
The Impact of Electronic Human Resource Management (e-HRM) on Non-Financial Organisational Performance: Perspective of Multinational Companies in Ghana

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Abstract: *This study aimed to determine how adopting e-HRM solutions may affect non-financial organizational performance. The study was quantitatively founded on cross-sectional research. The study's population comprised employees, middle management, top management, and human resources specialists from multinational corporations. The targeted population was 488 employees from three multinational companies that have adapted e-HRM tools for their operations. Yamane's sample size formula was used to determine a sample size of 219. The questionnaire was self-administered, and that contributed to the high return rate of 98%. The questionnaire was constructed in a Likert-scale style. The respondents were chosen using a systematic random sampling technique. The SPSS (Version 23) and SEM-PLS were used for data analysis. The strengths of SEM-PLS include its statistical power, robustness in the face of small sample sizes, general acceptability in social scientific research, and non-linearity of data handling. The results of this study showed a statistically significant correlation between e-HRM tools and non-financial organizational performance. It was suggested that the management of business enterprises should invest in and implement e-HRM tools to facilitate HR professionals'*

and line managers' functions and that the evaluation of organizational performance should not be based on financial indicators only but must incorporate financial and non-financial perspectives in a longitudinal study that incorporates many developing countries

Keywords: electronic human resource management (e-HRM), non-financial organisational performance, multinational companies, Ghana

INTRODUCTION

The 21st century has given birth to the digital age (Bijaniaram et al., 2023) and HRM has witnessed a paradigm shift from a traditional HR system, comprised of 'brick and mortar' manpower with manual business procedures to a highly self-sufficient, self-service culmination of skilled, remote manpower with web-driven workflows (Thite, 2022). Improvements in HRM are now being accomplished more often using technology-based solutions (Atrian & Ghobbeh, 2023). The digital age has enabled the transition from traditional paper-based, manual operations to a technology-driven, e-HRM approach (Thite, 2022; Haerani et al., 2020). Virtual HRM (e-HRM) is a paradigm shift from the traditional HRM practices, HRIS to strategic HRM (Maghsoudi, et al., 2023). Technological advancements have necessitated a transformation in HR practices, as organizations strive to maintain a competitive edge (Sengupta et al., 2021; Zavyalova et al., 2022). e-HRM has emerged as a strategic function that leverages various technologies to improve operational efficiency, enhance employee relations, and drive organizational transformation (Chaplaev et al., 2023; Zavyalova et al., 2022). Xiao et al., (2022) found that e-HRM adds new functionalities to HR functions. The digital revolution has given rise to various e-HRM practices, including e-recruitment, e-selection, e-compensation, and e-performance appraisal (Sengupta et al., 2021; Junita, 2021). These innovative approaches have revolutionized the way organizations attract, evaluate, compensate, and manage their workforce. The connection between e-HRM and organisational performance has attracted the attention of several scholars and managers (Nyathi & Kekwaletswe, 2024).

The integration of electronic human resource management (e-HRM) systems in organizations has become a critical strategy to improve their administrative efficiency and flexibility in the quickly changing digital landscape (Thite, 2022; Mosca, 2020). The HR system's mechanisation or digitalization guarantees effective HR practice performance, service quality, rapid service delivery easy communication, and overall productivity, boosting efficiency and effectiveness, (Matarazzo et al., 2021); streamlined procedures, save time, increases employee involvement, improve versatility, and enables quicker HR information transmission (Matarazzo et al., 2021). Again, it enables the HR specialists can act as strategic partners or collaborators because stakeholders can participate and be customer focused. (Zavyalova et al., 2022; Halid, et al., 2020; Xiao et al., 2022;

Ziao et al., 2022). The benefits of digital HRM include improved productivity via organizational efficiency, less bureaucracy, lower costs, and the creation of additional value (Vardarlier, 2020).

Statement of the problem

Scholarly studies have shown that implementing e-HRM practices can have statistically significant positive impacts on organisational financial and non-financial performance (Atobishi, et al., 2024). A meta-analysis by Cheng & Zou, (2021). found that e-HRM implementation is positively correlated with organisational performance. Moreover, Ahmed and Ogalo (2019) and Muqaddam & Hossain (2021) studied at Bangladeshi manufacturing company discovered that e-HRM significantly positive impact on organisational performance. Other empirical studies (Ageron et al., 2020; Kamble et al., 2020; Njoku et al., 2019), concluded that effective execution of e-HRM can enhance organisational performance. In contrast, the studies of Nosratabadi et al., 2022) concluded that e-HRM has not added any extra value to the growth of the organization. Though e-HRM serves a strategic utilisation of employees, there is no conclusive study to understand how e-HRM system impact financial and non-financial firm performance (Nosratabadi et al., 2022).

Moreover, studies on organisational performance are overly concentrated on financial indicators. This has led to the lack of comprehensive organization performance evaluation and the phenomenon has attracted the attention of international bodies such as the European Union (EU). The EU Directive 2014/95EU directed all firms to incorporate non-financial performance indicators in their disclosures. This was to enhance the significance, coherence, comprehensiveness, and comparability of the data in evaluating organisational performance to stakeholders. (Venturelli et al., 2020; Zarzycka & Krasodomska, 2021, Fregnan et al., 2020). According to Monciardini (2016), stakeholder demands the inclusion of non-financial indicators and the contribution to ecological sustainability development ((Mio et al., 2020) in their disclosures. Non-financial organisational performance indicators such as customer satisfaction, innovation, internal process, product or service quality, sustainability, and brand image are not researched (Siebers et al., 2008). Additional research into the impact of e-HRM on non-financial organisational performance in emerging economies is necessary considering the contradictory and equivocal empirical findings in advanced countries (Marler & Fisher, 2013; Müller et al., 2018; Strohmeier & Kabst, 2014). Thus, the need to close the research gap inspired the study.

REVIEW OF RELATED LITERATURE

Theoretical underpinning: AMO Model & Balance Scorecard Performance Model

Again, from the standpoint of human resource management, organizational performance can be measured using indicators such as low employee turnover, low employee absenteeism, and low employee churn. The AMO Model and the BSC Model serve as theoretical foundations for this research. (Appelbaum, Bailey, Berg, & Kalleberg, 2000) Ability, Motivation, and Opportunity (AMO) theory is an appropriate model for explaining the HRM-performance relationship. The

ability, motivation, and opportunity of employees determine their performance. HRM policies influence the development of an organization's human capital pool, which becomes a scarce, unique, and indispensable internal resource. Improvements in skills, attitudes, and behaviour (HRM outcomes) eventually translate to better organizational performance (Boxall and Steeneveld 1999). HRM policies act as a conduit for developing employees' knowledge, skills, abilities, and competence (KSAs), as well as their attitude and motivation (financial and non-financial), and the opportunity to participate in decision-making will increase employees' commitment, satisfaction, and retention. This explains the HRM-performance relationship (Purcell & Hutchinson 2007; Paauwe 2004). HRM can improve performance (Lepak et al. 2006) if the HRM system is designed to improve employees' abilities, motivation, and opportunities.

e-HRM

e-HRM is a paradigm shift from the traditional HRM practices, HRIS to strategic HRM (Maghsoudi, et al., 2023). e-HRM can be defined as a system that uses information technology, the internet, intranet, or internal social networking to offer HRM services (Thite, 2022). e-HRM is the use of web-based communication technology for administration of HR activities (Zhang & Chen, 2023). It is not just the automation of administrative transactions but an evolution from paper-based and basic IT-enabled HR to a system that offers greater flexibility, strategic input, and access to management information.

At the operational level, routine tasks such as document management, recruitment, and payroll administration can be automated, leading to greater efficiency and reduced errors (Zavyalova et al., 2022). e-HRM enhances user satisfaction, and computer self-efficacy, aids recruitment, onboarding, performance management, and compensation, promotes interactions and cooperation, and expedites procedures, (Qahtani & Alsmairat, 2023; Xiao et al., 2022). Relational aspects of HR, such as internal and external communication, can also be enhanced through digital platforms, ensuring faster and more effective service for employees and customers (Zavyalova et al., 2022). It increases the reliability of the information and provides real-time analytics and reporting capabilities (Kroon & Paauwe, 2021); decreases administrative burden, and increases efficiency (Pak et al., 2019). e-HRM can also boost the effectiveness of HR operations (Kabeta & Halubanza, 2023); and provide timely and precise data. At the transformational level, e-HRM tools enable strategic coordination and integration of HR practices across the organization, allowing for data-driven decision-making and alignment with broader business objectives (Kabeta & Halubanza, 2023; Zavyalova et al., 2022). It increases staff involvement and cost efficacy (Verhulst et al., 2023); increase staff involvement cost efficacy (Boccoli et al., 2023; Nyathi & Kekwaletswe, 2023); improves productivity and broad job satisfaction (Andrić et al., 2023). The adoption of e-HRM tools is not merely a technological shift, but a strategic one that requires attitudinal change and a culture that embraces digital innovation and employee empowerment (Zavyalova et al., 2022; Junita, 2021; Chaplaev et al., 2023)

e-HRM Tools / HRM Activities

e-HRM tools have revolutionized how HR professionals manage and handle various HR tasks. They provide efficient and automated solutions for recruitment, employee onboarding, performance management, payroll administration, and employee engagement (Kroon & Paauwe, 2021). The incorporation of e-HRM tools has aided HR practitioners in increasing efficiency, reducing administrative burden, enhancing communication and collaboration, offering real-time analytics and reporting capabilities, and allowing HR practitioners to make data-driven decisions and track key metrics. effectively managing and developing their workforce (Pak et al., 2019; Atrian & Ghobbeh, 2023). The key e-HRM tools in practice are e-recruitment, e-selection, e-training and development, e-compensation, e-appraisal, e-communication, e-learning, etc. (Rasheed Memon et al., 2022; Akter et al., 2021).

