficiency by automating administrative HR tasks; relational e-HRM empowers managers and employees to access HR information remotely and perform HR tasks independently (De Alwis et al., 2022; Zhang et al., 2024); and transformational e-HRM is linked to strategic HR activities that drive organisational goals and innovation (De Alwis et al., 2022; Milon et al., 2022; Siam & Alhaderi, 2019). AI-driven technologies in HRM processes can further enhance the alignment of HR functions with organisational goals, fostering a culture of continuous improvement and innovation (Madanchian & Taherdoost, 2025; Abuhantash, 2023; De Alwis et al., 2022; Njoku, Ruël, Rowlands, Evans, & Murdoch, 2019). Hence, this hypothesis:

***Ho₂:** There is no significant relationship between e-HR analytics and HR efficiency in the Nigerian banking sector.*

Organisational Culture, e-HRM Practices, and the Effectiveness of HR Managers

The relationship between effective e-HRM practice and HR managers' effectiveness can be shaped by organisational culture. Research suggests that the success of e-HRM implementation depends on contextual factors, including the organisation's characteristics, industry nature, and cultural context (Abuhantash, 2023; Milon et al., 2022; Umar et al., 2020; Waheed, Xiaoming, Waheed, Ahmad, & Tian-tian, 2020). Leadership support, employee attitudes towards technology, and organisational culture can also influence the extent to which e-HRM practices affect HRM outcomes (Umar et al., 2020; Waheed et al., 2020). Understanding these factors particularly organisational culture, can enable HR managers to tailor e-HRM strategies accordingly, in order to effectively achieve HRM effectiveness (Peretz, 2024; Milon et al., 2022; Siam & Alhaderi, 2019).

The strategic importance of HRM lies in its ability to harness technology for talent acquisition, performance management, and cultural cultivation in pursuit of workplace goals (Kess-Momoh et al., 2024). Effective HR managers can leverage talent to create value, consequently driving faster innovation, higher customer satisfaction, and stronger financial performance. This study investigates the incremental effect of organisational culture, over and above e-HRM practices, on the effectiveness of HR managers. The hypothesis is:

***H_{O3}:** Organisational culture does not significantly predict the effectiveness of HR managers, after controlling for e-HRM practices.*

Theoretical Review

The study is anchored on the following theories, each mapped directly onto one of the study's three objectives:

Technology Acceptance Model (TAM): Developed by Fred Davis in 1989, building on the Theory of Reasoned Action and Theory of Planned Behaviour to predict user acceptance of new technologies (Revythi & Tselios, 2019). TAM rests on two constructs — perceived usefulness (the degree to which a person believes a technology will improve their performance) and perceived ease of use (the degree to which a person believes using it will be free of effort) — which jointly shape an individual's intention to use a technology (Muktamar & Nurnaningsih, 2024). Where users perceive a technology as both useful and easy to use, they are more likely to accept and adopt it. This study applies TAM to explain HR managers' adaptability to e-HRM systems and its link to operational efficiency (Objective i): understanding perceived usefulness and ease of use can help HR managers in the banking sector design and implement e-HRM systems that meet employee needs, supporting increased adoption and usage. Similar studies have anchored on TAM, confirming that perceived usefulness and perceived ease of use determine user acceptance of technology (Abubakar & Akpan, 2020; Abuhantash, 2023; Ayari, Alzayer, Albarboori, Salem, & Sanosi, 2022; Waheed et al., 2020).

The Resource-Based View (RBV): Developed by Jay Barney (1991), RBV holds that a firm's internal resources and capabilities can be a source of sustained competitive advantage when they are valuable, rare, inimitable, and non-substitutable (the VRIN framework). Applied to this study, e-HR analytics capability is treated as precisely this kind of internal, difficult-to-imitate organisational resource: banks that build strong analytics capability can generate workforce insight their competitors cannot easily replicate, translating directly into HR efficiency gains (Objective ii). This lens enables HR managers to design and adopt e-HR analytics systems that leverage the organisation's distinct strengths and capabilities. RBV has similarly supported recent studies examining how organisations strategically leverage digital HRM practices to achieve HRM goals and competitive advantage (Rao, Ramachandran, Lakshmi, Vemuri, Krishnan, & Jindal, 2024; Kero & Bogale, 2023; De Alwis et al., 2022; Njoku et al., 2019; Abuhantash, 2023; Milon et al., 2022; Siam & Alhaderi, 2019).

