Digital Human Resources and Management Support Improve Human Resources Effectiveness

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Abstract: This study investigates how digital human resources (HR) improves HR effectiveness with management support. This study examines how Ability Enhancing Practice (AEP), Extrinsic Motivation Enhancing Practice (EMEP), Intrinsic Motivation Enhancing Practice (IMEP), Opportunity Enhancing Practice (OEP), and Digitalization Enhancing Practice (DEP) affect HR effectiveness (HE). Management support modifies the relationship between digital HR practises and HR effectiveness. Hyderabad-based HR professionals were surveyed to meet research goals. A structured questionnaire was used for quantitative research. The questionnaire covered digital HR, management support, and HR effectiveness. This study found that AEP, EMEP, IMEP, OEP, and DEP improve HR effectiveness. Management support moderates the relationship between digital HR practises and HR effectiveness, enhancing their benefits. The study found that effective digital HR practises, supported by management, can boost HR effectiveness in organisations. AEP, EMEP, IMEP, OEP, and DEP can help HR professionals work better and boost organisational success. Digital HR practises should be prioritised and supported by management. This may involve training and supporting HR professionals, creating a welcoming workplace, and promoting digitalization. This study's limitations. The research was limited to Hyderabad and may not reflect the HR landscape. Self-reported data may be biased and inaccurate.

Keywords: Digital Human Resource; Work Environment; Human Resource Effectiveness; Ability Enhancing Practice; Extrinsic Motivation Enhancing Practice; Digitalization Enhancing Practice.

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1. Introduction

The Human resources (HR) has undergone significant transformations in recent years, driven by the rapid advancement of digital technologies. The emergence of digital HR has revolutionized traditional HR practices, offering new opportunities to enhance HR effectiveness and drive organizational success. Using digital tools and practices effectively in HR functions can streamline processes, improve decision-making, and empower HR professionals to become strategic partners within their organizations. However, the successful implementation of digital HR practices relies not only on technological advancements but also on the support and collaboration of management. This study aims to investigate the role of digital HR in enhancing HR effectiveness, considering the moderating effect of management support. HR effectiveness refers to the ability of HR functions to meet organizational objectives and contribute to overall performance. The study focuses on five key digital HR

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practices: Ability Enhancing Practice (AEP), Extrinsic Motivation Enhancing Practice (EMEP), Intrinsic Motivation Enhancing Practice (IMEP), Opportunity Enhancing Practice (OEP), and Digitalization Enhancing Practice (DEP).

To gain insights into the relationship between digital HR practices, management support, and HR effectiveness, data was collected from 88 HR professionals in Hyderabad. A quantitative research approach was employed, utilizing a structured questionnaire to measure the variables of interest. The questionnaire included items related to implementing digital HR practices, the level of management support, and perceptions of HR effectiveness. The findings of this study will contribute to the existing body of knowledge by providing empirical evidence on the impact of digital HR practices on HR effectiveness. Moreover, the study will shed light on the moderating role of management support, emphasizing the importance of collaboration between HR professionals and management in driving the successful implementation of digital HR initiatives.

Organizations can make informed decisions regarding adopting and integrating digital technologies into their HR functions by understanding the relationship between digital HR practices, management support, and HR effectiveness. This research aims to provide practical recommendations for organizations in Hyderabad and beyond, enabling them to leverage digital HR practices effectively and optimize HR performance. In the following sections, the methodology, findings, conclusions, implementation strategies, limitations, and future research directions were explored in detail, offering a comprehensive understanding of the role of digital HR in enhancing HR effectiveness with the moderation of management support. Digital technologies have revolutionized various aspects of organizations, including HR functions. Digital HR practices can transform traditional HR processes, from recruitment and onboarding to performance management and employee engagement. These practices leverage technology to automate administrative tasks, provide data-driven insights, enhance communication, and improve overall efficiency and effectiveness in HR operations.

In today's dynamic business environment, organizations are recognizing the importance of HR as a strategic partner that contributes to organizational success. By adopting digital HR practices, organizations can empower their HR professionals to focus on strategic initiatives such as talent management, leadership development, and workforce planning. Integrating digital tools and technologies allows HR professionals to gather and analyze vast data, enabling evidence-based decision-making and predictive analytics in HR practices. However, the successful implementation of digital HR practices relies on technological advancements and management support. Management support is crucial in creating an environment that embraces digital transformation, providing HR professionals with the necessary resources, training, and guidance. When management actively supports digital HR initiatives, it fosters innovation and collaboration, encouraging HR professionals to embrace new technologies and leverage their full potential to enhance HR effectiveness.