- **e-Recruitment:** It refers to using digital technologies in the recruitment process (Chaplaev et al., 2023). Automated job postings, online applications, and applicant tracking systems have made it easier for organizations to reach a wider pool of potential candidates and streamline the application process (Stone et al., 2015). e-recruitment is preferred over traditional paper recruitment because of its wider availability, reachability, low cost, no discrimination against accessibility, decentralisation of recruitment processes, speed, and convenience to applicants (Kar and Bhacharya 2009; Vardarlier, 2020).
- **e-Selection:** It involves the use of digital assessment tools, such as online tests and video interviews, to evaluate and identify the most suitable candidates for a role (Zavyalova et al., 2022; Kesen, 2012). Automated applicant tracking systems, video interviews, and online assessments have enabled organizations to enhance the efficiency and objectivity of their hiring practices. According to (Suchitra 2014:5) "the goals of e-selection are primarily three: (a) achieving cost savings, (b) maximizing human capital utilization, and (c) sustainability". It is used for the identification, screening, and evaluation of candidates (Vardarlier, 2020).
- **e-Compensation:** It encompasses the digitalization of compensation and benefits management (Kesen, 2012). Through online platforms, employees can access and manage their payroll information, benefits, and incentives with greater transparency and convenience (Sengupta et al., 2021). Additionally, the use of data analytics in e-compensation allows organizations to make more informed and equitable decisions regarding employee remuneration, ensuring that compensation aligns with individual and organizational performance (Chaplaev et al., 2023). It enables HR to track and manage all data related to compensation, rewards, incentives, benefits, and retirement (Vardarlier, 2020).

- **e-Performance appraisal:** According to (Nivlouei 2014:20) e-performance appraisal is defined as "a competency-based system that measures people not only on goal attainment but on the very competencies that are required for their role." It utilizes digital platforms to monitor, evaluate, and provide feedback on employee performance (Zavyalova et al., 2022). This approach offers several advantages, such as real-time data tracking, automated performance reviews, and digital feedback mechanisms that can help organizations enhance their performance management processes and provide more transparent and objective assessments. It improves the analysis of job requirements, work units, workload, and employee performance, resulting in more accurate data on employee compensation and reward (Saini, 2018).
- **e-Training:** e-training, also known as online or electronic training, refers to the delivery of educational or training content through digital platforms (Kesen, 2012). This approach allows for more flexible and accessible learning opportunities, as employees can access training materials at their convenience (Zavyalova et al., 2022). Digital technologies enable personalized learning experiences, real-time feedback, and the ability to track individual progress (Saini, 2018). and continuously develop their workforce (Trenerry et al., 2021; Vardarlier, 2020).
- **e-Career development:** It refers to the utilization of digital technologies to facilitate the growth and progression of employees within an organization (Sengupta et al., 2021). Digital career development systems offer personalized recommendations, virtual career fairs, and remote networking opportunities, empowering individuals to navigate the dynamic job market more effectively. (Hooley & Staunton, 2020). This includes online training platforms, virtual mentorship programs, and digital performance management systems that enable real-time feedback and goal setting (Kesen, 2012). By leveraging these digital tools, organizations can empower their employees to take charge of their professional development, fostering a culture of continuous learning and growth (Zavyalova et al., 2022).
- **e-Learning:** It encompasses integrating digital technologies into the educational and training spheres. It is the delivery of educational content and training through digital platforms, has become a prevalent method for upskilling and reskilling employees, offering flexibility, scalability, and access to a wealth of online resources (Aleem et al., 2023; Van Veldhoven & Vanthienen, 2021). E-learning platforms offer flexibility, accessibility, and personalized learning experiences, catering to the diverse needs of students and professionals (Vardarlier, 2020).
- **e-Communication:** It refers to the utilization of digital technologies to facilitate internal and external communication within an organization (Zavyalova et al., 2022). This includes

the use of collaborative software, video conferencing, and instant messaging, which have become essential in the age of remote and hybrid work (Sengupta et al., 2021). The proliferation of email, video conferencing, instant messaging, and collaborative platforms has revolutionized has enabled real-time information sharing, remote collaboration, and enhanced productivity. Based on the literature, the following hypotheses were formulated:

H₁: There is a positive relationship between e-HRM tools and Non-Financial Organisational Performance

H₁: e-Career development has a positive relationship with *non-financial organisational performance*.

H₂: e-Communication has a positive relationship with *non-financial organisational performance*.

H₃: e-Learning has a positive relationship with *non-financial organisational performance*.

H₄: e-Performance Appraisal has a positive relationship with *non-financial organisational performance*.

H₅: e-Recruitment has a positive relationship with *non-financial organisational performance*.

H₆: e-Selection has a positive relationship with *non-financial organisational performance*.

H₇: e-Training and Development has a positive relationship with *non-financial organisational performance*

Non-Financial Organisational Performance (NFOP)

Non-financial performance refers to activities and outcomes that are not directly quantifiable in monetary terms. (Wu et al., 2020). The assessment of organizational performance has traditionally been dominated by financial metrics, such as profitability, return on investment, and market share. However, in recent years, there has been a growing recognition that non-financial measures are also crucial in evaluating a company's overall performance. (Wu et al., 2020). Because the adoption of financial metrics alone cannot offer superior performance evaluation (Nyathi & Kekwaletswe, 2023). Through the integration of diverse performance metrics, entities can furnish an equitable, comprehensive, and well-rounded assessment of their efficacy. (Maghsoudi et al., 2023; Zhang & Chen, 2023).

Impact of e-HRM on Non-Financial Organizational Performance

The implementation of e-HRM systems offers organizations the potential to enhance their non-financial performance through the streamlining of HR processes, improved service quality, employee engagement, operational efficiency, and strategic integration and ultimately contribute to the overall success of the organization (Halid et al., 2020; Iyer, 2019; Zavyalova et al., 2022). e-HRM can contribute to operational-level improvements, such as reduced administrative costs and increased responsiveness (Zavyalova et al., 2022). Furthermore, the integration of e-HRM systems can enhance the quality of HR services provided to employees, leading to improved employee satisfaction and engagement (Nurlina et al., 2020). At a strategic level, e-HRM can facilitate the alignment of HR practices with organizational objectives, enabling the HR function to play a more transformative role (Zavyalova et al., 2022). This strategic integration can lead to enhanced organizational agility, better talent management, and improved decision-making (Halid et al., 2020) (Zavyalova et al., 2022). Transformational e-HRM enables organizations to achieve and sustain competitive advantage through the exploitation of new productivity tools and approaches, such as digital analytics and artificial intelligence. (Njoku et al., 2019). Furthermore, e-HRM can be a valuable tool for management and employees to measure organizational performance more effectively and efficiently, reducing the effects of cost biases. (Nurlina et al., 2020).