Organisational Culture Theory (OCT): OCT holds that organisational culture is a complex, multifaceted phenomenon that shapes employee behaviour and performance, and can itself be shaped through leadership and management practice (Tadesse Bogale & Debela, 2024; Fernandes, Pereira, & Wiedenhöft, 2023; Schein, 1990). Applied here, OCT explains why organisational culture can exert an incremental effect on HR managers' effectiveness over and above e-HRM practices themselves (Objective iii): culture shapes how e-HRM tools are actually used, adapted, and sustained within the organisation. This theory supports the study's objective of examining that incremental effect, consistent with prior studies that have used OCT to explain the relationship between culture, leadership, and employee behaviour in the workplace (Abuhantash, 2023; De Alwis et al., 2022; Milon et al., 2022; Peretz, 2024; Siam & Alhaderi, 2019).

Empirical Review and Gap

The adoption of e-HRM systems has drawn growing empirical attention, with evidence that it enhances operational efficiency, organisational performance, and HRM goal achievement by helping HR managers secure the right quality and quantity of human resources, raise productivity, reduce costs, and improve decision-making (Abuhantash, 2023; De Alwis et al., 2022; Ayari et al., 2022; Milon et al., 2022; Siam & Alhaderi, 2019). However, much of this evidence comes from studies conducted outside the Nigerian banking context. Ayari et al. (2022) examined factors related to HR digital transformation and its effect on organisational performance in Bahrain during COVID-19, using a quantitative survey of HR executives and employees across multiple private- and public-sector organisations; their findings centred on funding, IT infrastructure, technical support, and organisational culture as drivers of adoption, but the study was set in a Gulf-state, multi-sector context rather than Nigerian banking, and was not anchored in TAM, RBV, or OCT. Similarly, in a Nigerian setting but outside banking, Alebiosu et al. (2023) investigated the role of human resource information systems on employees' behavioural outcomes among selected manufacturing firms in Nigeria, drawing on the diffusion of innovation theory; while this extended understanding of HRIS adoption in Nigerian manufacturing, it neither addressed banking nor examined HRM-goal achievement. Outside Africa, Waheed et al. (2020) investigated predictors of e-HRM implementation among small and medium manufacturing enterprises in Pakistan, finding that adoption depended heavily on employee attitude, resource availability, and conventional HRM practices, but again, this was confined to Pakistani SME manufacturing rather than banks, and its predictor-focused framing did not draw on TAM, RBV, or OCT.

These studies differ from the present study geographically (none focus on Nigerian DMBs), sectorally (manufacturing, mixed-sector, or Gulf-region banking), methodologically (general HR-staff samples rather than a purposive sample of internationally operating banks), and theoretically (diffusion of innovation or organisational-factor frameworks rather than TAM, RBV, and OCT). None examines e-HRM strategies—HR managers' adaptability, e-HR analytics, and e-HRM practices—in relation to HRM goal achievement within Nigerian DMBs. This study addresses that gap by examining the correlation between adaptability and operational efficiency, the relationship between e-HR analytics and HR efficiency, and the incremental effect of organisational culture, over and above e-HRM practices, on HR managers' effectiveness.

3. METHODOLOGY

This study adopted a survey research design. Seven Deposit Money Banks (DMBs) with international operations were purposively selected from Enugu State, one of the five south-east states in Nigeria. The study population comprised 750 employees across these DMBs, from which a sample size of 256 was determined using the Krejcie and Morgan (1970) table for sample size determination. A combination of purposive and random sampling techniques was employed: DMBs were purposively selected based on their international operations, while individual participants were randomly selected from within each bank.