This study explores the relationship between digital HR practices, management support, and HR effectiveness in the context of Hyderabad. By examining the impact of specific digital HR practices, such as AEP, EMEP, IMEP, OEP, and DEP, on HR effectiveness, the study seeks to provide empirical evidence on the effectiveness of these practices in enhancing HR performance. Furthermore, by considering the moderating effect of management support, the study will shed light on management's critical role in maximizing the benefits of digital HR initiatives. The findings of this study will not only contribute to the academic literature and provide practical insights for organizations in Hyderabad and beyond. Organizations can use these findings to develop strategies to successfully implement digital HR practices and garner management support to drive effectiveness. Additionally, the study will identify potential limitations and offer avenues for future research, encouraging further exploration of this important area.

2. Literature Review

Bondarouk, et al., [1] address the digital era's challenges of electronic human resource management (e-HRM). The study highlights that e-HRM practices, such as online performance appraisal systems and digital learning platforms, can enhance HR effectiveness. It emphasizes the importance of management support in overcoming challenges related to technology adoption, change management, and ensuring alignment with organizational objectives.

Cappelli [2] reflects on the future of HR and effective organizations, discussing the practice and research implications for the next decade. The author suggests that digital HR advancements, such as artificial intelligence, machine learning, and automation, can transform HR effectiveness. It underscores the need for management support in driving the adoption and integration of these technologies while ensuring ethical considerations and addressing potential challenges.

Chen and Huang [3] conducted a study examining the influence of digital HR on HR effectiveness, with a specific focus on the mediating role of employee skills and the moderating role of management support. The findings revealed a positive relationship between digital HR and HR effectiveness, which was mediated by employee skills development. Moreover, the study highlighted the crucial role of management support in strengthening this relationship.

De Vries, et al., [4] explore the relationship between leaders' communication styles, knowledge sharing, and leadership outcomes. They suggest that digital HR tools, such as communication platforms, can enable leaders to communicate their vision and expectations effectively, fostering knowledge sharing and enhancing HR effectiveness. The study highlights the importance of management support in promoting effective communication and leveraging digital HR platforms.

DeSanctis and Monge [5] discuss the communication processes necessary for effective virtual organizations. They argue that digital HR tools facilitate communication and collaboration among dispersed employees, ultimately enhancing HR effectiveness. The study highlights the importance of management support in leveraging these digital tools to foster effective communication within virtual teams.

Guest [6] proposes a new analytic framework that explores the relationship between human resource management and employee well-being. The author suggests that digital HR interventions, such as employee well-being apps and online wellness programs, can enhance HR effectiveness by promoting employee well-being. The study emphasizes the importance of management support in implementing and promoting these digital HR initiatives.

Huang and Liu [7] conducted a study investigating the relationship between digital HR and HR effectiveness, focusing on the mediating role of employee commitment and the moderating role of management support. The results indicated that digital HR positively influenced HR effectiveness through employee commitment. The study underscored the significance of management support in further enhancing the impact of digital HR on HR effectiveness.

Li and Xu [8] explored the impact of digital HR on HR effectiveness, specifically focusing on the mediating role of talent acquisition and the moderating role of management support. The findings highlighted that digital HR improved HR effectiveness by facilitating talent acquisition processes. Moreover, the study emphasized the importance of management support in maximizing the effectiveness of digital HR initiatives.

Liu and Lu [9] investigated the relationship between digital HR and HR effectiveness, emphasizing the mediating role of employee empowerment and the moderating role of management support. The study revealed that digital HR positively influenced HR effectiveness through employee empowerment. Additionally, the findings emphasized the crucial role of management support in enhancing the effectiveness of digital HR initiatives.

Malik, et al., [10] investigate the impact of digital HR practices on organizational performance. The study suggests that digital HR initiatives, including HR analytics, self-service portals, and performance management systems, can enhance HR effectiveness and improve organizational performance. It emphasizes the role of management support in aligning these practices with strategic goals and providing the necessary resources for successful implementation.

Panayotopoulou, et al., [11] examine how leaders' attitudes and behaviors influence employees' entrepreneurial behavior. They argue that supportive leaders who embrace digital HR technologies can foster a culture of innovation and entrepreneurship within the organization. The study emphasizes the moderating role of management support in harnessing digital HR tools to enhance HR effectiveness.