H₂: e-HRM has a positive effect on non-financial organisational performance

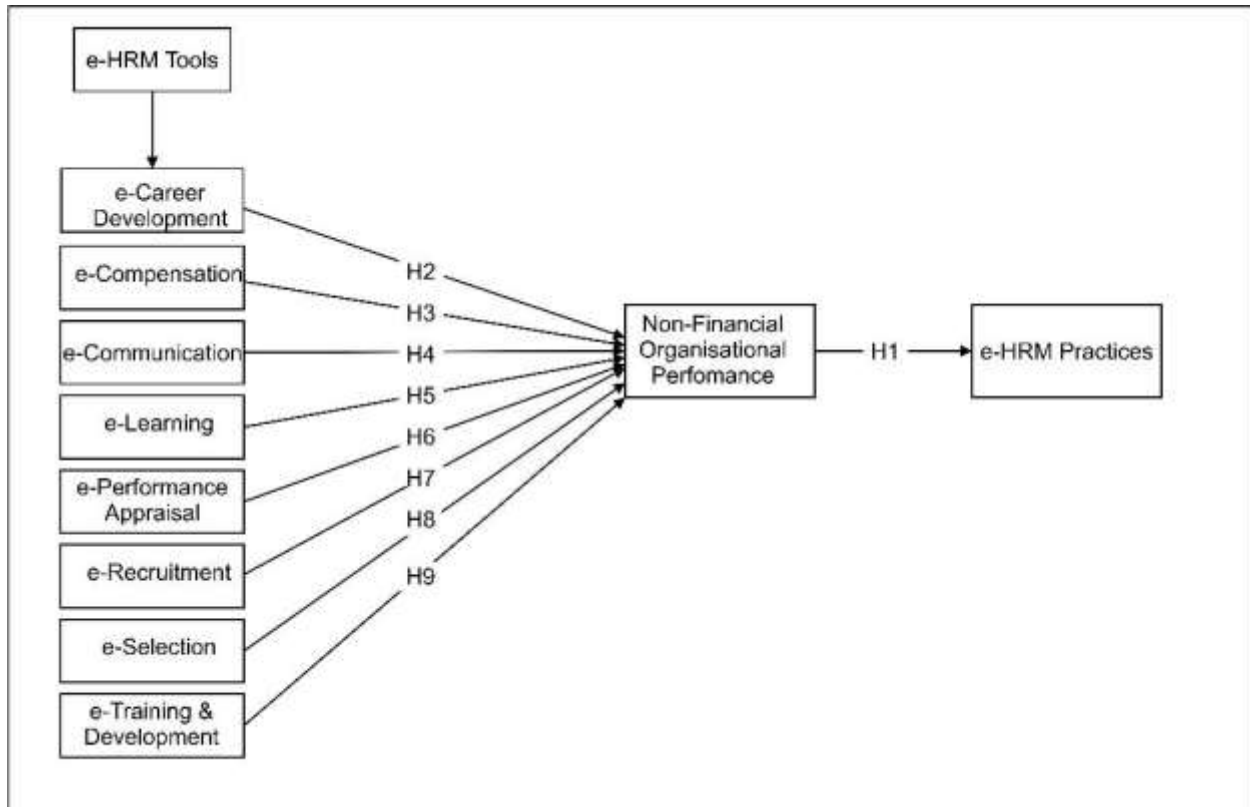


Figure 1: Conceptual Framework
Source: Research Own Construct, 2023

METHODOLOGY

Research Design

A research design is a framework for data collection and analysis that aims to reveal the priorities set for a variety of dimensions during a research process (Bryman and Bell 2015). The research design is determined by the research questions and objectives, as well as the research strategy (Saunders et al. 2009; Daymon and Holloway 2011). Purposive sampling was most appropriate because it is important for theory development (Bryman and Bell 2015).

Targeted Population

Employees of Tata Holdings (Ghana) Limited, Alliance Motors (Ghana) Limited, and MTN Ghana Limited comprised the study's population. Employees, line managers, and HR professionals who use e-HRM tools comprise the unit of analysis. Line managers develop the business strategy and implement the means to achieve the business strategy. HR professionals work with line managers, employees, and unions to develop and implement human resource system elements in the strategy. The three companies employed 569 people (N = 569) in total.

Table 1: Population of Study

Organisations	Population (N)
Tata Holdings (Ghana) Limited	109
Alliance Motors (Ghana) Limited	98
MTN Ghana Limited	281
Total	488

Sample Size Determination

The sample size was determined using Yamane's (1967) sample size formula

$$s = \frac{N}{1 + N(e)^2}$$

N = Population (N = 488)

e = Margin of error (5%)

$$= \frac{488}{1 + 488(0.5)^2} = 219.81$$

Out of the 219 targeted respondents, 215 questionnaires were received. This represents 98% which is statistically representative.

Sample & Sampling Technique

The systematic random sampling technique was used for the study because it has the advantage of selecting respondents at random. As a result, some units in the population have a higher chance of being chosen (Bryman and Bell, 2015). The respondents were drawn at regular intervals from an alphabetical sampling frame. The sampling interval (k) was calculated by dividing the population size by the desired sample size ($k = N/n$), where k represents the sampling interval, N represents the targeted population size, and n represents the sample size. As a result, with a targeted population size of $N = 488$ and a sample size of $n = 129$, $k = N/n$ ($k = 488/129 = 2$). A random selection was made within the "k," and then the second (2nd) respondent was chosen, and so on until 219 respondents were obtained (Saunders et al. 2016).

Research Instrument and Measurement

A structured questionnaire was used to gather data for the study. It was designed on a five-point Likert-scale style of 1 for "strongly disagree" to 5 for "strongly agree." There are four sections to the questionnaire. The first section contains biodata; Section B contains e-HRM tools; Section C deals with non-financial organizational performance, and Section D deals with e-HRM and organizational performance. A validated standardised scale from the literature was used. Non-financial organizational performance was measured using (Kaplan and Norton, 1992; 1996) Balanced Scorecard Model variables such as customer satisfaction, internal business processes, learning and growth, and innovation. The e-HRM tools (e-recruitment, e-selection, e-performance

appraisal, e-training and development, e-compensation, and e-career development) were evaluated. A standard questionnaire was adapted from (Iqbal et al. 2019).

Data Collection Procedure

Data was collected by distributing questionnaires personally. This ensured an optimum return rate since personal rapport was established and a relatively ambiguous questionnaire could be explained (Saunders, Lewis, and Thornhill 2023). The respondents were met at a favourable time scheduled with them.

Data Analysis

The data was analysed using SPSS (version 23) and (SEM-PLS (version 3.0) software. Descriptive statistics were used to analyse the nominal data (demographic characteristics), and the Structural Equation Model - Partial Least Square was used to determine the measurement and structural models (Hair et al. 2019). The PLS-SEM was used because of its robustness, statistical power, appropriateness for small data, suitable even when the data is not normally distributed In recent times, it has been the most used software in social science (Hair et. al., 2017; Ringle et al. 2018).

RESULTS AND DISCUSSION

Respondents' Demographic

Respondents include top management, middle management, line managers, HR professionals, and employees from three multinational organizations in Ghana. Table 2 shows that there was a total of 215 respondents. The results revealed that many of the employees were male, indicating that the work is dominated by men (see Table 2).

Table 2: Demographic Characteristics

Characteristics	Freq.	%	Cum %
Gender			
Male	170	79.0	79.0
Female	45	21.0	100.0
Total	215	100.0	
Age (Years)			
18 – 28	38	18.0	18.0
29 – 39	69	32.0	50.0
40 – 49	86	40.0	90.0
50+	22	10.0	100.0
Total	215	100.0	
Educational Qualification			
HND (Diploma)	45	21.0	21.0
Bachelor	109	51.0	72.0

Masters	36	17.0	89.0
Professionals	25	11.0	100.0
Total	215	100.0	
Experience			
5 or Less	154	72.0	72.0
6 – 10	35	16.0	88.0
11 – 15	26	12.0	100.0
Total	215	100.0	
Job Category			
Top Management	15	7.0	7.0
Middle Management	32	15.0	22.0
Line Managers	45	21.0	43.0
HR Professionals	25	12.0	55.0
Employees	98	45.00	100.0
Total	215	100.0	

Field Data: 2023

Measurement Model Test

The main criteria for reporting using SPL-SEM are the measurement models and the structural model. The measurement model examines the internal consistency of the data using convergent, construct, and discriminant validity. (Hair et. al., 2019).

Reliability and Validity

The study's reliability was assessed using internal consistency reliability and composite reliability (CR) as defined by (Jöreskog 1971). Another measure of internal consistency and reliability is Cronbach's alpha. Cronbach's alpha values greater than 0.70 indicate internal consistency. According to the rule of thumb, values ranging from 0.70 to 0.90 are considered "satisfactory to good." Because all the values range from 0.87 to 0.97, the data meets the reliability threshold. The convergent validity of a construct is the extent to which it converges to explain the variance of its items. The extracted average variance (AVE) is the metric used to assess the convergent validity of a construct. AVE is calculated by taking the square of the loadings of each indicator in the construct. Generally, the minimum acceptable value for AVE should be 0.50 or higher. A value of 0.50 or higher indicates that the construct explains 50% or more of the variance in the construct's constituent items. The AVE values in Table 3 are all greater than 0.50. (See Table 3).

Table 3: Construct Reliability and Validity

Constructs	Variables	Code	Cross Loadings	Cronbach's Alpha	rho_A	CR	AVE
Non-financial Org, Perf.	Customer satisfaction	CS1	0.813	0.940	0.941	0.948	0.602
		CS2	0.788				
		CS6	0.746				
		CS7	0.791				
	Internal Business Process	IBP1	0.830				
		IBP2	0.759				
		IBP3	0.763				
		IBP4	0.781				
	Innovation	INN	0.727				
	Learning & Growth	LGP1	0.773				
		LGP2	0.746				
		LGP4	0.790				
	Electronic HRM	e-Career Development	e-CD1				
e-CD3			0.899				
e-CD4			0.921				
e-CD5			0.896				

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	e-Compensation	e-COM 1	0.82 7	0.952	0.972	0.959	0.744
		e-COM 2	0.83 7				
		e-COM 3	0.83 4				
		e-COM 4	0.88 4				
		e-COM 6	0.89 3				
		e-COM 9	0.88 1				
		e-COM 10	0.85 5				
		e-COM 11	0,86 2				
	e-Communication	e-COMM1	0.88 0	0.878	0.887	0.916	0.732
		e-COMM2	0.82 4				
		e-COMM3	0.88 9				
		e-COMM4	0.82 7				
	e-Learning	e-Le 2	0.94 0	0.967	0.968	0.976	0.911
		e-Le 3	0.95 9				
		e-Le 4	0.95 6				
		e-Le 5	0.96 3				
	e-Perf. Appraisal	e-PA 1	0.76 3	0.916	0.920	0.932	0.630
		e-PA 2	0.80 8				
		e-PA 3	0.82 4				
		e-PA 4	0.79 9				

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		e-PA 5	0.78 7				
		e-PA 6	0.78 7				
		e-PA 7	0.77 4				
		e-PA 8	0.73 9				
	e-Recruitment	e-Re 2	0.74 4	0.899	0.902	0.921	0.624
		e-Re 4	0.91 2				
-		e-Re 6	0.76 1				
		e-Re 7	0.77 4				
		e-Re 8	0.83 9				
		e-Re 10	0.84 9				
		e-Re 11	0.88 4				
	e-Selection	e-Se 1	0.84 8	0.860	0.864	0.900	0.643
		e-Se 2	0.85 8				
		e-Se 3	0.78 3				
		e-Se 5	0.77 6				
		e-Se 6	0.73 7				
	e-Training & Dev.	e-TD 2	0.89 1	0.779	0.786	0.872	0.695
		e-TD 3	0.83 5				
		e-TD 7	0.77 1				

Discriminant Validity Test

The discriminant validity is the degree to which a construct differs from the other items in the structural model. The Fornell-Lacker criteria, the Heterotrait-Monotrait Ratio (HTMT), and the outer cross-loading were used to examine the discriminant validity.