Data were collected using a structured survey questionnaire designed to measure the study's key constructs. The adoption of e-HRM systems was operationalised through three dimensions: HR managers' adaptability, e-HR analytics, and e-HRM practices. Correspondingly, achievement of HRM goals was measured through operational efficiency, HR efficiency, and HR managers' effectiveness.

Two hundred and fifty-six (256) copies of the questionnaire were administered to participants. The researchers approached the operations managers of the selected DMBs with an informed consent letter and the questionnaire; the operations managers, in turn, administered these to staff within their respective banks. Participants were given one month to complete the questionnaires, after which the researchers returned to retrieve them. All 256 copies were retrieved and, upon sorting, found to be correctly filled and valid, yielding a 100% response rate. In line with a condition set by the participating banks, the identities of the individual DMBs are withheld throughout this study. Data analysis was conducted using SPSS. Before testing the hypotheses, the measurement model was assessed to establish reliability and validity. Pearson correlation analysis was then used to determine the strength and direction of relationships between variables, while multiple regression analysis was used to ascertain the effect of each independent variable on the dependent variable.

4. RESULTS ON TESTING OF HYPOTHESES

Statistical significance was determined using a p-value threshold of .05. Reliability analysis confirmed that all six constructs: HR managers' adaptability, e-HR analytics, e-HRM practices, operational efficiency, HR efficiency, and HR managers' effectiveness, achieved Cronbach's alpha values above the .70 acceptance threshold (0.81). Preliminary assumption testing was conducted prior to the test of hypothesis: normality and linearity were assessed for the correlational analyses (H_1 and H_2), while normality, linearity, multicollinearity, and homoscedasticity were assessed for the hierarchical regression analysis (H_3); no violations were found.

Hypothesis One

Ho_1: There is no significant correlation between HR managers' adaptability to automated routine tasks and operational efficiency

Table 1: Correlation Between HR Managers' Adaptability to Automated Routine Tasks and Operational Efficiency

Correlations			
		Total HR Manager Adaptability	Total Operational Efficiency
Total HR manager Adaptability	Pearson Correlation	1	.620**
	Sig. (2-tailed)		.000
	N	256	256
Total Operational Efficiency	Pearson Correlation	.620**	1
	Sig. (2-tailed)	.000	
	N	256	256
**. Correlation is significant at the 0.01 level (2-tailed).			

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

The correlation between the HR managers' adaptability to automated routine tasks and operational efficiency in Nigerian banking sector was examined using Pearson product-moment correlation coefficient. It was found that there was a strong positive correlation between the two variables, ($r=.620$, $n = 256$, $p < .001$). The result implies that the more a HR manager adapt to automated routine tasks, the more likely that operational efficiency will improve which will eventually lead to achieving the HRM goals of the organisation. Consequently, the hypothesis which stated that there is no significant correlation between the HR managers' adaptability to automated routine tasks and operational efficiency in Nigerian banking sector was rejected.

Hypothesis Two

Ho_2: There is no significant relationship between e-HR analytics and HR efficiency in the Nigerian banking sector.

Table 2: Correlation Between e-HR Analytics and HR Efficiency

Correlations			
		Total e-HR analytics	Total HR Efficiency
Total e-HR analytics	Pearson Correlation	1	.822**
	Sig. (2-tailed)		.000
	N	256	256
Total HR Efficiency	Pearson Correlation	.822**	1
	Sig. (2-tailed)	.000	
	N	256	256
**. Correlation is significant at the 0.01 level (2-tailed).			