Parry and Tyson [12] examine the role of social media and internal social networks in enhancing HRM effectiveness. The study emphasizes that digital HR platforms and social media tools can facilitate knowledge sharing, collaboration, and employee engagement. The findings underscore the importance of management support in leveraging these platforms effectively to enhance HR effectiveness.

Parry and Wilson [13] investigate the factors influencing the adoption of online recruitment practices. They highlight that digital HR tools, such as online job portals and applicant tracking systems, can streamline recruitment, enhance candidate sourcing, and improve HR effectiveness. The study emphasizes the role of management support in driving the successful adoption and utilization of digital HR tools for recruitment purposes.

Rees and Rumbles [14] provide an overview of human resource management in the digital economy, discussing current perspectives and future directions. The study emphasizes that digital HR technologies can enhance effectiveness through improved efficiency, accuracy, and data-driven decision-making. It highlights the role of management support in embracing technological advancements and fostering a digital HR mindset throughout the organization.

Saeed, et al., [15] explore the relationship between IT-enabled communication capability and virtual work performance, focusing on the implications for the virtual workplace. The study suggests that digital HR tools that enhance communication capabilities, such as video conferencing and collaborative platforms, can improve HR effectiveness in virtual work settings. It highlights the importance of management support in providing access to and training on these tools to maximize their impact.

Wang and Sun [16] conducted a study examining the impact of digital HR on HR effectiveness, with a specific focus on the mediating role of knowledge sharing and the moderating role of management support. Their findings revealed that digital HR positively influenced HR effectiveness by promoting employee knowledge sharing. Moreover, the study highlighted the amplifying effect of management support in maximizing the impact of digital HR on HR effectiveness.

Yu and Gong [17] explored the impact of digital HR on HR effectiveness, emphasizing the mediating role of employee engagement and the moderating role of management support. Their research demonstrated that digital HR positively influenced HR effectiveness by fostering employee engagement. Furthermore, the study highlighted the importance of supportive management practices in maximizing the effectiveness of digital HR initiatives.

Zhang and Ma [18] investigated the role of digital HR in promoting HR effectiveness, focusing on the mediating effect of employee performance and the moderating effect of management support. The results indicated that digital HR positively influenced HR effectiveness by enhancing employee performance. Additionally, the study emphasized the significance of management support in further enhancing the impact of digital HR on HR effectiveness.

3. Research Methodology

Data for this study is collected through a structured questionnaire administered to HR professionals in Hyderabad. The questionnaire measures the variables of interest, including digital HR practices, management support, and HR effectiveness. The questionnaire consists of Likert-scale items that capture respondents' perceptions and experiences related to the research variables. The study utilizes a non-probability sampling technique, specifically convenience sampling, to select the participants. HR professionals working in various organizations in Hyderabad are targeted as the sample population. The convenience sampling technique is employed due to its practicality and accessibility, enabling the researchers to gather data efficiently within the designated time frame. The study aims to collect data from 88 HR professionals in Hyderabad. The sample size is determined based on the feasibility and resources available for data collection. While a larger sample size would enhance the generalizability of the findings, the chosen sample size is considered sufficient for conducting statistical analyses and drawing meaningful conclusions.

The collected data was analyzed using valid statistical techniques. Descriptive statistics, such as means, standard deviations, and frequencies, were computed to summarize the characteristics of the variables. Inferential statistical techniques were employed to examine the relationships between digital HR practices, management support, and HR effectiveness. Multiple regression analysis was conducted to assess the impact of digital HR practices on HR effectiveness. In contrast, moderation analysis was used to investigate the moderating effect of management support on this relationship. Ethical considerations were given due importance throughout the research process. Informed consent was obtained from the participants, ensuring their voluntary participation and confidentiality of their responses. The research will adhered to ethical guidelines and principles of data protection. The research methodology outlined above aims to provide robust and reliable results regarding the role of digital HR in enhancing HR effectiveness. By employing a quantitative approach, the study aims to quantify the relationships between variables and draw statistically sound conclusions, contributing to the existing body of knowledge in HR and digitalization.
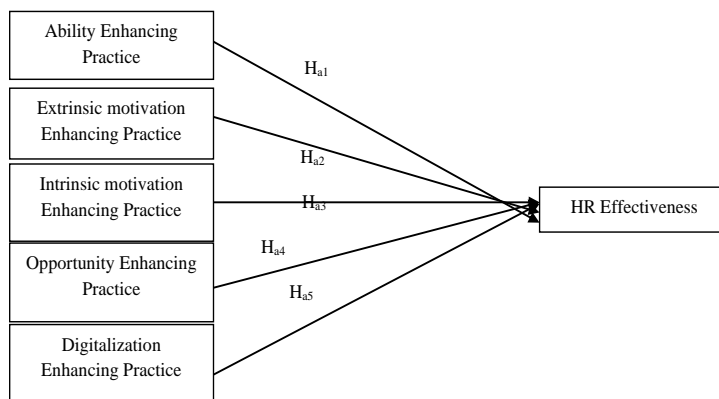
4. Research Model and Hypothesis

Figure 1: Research Model

Ha: HR effectiveness depends on the Digitalization of HR and other factors (fig.1).