Table 4: Fornell-Larcker Criterion

Items	NFOP	eCD	eCOM	eCOMM	eHRMP	eLe	ePA	eRe	eS	eTD
NFOP	0.776									
eCD	0.707	0.905								
eCOM	0.171	0.163	0.863							
eCOMM	0.647	0.570	0.241	0.856						
eHRMP	0.757	0.648	0.237	0.667	0.852					
eLe	0.714	0.654	0.182	0.879	0.721	0.954				
ePA	0.600	0.697	0.288	0.529	0.665	0.593	0.794			
eRe	0.817	0.698	0.240	0.585	0.553	0.624	0.496	0.790		
eS	0.631	0.642	0.264	0.544	0.542	0.579	0.457	0.581	0.802	
eTD	0.585	0.423	0.319	0.514	0.559	0.492	0.373	0.557	0.455	0.834

According to Henseler et al. (2015) the Heterotrait-Monotrait Ratio (HTMT) has greater statistical power than the Fornell-Larker criterion. The HTMT is defined as the mean value of the item correlations across constructs. When HTMT values are high, discriminant validity issues emerge. A threshold of 0.90 indicates that there is no discriminant validity (Henseler et al. 2015).

Table 5: Heterotrait-Monotrait Ratio (HTMT)

Items	NFOP	eCD	eCOM	eCOMM	eHRMP	eLe	ePA	eRe	eS
NFOP									
eCD	0.755								
eCOM	0.168	0.159							
eCOMM	0.704	0.624	0.258						
eHRMP	0.778	0.680	0.253	0.707					
eLe	0.744	0.691	0.171	0.949	0.731				
ePA	0.641	0.757	0.302	0.582	0.732	0.628			
eRe	0.886	0.765	0.235	0.654	0.575	0.669	0.545		
eS	0.694	0.718	0.280	0.619	0.578	0.632	0.509	0.661	
eTD	0.680	0.497	0.375	0.615	0.623	0.566	0.435	0.663	0.557

In Table 5, the square root of AVE and the factor correlation coefficients are diagonally displayed in bold. The variable is reflected if the square root of AVE is greater than the factor correlation

coefficients. There is no association value bigger than the square root of AVE, according to the findings in Table 5. As a result, discriminant validity poses no issues.

Structural Model Assessment Procedure

The structural model examines the collinearity assessment, coefficients of determination (R^2 value), effect size (f^2), and predictive relevance (Q^2) (Hair et. al., 2014).

Collinearity (VIF values)

Collinearity implies highly corrected items that are incapable of independently predicting the dependent variable (s). To determine collinearity, the Variance Inflation Factor (VIF) was used.). The threshold VIF acceptance is 3 – 5 (Diamantopoulos and Siguaw 2006; Hair, Ringle, and Sarsted, 2011). In table 6, all the VIF values are below 5, hence it is determined that there are no issues of collinearity.

Table 6: Collinearity

Items	VIF	Items	VIF
CS1	2.789	ePA1	2.336
CS2	2.543	ePA2	2.483
CS6	2.179	ePA3	2.865
CS7	2.777	ePA4	2.850
IBP1	3.089	ePA5	2.425
IBP2	2.543	ePA6	2.921
IBP3	2.497	ePA7	2.609
IBP4	2.517	ePA8	2.032
INN1	1.889	eR10	2.537
LGP1	2.400	eR11	2.686
LGP2	2.382	eR2	1.866
LGP4	2.753	eR4	1.857
eCD1	3.244	eR6	2.057
eCD3	3.049	eR7	2.078
eCD4	3.855	eR8	2.608
eCD5	2.993	eS1	2.334
eCOM1	2.339	eS2	2.323
eCOM10	3.551	eS3	1.861
eCOM11	2.958	eS5	1.839
eCOM2	3.575	eS6	1.591
eCOM3	2.926	eTD2	2.127
eCOM4	4.022	eTD3	1.691

eCOM6	3.606	eTD7	1.508
eCOM9	4.295	eHROP6	3.544
eCOMM1	2.917	eHROP7	2.739
eCOMM2	2.337	eHROP8	3.455
eCOMM3	2.612	eHROP9	4.039
eCOMM4	2.084		

Path Coefficients

The path coefficient indicates the relationships between the model's constructs. Correlation (r) should be greater than 1 (-1 to 1+), and the associated t-value should be greater than 1.69; the confidence level should be 0.05, and the p-value should be significant ($p < 0.05$). Non-financial organization performance has a positive relationship with e-HRM activities, according to hypothesis testing table 9 ($M=0.757$; $\beta = 0.034$, $t = 22.346$, $p < 0.05$).

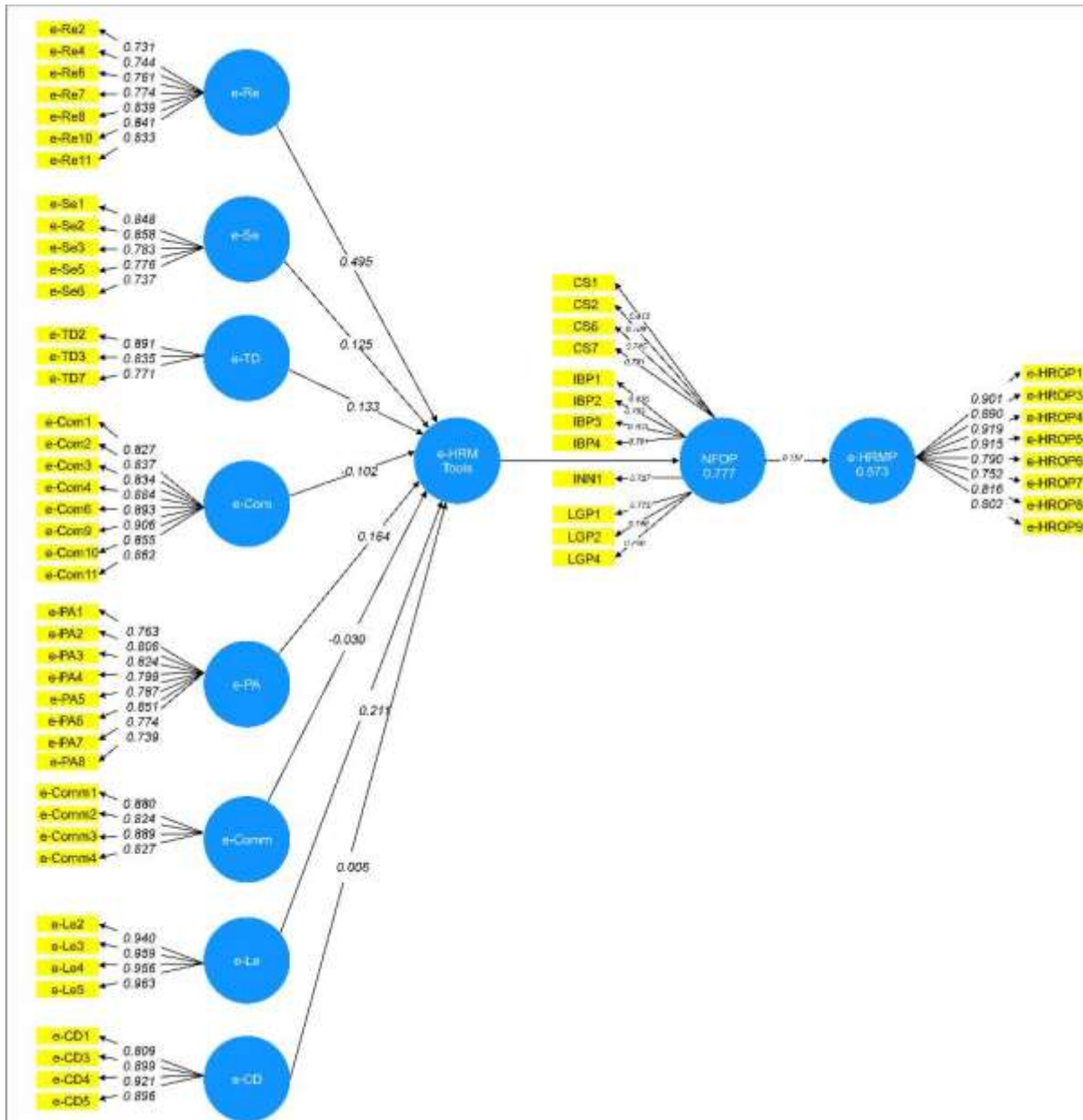


Figure 2: Path Coefficients

Table 7: Test of hypothesis

Mean, STDEV, T-Values, P-Values						
ITEMS	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics ((O/STDEV))	P Values	DECISIONS
NFOP -> eHRMP	0.757	0.757	0.034	22.346	0.000	Supported
eCD -> NFOP	0.006	0.003	0.102	0.057	0.477	Not Supported
eLe -> NFOP	0.210	0.213	0.094	2.231	0.013	Supported
ePA -> NFOP	0.164	0.170	0.050	3.288	0.001	Supported
eRe -> NFOP	0.496	0.502	0.080	6.231	0.000	Supported
eS -> NFOP	0.124	0.125	0.060	2.061	0.020	Supported
eTD -> NFOP	0.132	0.127	0.061	2.166	0.015	Supported