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

The correlation between e-HR analytics and HR efficiency in the Nigerian banking sector was examined using Pearson product-moment correlation coefficient. It was found that there was a strong positive correlation between the two variables ($r = .822$, $n = 256$, $p < .001$). The result implies that the more a manager applies e-HR analytical tools and metrics (training ROI, predictive analytics, employee turnover rate, prescriptive analytics, etc.), the more likely that HR efficiency in the organisation will improve. Consequently, the hypothesis which stated that there is no significant correlation between e-HR analytics and HR efficiency in the Nigerian banking sector was rejected

Hypothesis Three

Ho_3: Organisational culture does not significantly predict HR managers' effectiveness, after controlling for e-HRM practices

Hierarchical multiple regression was used to assess the ability of the control measure (organisational culture) to predict the level of effectiveness of HR managers, after controlling for e-HRM practices. Preliminary analysis was conducted to ensure no violation of the assumptions of normality, linearity, multicollinearity, and homoscedasticity. e-HRM practices was entered at step 1, explaining 4.8% of the variance in HR manager effectiveness, $F(1, 254) = 12.882$, $p < .001$. After entering organisational culture (the control measure) at step 2, the total variance explained by the model as a whole was 33.8%. The control measure explained an additional 29.0% of the variance in HR managers' effectiveness after controlling for e-HRM practices, R^2 change = .290, $F(1, 253) = 107.6$, $p < .001$. In the final model, the control measure was statistically significant, with organisational culture recording a higher beta value ($\beta = .463$, $p < .001$) than the e-HRM practices scale ($\beta = .333$, $p < .001$).

Model Summary

Table 3: Model Summary for the Hierarchical Regression Predicting HR Managers' Effectiveness

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R^2 Change	F Change	df1	df2	Sig. F Change
1	.219[a]	.048	.044	4.859	.048	12.882	1	254	.000
2	.582[b]	.338	.333	4.060	.290	107.6	1	253	.000

a. Predictors: (Constant), Total HRM Practices

b. Predictors: (Constant), Total HRM Practices, Total Cultural Factor

c. Dependent Variable: Total effectiveness of HR Managers

ANOVA

Table 4: ***ANOVA Results for the Hierarchical Regression Model***

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	304.1	1	304.1	12.882	.000[b]
	Residual	5994.8	254	23.60		
	Total	6298.859	255			
2	Regression	2129.0	2	1064.5	64.685	.000[c]
	Residual	4169.9	253	16.48		
	Total	6298.859	255			

a. Dependent Variable: Total effectiveness of HR Managers

b. Predictors: (Constant), Total HRM Practices

c. Predictors: (Constant), Total HRM Practices, Total Cultural Factor

Coefficients

Table 5: Coefficients for the Hierarchical Regression Model Predicting HR Managers' Effectiveness

							95% CI for B		Correlations			Collinearity Stats	
Model		B	Std. Error	Beta	t	Sig.	Lower Bound	Upper Bound	Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	2.747	.893		3.077	.002	.989	4.505					
	Total HRM Practices	.314	.050	.333	6.254	.000	.215	.412	.582	.366	.281	.711	1.407
	Total Cultural Factor	.490	.056	.463	8.693	.000	.379	.601	.642	.480	.390	.711	1.407

a. Dependent Variable: Total effectiveness of HR Managers

5. DISCUSSION

Hypothesis 1 (Ho_1): There is no significant correlation between HR managers' adaptability to automated routine tasks and operational efficiency

The findings confirmed a strong positive relationship between HR managers' adaptability to automated routine tasks and operational efficiency ($r=.620$, $n = 256$, $p < .001$). This aligns with (Mushumba & Nyirenda, 2025; De Alwis et al., 2022; Njoku et al., 2019) who found that the adaptability of HR managers to e-HRM systems and practices improves operational efficiency by reducing errors in completion of tasks, reducing technical issues with e-HRM systems which could ultimately lead to more accurate and complete performance data, making it easier to evaluate employee performance and make informed decision. The studies by (Abuhantash, 2023) further supports this, highlighting how uninformed decisions due to inaccurate and incomplete performance data leads to adverse events like poor quality of hires and poor employee performance.