4.1. Analysis

Table 1: Demographic Profile of HRs

		Frequency	**Percentages**
Age	20 to 28 Years	11	12.5
	28 to 36 Years	42	47.7
	36 to 44 Years	13	14.8
	44 to 52 Years	6	6.8
	52 and above	16	18.2
		88	**100%**
Gender	Male	30	34.1
	Female	58	65.9
		88	**100%**
Occupation	Corporate	7	8.0
	Real Estate	21	23.9
	Medical	10	11.4
	Pharmaceutical	9	10.2
	Automobile	25	28.4
	Trading	10	11.4
	Others	6	6.8
		88	**100%**
Income (PA)	Less than Rs. 200,000	7	8.0
	Rs. 200,000 to Rs. 500,000	43	48.9
	Rs. 500,000 to Rs. 800,000	16	18.2
	Rs. 800,000 to Rs. 12,00,000	6	6.8
	Rs. 12,00,000 and more	16	18.2
		88	**100%**

SPSS View

Table 1 presents the demographic profile of HR participating in the study. The table 1 provides information on the frequencies and percentages of respondents in various categories related to age, gender, occupation, and income (fig.2).
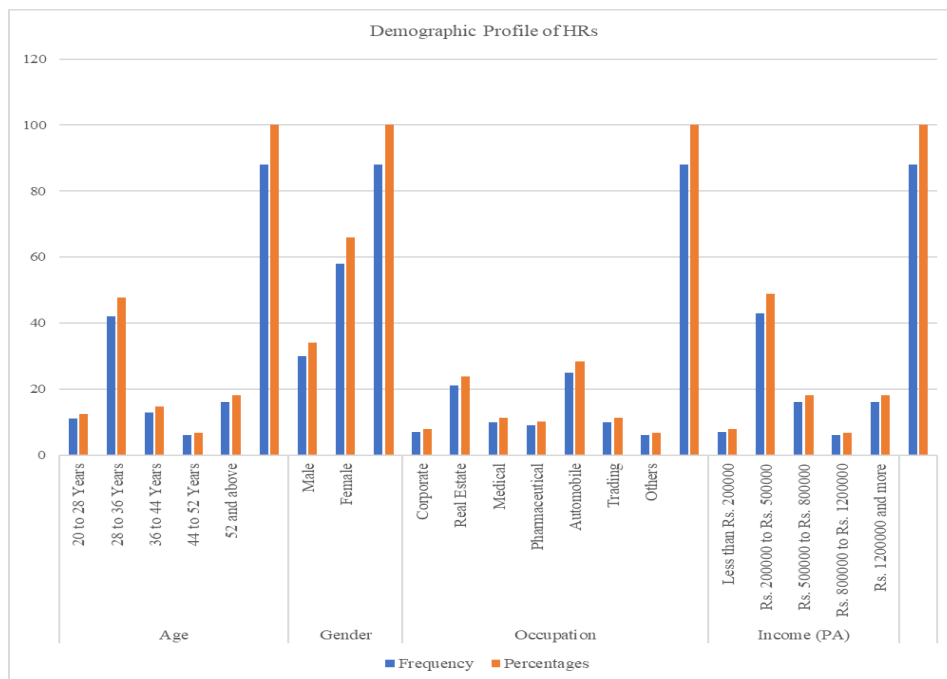

Figure 2: Demographic Profile of HRs

The respondents are categorized into different age groups, namely, 20 to 28 years, 28 to 36 years, 36 to 44 years, 44 to 52 years, and 52 years and above. The table 1 displays the frequency and percentage of respondents in each age group. For example, 11 respondents (12.5%) fall into the age group of 20 to 28 years, while the largest group consists of 42 respondents (47.7%) in the age group of 28 to 36 years.