The study's primary goal was to identify the link between e-HRM activities and non-financial organizational performance. The primary hypothesis is therefore that e-HRM activities and non-financial organizational performance are positively correlated. The study's conclusions demonstrate that non-financial organizational performance is statistically significant (0.757; = 0.034, $t = 22.346$, $p = 0.000$). This supports the findings of research showing e-HRM improves organizational performance, including those by Bondarouk and Ruel (2014), Marler and Fisher (2016), Obeidat (2016), Bondarouk, Parry, and Furtmueller (2017), Stone et al. (2015), and Bondarouk, Ruel, and Parry (2017). Since the human resource is the most valuable, it should be motivated, directed, led, and overseen by the application of the best possible set of human resource practices. However, other academics claim that e-HRM acts as a mediator for goal achievement rather than having a direct impact on organizational performance (Marler and Fisher 2016; Obeidat 2016; Wright and Gardner 2003; Collins and Clark 2003; Paauwe 2009). It is also unmistakably obvious that only implementing technology cannot result in the attainment of organizational goals and objectives; these things ask for a shift in employees' attitudes, behaviours, skills, competence, motivation, autonomy, and commitment. According to the literature, information technology (e-HRM) in HR lowers costs, expedites the delivery of high-quality services, transforms HR professionals into strategic partners, and acts as a conduit for effectiveness and efficiency. (see Table 9)

H₁: An organization's non-financial performance is positively correlated with e-Career development. According to the findings, the null hypothesis is disproved since the p-value is higher than 0.05 ($M=0.003$; = 0.102, $t = 0.057$, $p>0.477$). This is predicated on the notion that organizations' use of web-based technologies for employee development in terms of their skills, knowledge, and competencies has little impact on non-financial performance. They will be able to construct personal development profiles and safeguard their data using web-based technologies

thanks to e-career development. Lengnick-Hall and Moritz's 2003 findings conflict with the findings. Once more, e-career development will support the organization's strategy for career development and promote "professional planning, career path identification, and career growth" (Mehta,2020)

H₂: The non-financial organizational performance is positively correlated with e-Compensation. The outcome showed that the null hypothesis is accepted because ($M=-0.100$; $= 0.048$; $t = 2.134$, $p0.017$). Employers and managers may gather, assess, and share data on incentives, benefits, and pay for processing and storage using web-based technology. With the use of ICT, employees will be able to learn more about their compensation (Nivlouei, 2014; Menka, 2015). The technology is a self-service system that allows employees to update their records concerning attendance, leave, induction programs, and producing pay stubs. It allows for fairness, equality, and the ability to choose employee compensation. (Oswal, 2014). According to Dulebohn and Marler's (2005) studies, e-compensation tools assist HRM professionals in three ways: (i) by providing data for equity analysis in reward and pay; (ii) by making compensation information and data available to management; and (iii) by reducing the bureaucracy in compensation information. E-compensation also ties merits to pay, safeguards individual data, minimizes mistakes, makes it simple to retrieve previous compensation data, and maintains pay structure uniformity (Manidipa 2015)

H₃: According to the study's findings, e-learning has a positive relationship with non-financial organizational performance ($M = -0.213$; $= 0.094$; $t = 2.231$; $p 0.05$). The outcomes show that the null hypothesis is accepted. The practical implication is that e-learning transgresses the barrier associated with traditional learning since learning can take place in a virtual mode using computer-assisted applications (Ben Romdhane, 2010). It creates room for the transfer of knowledge (Parry, 2011) and is convenient for places where traditional classroom learning is practically impossible due to geographical location, work schedules, meeting family obligations, or work conflicts with personal life. And when e-learning is enhanced, it will boost organisational performance. According to Welsh et al. (2003), there are six reasons why businesses should utilize e-learning systems: it offers uniform and global training, shortens the delivery cycle time, makes learning more convenient for learners, lessens information overload, enhances employee tracking, and lowers costs.

H₄: The null hypothesis is sustained; electronic performance appraisal is positively correlated with non-financial organizational performance ($M=0.170$; $= 0.050$, $t = 3.288$, $p0.05$). Evaluating employee performance is for administrative and individual decision-making using web-based technology (Asmaa Ata Atallah, 2016). The web-based portals and technical tools allow for online evaluation of employees' abilities, expertise, and performance (Swaroop, 2012); and make employee performance information available to all performance management stakeholders. The appropriate e-performance appraisal system ensures fair reward and equitability, which breeds fairness, organisational justice, and citizenship behaviour. These attributes eventually contribute

to firms' performance (DeNisi 2017; Smith 2014; Thite 2018). A sound e-performance appraisal system helps in policy and practice integration, managing employee behaviour, pinpointing flaws, recording performance reports, and suggesting areas for training (Bhattacharyya, 2017).

H₅: E-Recruitment has a favourable relationship with non-financial organizational performance. ($M=0.170$; $\beta= 0.050$, $t = 3.288$, $p<0.05$). The conclusion upholds the null hypothesis. It is the use of information and communication technologies to draw qualified candidates to fill open vacancies (Fayyazi and Afshar, 2015). Candidates may quickly check their qualification eligibility and compare it to the job requirements in the job description online. e-recruitment because it boosts successful interviewing, makes it possible to save candidate records electronically, offers real-time reporting, enables the selection of applicants who are best matched to job specifications, improves standardization of employment, and is bias-free (Parry, 2011; Makkar and Sanjeev, 2014; Gupta 2016); has a greater reach, qualified candidates, cost-effectiveness (lowering costs), immediate access to job openings, decentralization of recruitment, a reduction in the need to store paperwork, the ability to allow multiple users to access the information at the same time, system speed, and convenience (Kar & Bhacharya, 2009; Torrington, Hall, and Taylor, 2008).

H₆: The null hypothesis is validated since e-Selection shows a positive connection with non-financial organizational performance ($M = 0.125$; $\beta = 0.060$, $t = 2.061$, $p0.05$). It is the procedure for selecting and recruiting potential employees using the Internet and web-based technology. As to Suchitra (2014:5), "E-selection primarily serves the following three goals: (a) reducing costs; (b) maximizing the use of human resources; and (c) sustainability. Maximum human capital utilization, the second goal, is being attained by high retention rates, a rise in the proportion of applicants who fit job criteria, and higher productivity after new hires." e-selection lowers administrative burdens by automatically screening applications to ensure that candidates meet essential job requirements and enables organizations to conduct interviews with candidates using webcams. "The major purpose of the recruiting process is to attract potential employees whose abilities align with the goals and objectives of the firm."(Oswal 2014, 12)

H₇: The null hypothesis, which states that there is a positive correlation between e-Training and Development and non-financial organizational performance, is accepted ($M = 0.127$; $\beta = 0.061$; $t = 2.166$; $p 0.05$). E-Training is the practice of doing training in a virtual environment with the use of ICT. The ability to record individual training histories, register employees for certain courses, and capture and track course information is made possible by e-training management. The use of electronic training management by organizations lowers training costs, allows for cost classification by department, race, or gender, ensures that employee training records are quickly accessible, offers a training schedule, course descriptions, and individual training history accessibility, and keeps track of training courses and employee training records. (Oswal, 2014, p. 13) asserts that "online training enables training to workers at any time and any location" and that "training techniques allow the employees to build and increase their knowledge and abilities for

business growth and effective customer service." (Nivlouei 2014, 150). Additionally, it facilitates information sharing across departments and businesses and helps staff members become comfortable with new internet technologies. To counteract the drawbacks of each modality, training will be more successful if it combines online, in-person, and on-the-job training programs.

Coefficient of Determination (R^2)

The R^2 value is used to examine the endogenous construct(s) and explains the variance contribution of each endogenous construct as well as the explanatory power of the model (Shmueli and Koppius 2011). R^2 is the in-sample explanatory power (Rigdon, 2021:2). The R^2 is used to account for the variance contributed by each endogenous construct as well as the model's explanatory power (Shmueli and Koppius 2011). R^2 is the in-sample explanatory power (Rigdon, 2021:2). R^2 values of 0.75, 0.50, and 0.25 are interpreted as significant, moderate, and weak, respectively (Hair et al. 2011). A high R^2 indicates that the model overfits the data, is too complex, or does not reflect the population (Sharma et al. 2019a). In this study, the R^2 values of the endogenous constructs non-financial organizational performance were 0.777 (77.7%), and e-Human Resource Management Practices accounted for 0.573 (57.3%) (See table 10) The values are good, as suggested by Chin ($R^2 > 0.67$ indicates a strong model).

Table 8: R Square

	R^2	R^2 Adjusted
NFOP	0.777	0.768
e-HRMP	0.573	0.571

Field Data, 2023

The predictive relevance (Q^2)

The predictive power of the PLS path model can be measured by the value (Geisser 1974). The blindfolded metric can (Rigdon 2014b, Sarstedt et al. 2014). Out-of-sample prediction and in-sample explanatory power are combined in the Q^2 (Shmueli, et al. 2016; Sarstedt et al. 2017a). A Q^2 value greater than zero indicates greater predictive accuracy. As a general rule, Q^2 values greater than zero, 0.25, and 0.5 are interpreted as a small, medium, and large predictive relevance of the PLS-path model, respectively.