Hypothesis 2 (Ho_2): There is no significant relationship between e-HR analytics and HR efficiency in the Nigerian banking sector.
The results demonstrated that there is a significant and positive relationship between e- HR analytics and HR efficiency ($r=.822$, $n = 256$, $p < .001$). These are in alignment with the works of (Pillutla, 2025; Ayari et al., 2022; dela Cruz & Cabaluna, 2022; Abubakar & Akpan, 2020; Siam & Alhaderi, 2019) who found that prescriptive analytics such as recommending interventions to improve employee engagement improves employee efficiency, and that Improved employee experience occurred through the combination of analytical technologies which delivered better digital HR performances and gain easy access to HR systems through such digital tools. In Nigerian banks, lack of knowledge or inadequate implementation of e-HRM analytical skills that will facilitate employee's efficiency hinder proactive interventions (Mushumba & Nyirenda, 2025; Abuhantash, 2023; Ayari et al., 2022; Umar et al., 2020; Njoku et al., 2019).
Hypothesis 3 (Ho_3): Cultural factor does not significantly predict HR managers' effectiveness after controlling for e-HRM practices
The overall model was statistically significant, $F(2, 253) = 64.685$, $p < .001$, explaining 33.8% of the variance in HR managers' effectiveness. After controlling for e-HRM practices, organisational culture explained a further 29.0% of the variance (R^2 change = .290, $F(1, 253) = 107.6$, $p < .001$), with organisational culture recording a higher beta value ($\beta = .463$, $p < .001$) than the e-HRM practices scale ($\beta = .333$, $p < .001$). This echoes the conclusions of Peretz (2024), Milon et al. (2022), Waheed et al. (2020), and Siam and Alhaderi (2019), who argued that the relationship between e-HRM practices and HR managers' effectiveness depends on organisational culture, for instance, an adaptive organisational culture can strengthen this relationship. The additional-predictor effect size ($\beta = .463$) underscores the need for an adaptive culture in the workplace, as proposed by Peretz (2024), De Alwis et al. (2022), and Umar et al. (2020).

6. CONCLUSION

The adoption of e-HRM systems in the Nigerian banking sector has been shown to significantly enhance the achievement of HRM goals. HR managers' adaptability to automated routine tasks was strongly associated with operational efficiency ($r = .620$), the integration of e-HR analytics showed an even stronger association with HR efficiency ($r = .822$), and e-HRM practices together with organisational culture jointly explained a substantial share of the variance in HR managers' effectiveness with organisational culture emerging as the stronger of the two predictors ($\beta = .463$ versus $\beta = .333$). Taken together, these findings suggest that banks which invest in HR managers' adaptability, build strong e-HR analytics capability, and cultivate a supportive organisational culture are best positioned to translate e-HRM adoption into improved operational efficiency, HR efficiency, and HR manager effectiveness, ultimately supporting better decision-making and enhanced customer experience.

7. RECOMMENDATIONS & PRACTICAL IMPLICATIONS

Based on the findings, the study recommends thus:

i. DMBs, banks, and other organisations should invest in structured onboarding, training, and change management support to strengthen HR managers' adaptability to automated e-HRM tasks, given the strong positive relationship found between adaptability and operational efficiency.

ii. Policy makers should develop policies that support organisational investment in HR technology, while banks should build robust e-HR analytics capability which should include: access to predictive and prescriptive analytics tools and the skills which will help them given the strong positive effect of e-HR analytics integration on HR efficiency.

iii. Banks should deliberately cultivate a supportive, adaptive organisational culture alongside their e-HRM practices, given that organisational culture was found to be the stronger of the two predictors of HR managers' effectiveness

8. LIMITATIONS OF THE STUDY

The collection of data was done through a cross-sectional survey, which captures perceptions at a single point in time and that may not be sufficient to establish causal direction between e-HRM practices and the outcomes examined. Secondly, the sample was drawn purposively from seven deposit money banks with international operations in Enugu State, so the findings may not generalise to banks without international operations, to other South-East states, or to Nigeria's banking sector as a whole. Finally, the study relies on employees' perceptions of HR managers' adaptability and effectiveness rather than objective performance indicators. Future research could adopt a longitudinal design, a broader and more randomly selected sample across Nigerian banking regions, and objective performance data to address these limitations.

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