The gender distribution of the respondents is captured in this category. The table 1 displays separate frequencies and percentages for male and female respondents. Of the 88 respondents, 30 (34.1%) are male, while 58 (65.9%) are female.

This category represents the different occupations of the respondents. The table 1 presents the frequencies and percentages of respondents in each occupation category. The occupation groups include corporate, real estate, medical, pharmaceutical, automobile, and trading. For instance, seven respondents (8.0%) are engaged in corporate occupations, while the highest number of respondents, 43 (48.9%), are involved in trading.

This category provides information on the income levels of the respondents. The income ranges include less than Rs. 200,000, Rs. 200,000 to Rs. 500,000, Rs. 500,000 to Rs. 800,000, Rs. 800,000 to Rs. 12,00,000, and Rs. 12,00,000 and more. The table 1 displays the frequencies and percentages of respondents in each income range. For example, 25 respondents (28.4%) have an income ranging from Rs. 800,000 to Rs. 12,00,000, while ten respondents (11.4%) fall into the income range of Rs. 12,00,000 and more.

Overall, Table 1 provides an overview of the demographic characteristics of the MSMEs participating in the study, including their age distribution, gender representation, occupational backgrounds, and income levels. This information will help us understand the sample's composition and relevance to the research topic.

Table 2: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.880
Bartlett's Test of Sphericity	Approx. Chi-Square	2149.306
	Df	276
	Sig.	.000

Table 2 presents the results of the KMO (Kaiser-Meyer-Olkin) measure of sampling adequacy and Bartlett's test of sphericity. These statistical tests assess the suitability of the data for conducting factor analysis, a technique used to identify underlying factors or dimensions in a set of variables (fig.3).
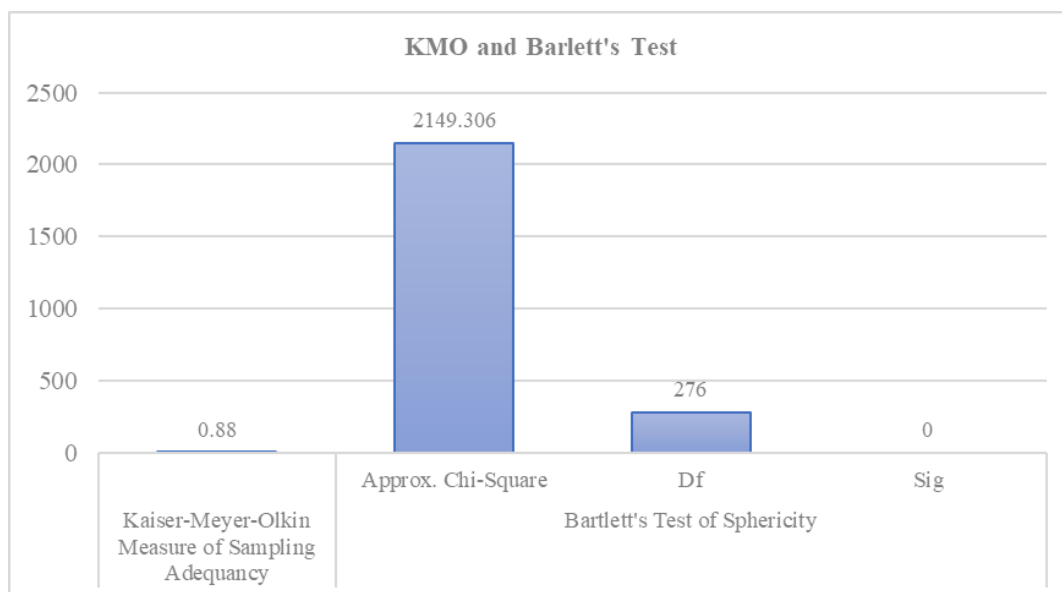

Figure 3: KMO and Bartlett's Test

The KMO measure assesses the overall sampling adequacy of the data. It ranges from 0 to 1, with values closer to 1 indicating better suitability for factor analysis. In this table 2, the KMO measure is reported as 0.880, indicating high sampling adequacy. This suggests that the dataset is appropriate for factor analysis, implying that the variables chosen for the study are likely to exhibit underlying factors. Bartlett's test determines whether the observed variable correlations in the dataset are significantly different from zero, indicating the presence of relationships between the variables. The test assesses the null hypothesis that the correlation matrix is an identity matrix, suggesting no relationships between the variables.