RESULTS AND DISCUSSIONS

The purpose of the research is to determine the impact of e-HRM activities on non-financial organizational performance. The study's findings indicate a link between e-HRM activities and non-financial organizational performance ($M=0.757$; $\beta= 0.034$, $t = 22.346$, $p0.000$). When managers use technology in the primary HRM function, it can influence innovation, customer satisfaction, internal business processes, and employee learning and growth. This supports the findings of the (CIPD 2007; Ruel, Bondarouk, and Looise 2007) studies.

Again, H₂: e-Career development is related to non-financial organizational performance. The empirical findings of this study show that e-career development does not correlate with non-financial organizational performance ($M=0.003$; $\beta = 0.102$, $t = 0.057$, $p>0.047$). This is contrary to the findings of (Lengnick-Hall and Moritz 2003).

In addition, the third hypothesis states H₃: e-Communication has a positive relationship with non-financial organizational performance, and the results show ($M=-0.31$; $\beta = 0.088$, $t = 0.338$, $p0.368$). This implies that there is no link between e-Communication and non-financial organizational performance. The outcome contradicts the findings of the study of (Khashman and Al-Ryalat 2015).

Also, the empirical findings of this study indicate a positive relationship between e-learning and non-financial organizational performance ($M=0.213$; $\beta = 0.094$, $t = 2.231$, $p0.013$). The findings are consistent with the findings of the (CIPD 2013 and Parry 2011)

Furthermore, the study finds a link between e-Performance Appraisal and non-financial organizational performance ($M=0.170$; $\beta = 0.050$, $t = 3.288$, $p0.001$). This is consistent with the findings of (Bhattacharyya 2017). H₆: E-recruitment has a positive relationship with non-financial organizational performance. The empirical result ($M=0.502$; $\beta = 0.080$, $t = 6.231$, $p0.000$) backs up the assertion. This finding is consistent with the findings of (Fayyazi and Afshar's 2015) studies. H₇: e-Selection positively correlates with non-financial organizational performance ($M=0.125$; $\beta = 0.060$, $t = 2.061$, $p0.020$), confirming (Stone and Dulebohn's 2013) study. H₈: e-Training and Development positively relates to non-financial organizational performance ($M=0.127$; $\beta = 0.061$, $t = 2.166$, $p0.015$). The study's empirical findings are consistent with those of (Oswal 2014; Nivlouei 2014). The R² values indicate that e-HRM activities accounted for 0.573 (57.3%) of non-financial organisational performance.

Theoretical Implication

Electronic Human Resource Management (e-HRM) has significant theoretical implications for non-financial organizational performance. Research indicates that e-HRM practices positively impact various aspects of organizational performance, including efficiency, agility, and effectiveness (Arshad et al., 2023; Thathsara & Sutha, 2021). Implementing e-HRM systems leads to improved HR processes, such as recruitment and selection, training and development, and performance evaluation. These enhancements contribute to better talent acquisition, skill development, and performance management, ultimately improving organizational performance (Al-Harazneh & Sila, 2021; Arshad et al., 2023). Furthermore, e-HRM implementation is associated with increased strategic involvement of HR professionals, leading to more effective HR practices and improved organizational outcomes (Marler & Parry, 2015). Interestingly, the relationship between e-HRM and organizational performance is not always straightforward. Organizational agility has been found to mediate the relationship between e-HRM practices and

organizational performance, suggesting that e-HRM's impact on performance may be indirect (Thatsara & Sutha, 2021). Additionally, factors such as performance expectancy, ease of use, and top management support play crucial roles in the successful implementation and usage of e-HRM systems, which in turn affects organizational performance (Al-Harazneh & Sila, 2021; Vazquez & Sunyer, 2021). In conclusion, the theoretical implications of e-HRM on non-financial organizational performance are multifaceted. While e-HRM generally has a positive impact on organizational performance, its effectiveness depends on various factors, including user acceptance, organizational culture, and leadership support. Future research should focus on exploring the long-term effects of e-HRM on organizational performance and investigating the potential moderating and mediating factors in this relationship.

Managerial Implications

The study's major findings indicate a statistically significant correlation between e-HRM activities and non-financial organizational performance ($M=0.757$; $\beta = 0.034$, $t = 22.346$, $p<0.000$); and a correlation between e-learning, e-performance appraisal, e-selection, e-training and development and non-financial organizational performance. The implication for business leaders is that investing in, introducing, and implementing technology (e-HRM Tools) may improve non-financial organizational performance. Irrespective of firm size (small, Medium or large) must incorporate Hr Technology into its strategic plans. Again, the study is abundantly clear that in modern times, using financial measures to determine organisational performance is quite misleading. There is the need to integrate financial and non-financial approaches to give a comprehensive picture of a firm actual performance.

CONCLUSION

This study has made a significant contribution to closing the research gap identified in the literature as the over-concentration of organizational performance on financial indicators to the neglect of non-financial organizational performance (innovation, internal business processes, learning and growth, customer satisfaction) as proposed by Kaplan and Norton (1996) in their Balanced Scorecard Model (BSC) Model, which is a widely used assessment tool for organizational performance. The financial perspective is criticized for lacking data consistency and comparability because it is based on secondary data and focuses on short-term accomplishments (Sila,2007). The study found a link between e-HRM activities and non-financial outcomes.

Recommendations

These suggestions were offered in light of the study's empirical findings:

- i. The management of businesses shouldn't judge their performance solely on financial metrics because this could give shareholders the impression that the company is doing well even though

non-financial performance metrics like innovation, customer satisfaction, internal business processes, and employee learning and development may be lacking.

- ii. The study's findings show that managers should spend money on technology, particularly e-HRM tools (e-Learning, e-Performance Appraisal, e-Recruitment, e-Selection, e-Training and Development), to improve service quality, cut expenses, and enable HR department staff to serve as strategic partners.

Contribution of the Study

The research papers provide valuable insights into the impact of Electronic Human Resource Management (E-HRM) on non-financial organizational performance: E-HRM practices have been found to significantly and positively impact organizational performance (Thatsara & Sutha, 2021). This impact is mediated by organizational agility, suggesting that E-HRM enhances an organization's ability to adapt quickly to changes, thereby improving overall performance. The study also highlights the importance of E-HRM in achieving sustainable competitive advantage, particularly in financial institutions. Specific E-HRM practices such as E-Recruitment and Selection, E-Training and Development, and E-HR Evaluation have been shown to positively influence organizational performance in the banking industry (Arshad et al., 2023). This indicates that electronic methods for talent acquisition, skill development, and performance assessment contribute to improved organizational outcomes. Interestingly, user acceptance of E-HRM systems plays a crucial role in their effectiveness. Performance expectations and ease of use are identified as key factors influencing E-HRM acceptance (Vazquez & Sunyer, 2021). This suggests that organizations need to focus on demonstrating the benefits of E-HRM and ensuring user-friendly interfaces to maximize its impact on performance. In conclusion, the research collectively demonstrates that E-HRM practices contribute positively to non-financial organizational performance through various mechanisms. These include enhancing organizational agility, improving HR functions, and increasing user acceptance. However, it's important to note that the effectiveness of E-HRM may depend on factors such as implementation strategies, organizational culture, and employee perceptions (Asmini et al., 2023; Gürol et al., 2010).

Contribution to e-HRM to Academic Debate

The contribution to the academic debate on the impact of electronic Human Resource Management (e-HRM) on non-financial organizational performance is multifaceted. E-HRM practices have been found to significantly and positively impact organizational performance, with organizational agility mediating this relationship (Thatsara & Sutha, 2021). This suggests that e-HRM not only directly improves performance but also enhances an organization's ability to adapt quickly to changes, which in turn boosts performance. Specific e-HRM practices, such as e-recruitment and selection, e-training and development, and e-HR evaluation, have been shown to positively influence organizational performance in the banking industry (Arshad et al., 2023). This indicates that e-HRM can enhance the quality and efficiency of various HR functions, leading to improved

overall performance. The acceptance and use of e-HRM systems by employees play a crucial role in their effectiveness. Factors such as performance expectations and ease of use have been identified as positive predictors of e-HRM acceptance (Vazquez & Sunyer, 2021). This highlights the importance of user-friendly e-HRM systems and clear communication of their benefits to ensure successful implementation and subsequent performance improvements. While financial performance is often a focus, research has shown that subjective measures of organizational performance better explain the impact of HRM practices (Triguero et al., 2012). This suggests that e-HRM's effects on non-financial aspects of performance, such as employee satisfaction and organizational culture, maybe more significant and should be given due consideration in academic research. In conclusion, the academic debate on e-HRM's impact on non-financial organizational performance emphasizes its potential to enhance the efficiency, agility, and overall effectiveness of HR functions. However, the success of e-HRM implementation depends on various factors, including user acceptance and the specific practices adopted. Future research could further explore the long-term effects of e-HRM on non-financial performance metrics and investigate how different organizational contexts may influence these outcomes.

Research limitation

The main limitation has been the financial and time to do a longitudinal study on the subject matter and the inclusion of many multinational and national companies. Again, identifying a research paper in literature published in developing countries was a challenge. Probably, many companies in developing countries are not using e-HRM tools due to the high cost of their adaptation and implementation.

Direction for Future Studies

The study was conducted in three multinational companies in Ghana. Future studies can incorporate a longitudinal study to include small, medium and multinational companies as well as combining both financial and non-financial indicators in a study to give a complete picture of the organisational performance.

REFERENCES

- Ageron, B., Bentahar, O., & Gunasekaran, A. (2020). Digital supply chain: challenges and future directions. In *Supply Chain Forum*, 21(3). <https://doi.org/10.1080/16258312.2020.1816361>
- Ahmed, A., & Ogalo, H. S. (2019). From HRM to E-HRM: Contemporary Developments from Scholarly Work. *Annals of Contemporary Developments in Management & HR*, 1(1). <https://doi.org/10.33166/acdmhr.2019.01.001>

- Akter, K., Ali, M. & Chang, A. (2021), "Work-life programs and performance in Australian organisations: the role of organisation size and industry type", *Asia Pacific Journal of Human Resources*, 59 (2), 227-249.
- Aleem, M., Sufyan, M. Irfan Ameer, I. & Mustak, M. (2023). Remote work and the COVID-19 pandemic: An artificial intelligence-based topic modeling and a future agenda. *Journal of Business Research*. 154, 113303. doi.org/10.1016/j.jbusres.2022.113303
- Appelbaum, E., Bailey, T., Berg, P., & Kalleberg, A. (2000). *Manufacturing advantage: Why high-performance work systems pay off*. Ithaca, NY: Cornell University Press.
- Armita Atrian & Saleh Ghobbeh, (2023). "Technostress and Job Performance: Understanding the Negative Impacts and Strategic Responses in the Workplace," Papers 2311.07072, arXiv.org.
- Atobishi, T., Moh'd Abu Bakir(2018), S., & Nosratabadi, S. (2024). How Do Digital Capabilities Affect Organizational Performance in the Public Sector? The Mediating Role of the Organizational Agility. *Administrative Sciences*, 14(2), 37.
- Ayoup, H., Omar, N., & Rahman, I. K. A. (2015a). Behavioral Factors Affecting Strategic Alignment Based on the Balanced Scorecard Framework: Evidence from A Malaysian Company
- Bijaniaram, R., Tehrani, M., Noori, R., & Pak, J. (2023). What Does It Take for Organizations to Adopt Massive Open Online Courses (MOOCs)? A Fuzzy DANP Analysis. ncbi.nlm.nih.gov
- Boccoli, G., Gastaldi, L., & Corso, M. (2023). The evolution of employee engagement: Towards a social and contextual construct for balancing individual performance and wellbeing dynamically. *International Journal of Management Reviews*, 25(1), 75–98. <https://doi.org/10.1111/ijmr.12304>
- Bryman, A., and E. Bell. (2015). "Business research methods (Vol. 4th)." *Glasgow: Bell & Bain Ltd*
- Chaplaev, Huseyn et al., (2023). Use of Digital Technologies in Human Resources Management. SHS Web of Conferences 164, 00027 CILDIAH-2022, <https://doi.org/10.1051/shsconf/202316400027>.
- Cheng, Y., & Zou, Y. (2021). Whether and when e-HRM improves organizational performance: A meta-analysis. In *Academy of Management Proceedings*, 1, 13990).
- Chintengo et al., (2017). An evaluation of performance using the balanced scorecard model for the University of Malawis Polytechnic. *African Journal of Business Management* 11(4):84-93. doi:[10.5897/ajbm2016.8201](https://doi.org/10.5897/ajbm2016.8201)
- Diamantopoulos, A., & Siguaw, J. A. (2006). Formative Versus Reflective Indicators in Organizational Measure Development: A Comparison and Empirical Illustration. *British Journal of Management*, 17(4), 263–282. <https://doi.org/10.1111/j.1467-8551.2006.00500.x>

- Erdoğan, N. K., Onay, A. & Karamaşa, Ç. (2019). Measuring the Performance of Retailer Firms Listed in BIST under the Balanced Scorecard Perspective *Alphanumeric Journal*, 7(2), 333-350. doi.org/10.17093/alphanumeric.451247
- EU (2014), "Directive 2014/56/EU of the European Parliament and of the Council of April 16 2014 amending Directive 2006/43/EC on statutory audits of annual accounts and consolidated accounts", available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32014L0056>.
- Fregnan, E., Ivaldi, S., & Scaratti, G. (2020). HRM 4.0 and new managerial competencies profile The COMAU case. *Frontiers In Psychology*, 11, 578251.
- Gamal, A., & Soemantri, A. I. (2017). The Effect of Balanced Scorecard on the Private College Performance (Case Study at the University of WR Supratman Surabaya). *Archives of Business Research*, 5(5), 126-134.
- Haerani, S., Sumardi, Hakim, W., Hartini, & Putra, A. H. P. K. (2020). Structural Model of Developing Human Resources Performance: Empirical Study of Indonesia States Owned Enterprises. *Journal of Asian Finance, Economics and Business*, 7(3), 211-221. <https://doi.org/10.13106/jafeb.2020.vol7.no3.211>
- Hair Jr, Joe F., Lucy M. Matthews, Ryan L. Matthews, and Marko Sarstedt. (2017). "PLS-SEM or CB-SEM: updated guidelines on which method to use." *International Journal of Multivariate Data Analysis* 1(2) 107-123.
- Hair, Joe F., Christian M. Ringle, and Marko Sarstedt. (2011). "PLS-SEM: Indeed, a silver bullet." *Journal of Marketing Theory and Practice* 19(2) 139-152.
- Hair, Joseph F., Marko Sarstedt, and Christian M. Ringle. (2019). "Rethinking some of the rethinking of partial least squares." *European Journal of Marketing*
- Halid, H., Yusoff, Y. M., & Somu, H. (2020). The relationship between digital human resource management and organizational performance. In *First ASEAN Business, Environment, and Technology Symposium (ABEATS 2019)*, 96-99. Atlantis Press.
- Henseler, Jörg, Christian M. Ringle, and Marko Sarstedt. (2015): "A new criterion for assessing discriminant validity in variance-based structural equation modeling." *Journal of the Academy of Marketing Science* 43(1) 115-135.
- Hooley, T. & Staunton, T. (2020). The Role of Digital Technology in Career Development. In Robertson, P., Hooley, T., & McCash, P. (Eds.). *The Oxford Handbook of Career Development*. Oxford: Oxford University Press. <https://doi.org/10.1093/oxfordhb/9780190069704.013.22>
- Iqbal, N., Ahmad, M. and Allen, M. M. C (2019). "Unveiling the relationship between e-HRM, impersonal trust, and employee productivity." *Management Research Review* 42(7) 879 - 899
- Jöreskog, Karl G. (1971). "Simultaneous factor analysis in several populations." *Psychometrika* 36, 4 409-426.

- Junita, A. (2021). The creative hub: HR strategic function in the digital age. In *4th International Conference on Sustainable Innovation 2020-accounting and management (ICoSIAMS 2020)* (pp. 229-235). Atlantis Press.
- Kabeta, R., & Halubanza, B. (2023). Transformational Leadership and Organizational Excellence: Implications for Leadership Practice in Higher Education Institutions- A Review of Literature. *Zambia Association of Public Universities and Colleges (ZAPUC) Conference*, 3(1), 80–84.
- Kamble, S., Gunasekaran, A., & Dhone, N. C. (2020). Industry 4.0 and lean manufacturing practices for sustainable organisational performance in Indian manufacturing companies. *International Journal of Production Research*, 58(5). <https://doi.org/10.1080/00207543.2019.1630772>
- Kaplan, A. R. S. Lagace, M. and Kaplan, R. S. “Strategy Execution and the Balanced Scorecard,” *Harv. Bus. Rev.* 1–3, 2008.
- Kaplan, R. S., & Norton, D. P. (1996). Using the balanced scorecard as a strategic management system. *Harvard Business Review*, 74(1), 75–76.
- Kaplan, Robert S., and David P. Norton. (1996): "Linking the balanced scorecard to strategy." *California Management Review* 39(1) 53-79.
- Kesen, H. (2012). How e-HR optimizes the human resource management process. DOI:[10.1109/ICSSEM.2012.6340751](https://doi.org/10.1109/ICSSEM.2012.6340751), Conference: 2012 3rd International Conference on System Science, Engineering Design and Manufacturing Informatization (ICSEM)
- Kroon, B., & Paauwe, J. (2021). HRM in 21st century small organizations: A midrange typology to describe, contrast and contextualize the phenomenon. *The International Journal of Human Resource Management*, 33(16), 1–28. <https://doi.org/10.1080/09585192.2021.1915359>
- Maghsoudi, M., Kamrani Shahri, M., Agha Mohammad Ali Kermani, M., & Khanizad, R. (2023). Unveiling the Collaborative Patterns of Artificial Intelligence Applications in Human Resource
- Mark N.K. Saunders, Philip Lewis and Adrian Thornhill (2023). *Research Methods for Business Students* (9th ed.). Pearson Education Limited, Harlow, England, London.
- Marler, J. H., & Fisher, S. L. (2013). An evidence-based review of e-HRM and strategic human resource management. In *Human Resource Management Review*, 23(1). <https://doi.org/10.1016/j.hrmr.2012.06.002>
- Matarazzo, M., Penco, L., Profumo, G., & Quaglia, R. (2021). Digital transformation and customer value creation in Made in Italy SMEs: A dynamic capabilities perspective. *Journal of Business research*, 123, 642-656. <https://doi.org/10.1016/j.jbusres.2020.10.033>
- Mio, C., Costantini, A., & Panfilo, S. (2022). Performance measurement tools for sustainable business: A systematic literature review on the sustainability balanced scorecard use. *Corporate Social Responsibility and Environmental Management*, 29(2), 367–384.
- Mio, C., Fasan, M., Marcon, C. and Panfilo, S. (2020), “The predictive ability of legitimacy and agency theory after the implementation of the EU directive on non-financial information”,

- Corporate Social Responsibility and Environmental Management*, 27, 6, 2465-2476, doi: 10.1002/csr.1968.
- Monciardini, D. (2016), "The 'coalition of the unlikely' driving the EU regulatory process of nonfinancial reporting", *Social and Environmental Accountability Journal*, Routledge, 36, 76-89, doi: 10.1080/0969160X.2016.1149302.
- Mosca, M. (2020). *Digitalization of HRM: A study of success factors and consequences in the last decade* (master's thesis, University of Twente).
- Müller, J. M., Kiel, D., & Voigt, K. I. (2018). What drives the implementation of Industry 4.0? The role of opportunities and challenges in the context of sustainability. *Sustainability* (Switzerland), 10(1). <https://doi.org/10.3390/su10010247>
- Nivlouei, Fahimeh Babaei. (2014): "Electronic human resource management system: The main element in capacitating globalization paradigm." *International Journal of Business and Social Science* 5(2) 147 – 159.
- Njoku, E., Ruël, H., Rowlands, H., Evans, L., & Murdoch, M. (2019). An Analysis of the Contribution of e-HRM to Sustaining Business Performance. *Advanced Series in Management*, 23. <https://doi.org/10.1108/S1877-636120190000023003>
- Nosratabadi S., Zahed R. K., Ponkratov V. V., Kostyrin E. V. (2022), "Artificial Intelligence Models and Employee Lifecycle Management: A Systematic Literature Review", *Organizacija*, 55(3), 181-198.
- Nurlina N., Itumorang, J., Akob, M. Uilim, C. A. (2020). Influence of e-HRM and Human Resources Service Quality on Employee Performance. *Journal of Asian Finance Economics and Business* 7(10):391-399, DOI:10.13106/jafeb.2020.vol7.no10.391
- Nyathi, M., & Kekwaletswe, R. (2023). Realizing employee and organizational performance gains through electronic human resource management use in developing countries. *African Journal of Economic and Management Studies*, 14(1). <https://doi.org/10.1108/AJEMS-11-2021-0489>
- Nyathi, M., & Kekwaletswe, R. (2024). Electronic human resource management (e-HRM) configuration for organizational success: inclusion of employee outcomes as contextual variables. *Journal of Organizational Effectiveness: People and Performance*, 11(1), 196-212. DOI 10.1108/JOEPP-08-2022-0237
- Pak, K., Kooij, D. T., De Lange, A. H., & Van Veldhoven, M. J. (2019). Human resource management and the ability, motivation and opportunity to continue working: A review of quantitative studies. *Human Resource Management Review*, 29(3), 336–352. <https://doi.org/10.1016/j.hrmr.2018.07.002>
- Putri et al., (2017). The effect of occupational health and safety, work environment and discipline on employee performance in a consumer goods company. *IOP Conference Series Materials Science and Engineering* 337(1):012036. doi:10.1088/1757-899x/337/1/012036
- Qahtani, E. H. A. L., & Alsmairat, M. A. K. (2023). Assisting artificial intelligence adoption drivers in human resources management: a mediation model. *Acta Logistica*, 10(1), 141–150. <https://doi.org/10.22306/al.v10i1.371>

- Rasheed Memon, K., Ghani, B., Irfan Hyder, S., Han, H., Zada, M., Ariza-Montes, A., & Arraño-Muñoz, M. (2022). Management of knowledge and competence through human resource information system—A structured review. [ncbi.nlm.nih.gov](https://pubmed.ncbi.nlm.nih.gov/)
- Ringle, Christian M., Marko Sarstedt, Rebecca Mitchell, and Siegfried P. Gudergan. (2020). "Partial least squares structural equation modeling in HRM research." *The International Journal of Human Resource Management* 31, 12, 1617-1643.
- Sani, S. (2018). Digital HRM and its Effective Implementation: An Empirical Study. *International Journal of Management Studies* (2(7)):60 DOI:[10.18843/ijms/v5i2\(7\)/08](https://doi.org/10.18843/ijms/v5i2(7)/08)
- Sengupta, A., Lalwani, S., Goswami, S., & Srivastava, P. (2021). Reinventing HR functions with SMAC technologies-an exploratory study. *Materials Today: Proceedings*, 46, 10169-10174. doi.org/10.1016/j.matpr.2020.10.875
- Siebers, P. O., Aickelin, U., Battisti, G., Celia, H., Clegg, C., Fu, X., De Hoyos, R., Iona, A., Petrescu, A., & Adriano, P. (2008). The Role of Management Practices in Closing the Productivity Gap.
- Strohmeier, S., & Kabst, R. (2014). Configurations of e-HRM - an empirical exploration. *Employee Relations*, 36(4). <https://doi.org/10.1108/ER-07-2013-0082>
- Thite, M. (2022). Digital human resource development: where are we? Where should we go and how do we go there? *Human Resource Development International*, 25(1), 87-103. doi.org/10.1080/13678868.2020.1842982
- Trenerry B. et al., (2021). "Preparing Workplaces for Digital Transformation: An Integrative Review and Framework of Multi-Level Factors," *Front. Psychol.*, 12, 1–24, doi:10.3389/fpsyg.2021.620766
- Van Veldhoven, Z., & Vanthienen, J. (2021). Digital transformation as an interaction-driven perspective between business, society, and technology. *Electronic Markets*, 16. doi: 10.1007/s12525-021-00464-5.
- Vardarlier, P. (2020). Digital transformation of human resource management: Digital applications and strategic tools in HRM. In *Digital Business Strategies in Blockchain Ecosystems*, 239–264. Springer
- Venturelli, A., Pizzi, S., Caputo, F. and Principale, S. (2020), "The revision of non-financial reporting directive: a critical lens on the comparability principle", *Business Strategy and the Environment*, 29, 8, 3584-3597, doi: 10.1002/bse.2598.
- Venturelli, A., Pizzi, S., Caputo, F., & Principale, S. (2020). The revision of nonfinancial reporting directive: A critical lens on the comparability principle. *Business Strategy and the Environment*, 29(8), 3584-3597.
- Verhulst, S. L. & DeCenzo, D. A. (2022). *Fundamentals of human resource management* (14th ed.). John Wiley & Sons, Inc.
- Wu, Y., & de Vries, H. J. (2022). Effects of participation in standardization on firm performance from a network perspective: Evidence from China. *Technological Forecasting and Social Change*, 175, 121376. <https://doi.org/10.1016/j.techfore.2021.121376>

- Xiao, Q., & Cooke, F. L. (2022). The joint impact of HRM attributions and HRM system consistency on employee well-being: a two-wave study. *Employee Relations: The International Journal*, 44(4), 926-947. <https://doi.org/10.1108/ER-07-2021-0333>
- Xiao, Y., Younus, R., Saeed, W., Ul Haq, J., & Li, X. (2022). Is There a Link Between Green Human Resource Management and Consumer Buying Behavior? The Moderating Role of Employee Diffidence. ncbi.nlm.nih.gov
- Yawson, D. E., & Yamoah, F. A. (2023). Towards a framework for the promotion of business management graduate employability: an extended CareerEDGE model. *Studies in Higher Education*, 48(7), 1007-1024.
- Yumboris, Y., Gisip, I. A., & Ambad, N. A. (2020). Strategic Orientation and Performance of Small and Medium Enterprises (SMEs) in Sabah, Malaysia. *Journal of Social Transformation and Regional Development*, 2(1), 11–20. <https://doi.org/10.30880/jstard.2020.02.01.002>
- Zarzycka, E. and Krasodomska, J. (2021). Non-financial key performance indicators: what determines the differences in the quality and quantity of the disclosures? *Journal of Applied Accounting Research* 23, 1, 139-162. DOI 10.1108/JAAR-02-2021-0036
- Zarzycka, E., Krasodomska, J., & Dobija, D. (2021). Stakeholder engagement in corporate social practices and non-financial disclosures: a systematic literature review. *Central European Management Journal*, 29, 112-135.
- Zavyalova, E., Sokolov, D., Kucherov, D., & Lisovskaya, A. (2022). The digitalization of human resource management: Present and future. *Foresight and STI Governance*, 16(2), 42-51. DOI: 10.17323/2500-2597.2022.2.42.51
- Zhang, J. & Chen, Z. (2023). Exploring Human Resource Management Digital Transformation in the Digital Age. ncbi.nlm.nih.gov
- Zhou, Y., Cheng, Y., Zou, Y., & Liu, G. (2022). e-HRM: A meta-analysis of the antecedents, consequences, and cross-national moderators. *Human Resource Management Review*, 32(4). <https://doi.org/10.1016/j.hrmr.2021.100862>
- Zin, N. M., Sulaiman, S., Ramli, A., & Nawawi, A. (2012). Balanced Scorecard Implementation Within a Malaysian Government-Linked Company. *Asia-Pacific Management Accounting Journal*, 7(1).