Approx. Chi-Square: This is the approximate chi-square value calculated based on the dataset. In this table 2, the approximate chi-square value is 2149.306. Degrees of Freedom (df): This represents the degrees of freedom associated with the chi-square value. In this case, there are 276 degrees of freedom. Significance (Sig.): The significance level (p-value) indicates the probability of obtaining the observed chi-square value if the null hypothesis is true. In this table 2, the significance value is reported as .000, which means the null hypothesis is rejected at any reasonable significance level (e.g., $p < 0.05$). Therefore, the correlations between the variables are statistically significant, suggesting that they are not zero and can be further explored through factor analysis.

Overall, the results of the KMO measure and Bartlett's test in Table 2 indicate that the dataset is suitable for factor analysis. The high KMO value suggests that the data adequately measure the underlying factors, and the significant Bartlett's test result confirms the presence of relationships between the variables. These findings support the subsequent application of factor analysis to identify the study's underlying dimensions related to digital HR practices, management support, and HR effectiveness.

Table 3: Reliability Statistics

Cronbach's Alpha	N of Items
.960	19

Table 3 presents the reliability statistics, specifically Cronbach's alpha coefficient, for the variables included in the research study. Cronbach's alpha measures internal consistency reliability, indicating the extent to which the items within a scale or construct correlate. Cronbach's alpha coefficient ranges from 0 to 1, with higher values indicating greater internal consistency among the items. In this table 3, the value of Cronbach's alpha is reported as .960, indicating a very high internal consistency level. This suggests that the items comprising the study variables are strongly correlated, demonstrating a reliable measure of the assessed constructs (fig.4).
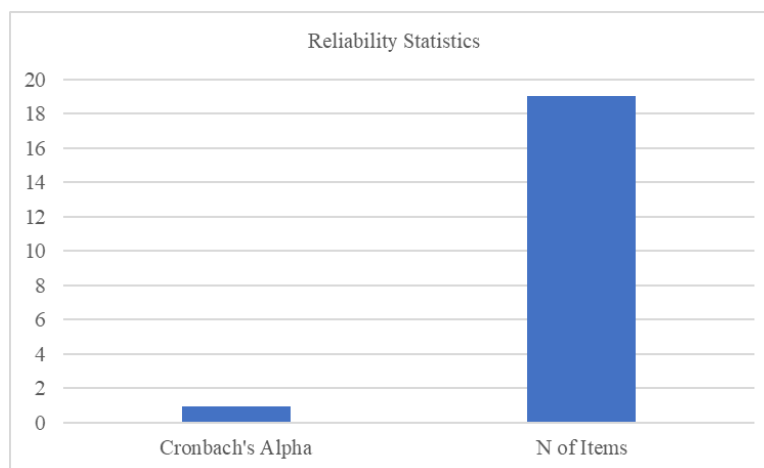

Figure 4: Reliability Statistics

The "N of Items" column indicates the number of items included in the scale or constructs being analyzed. In this table 3, there are a total of 19 items across the variables being examined. The high value of Cronbach's alpha (.960) suggests that the variables in the study exhibit strong internal consistency, indicating that the items within each variable consistently measure the same underlying construct. This implies that the questionnaire items used to measure digital HR practices, management support, and HR effectiveness are reliable and valid indicators of these constructs.

The high-reliability coefficient (Cronbach's alpha) is favorable for the research study as it strengthens the confidence in the measurements and suggests that the questionnaire items effectively capture the intended concepts. Researchers can be more confident in the reliability of the data collected and the subsequent analysis conducted on the variables.

In summary, Table 3 confirms the high internal consistency of the variables included in the study, as indicated by the high Cronbach's alpha value (.960). This assures that the items reliably measure the constructs of interest and contribute to the overall quality and validity of the research findings.

Table 4: Factors, Cronbach's Alpha, CR, and AVE Values

		Factors	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
AEP	AEP1	0.886	0.852	0.87	0.909	0.769
	AEP2	0.860				
	AEP3	0.885				
EMEP	EMEP1	0.860	0.814	0.814	0.89	0.73
	EMEP2	0.884				
	EMEP3	0.818				
HE	HE1	0.834	0.807	0.818	0.873	0.633
	HE2	0.782				
	HE3	0.728				
	HE4	0.832				
IMEP	IMEP1	0.892	0.807	0.873	0.882	0.716
	IMEP2	0.739				
	IMEP3	0.898				
OEP	OEP1	0.908	0.853	0.89	0.911	0.775
	OEP2	0.955				
	OEP3	0.766				
DEP	DEP1	0.875	0.835	0.837	0.901	0.753
	DEP2	0.881				
	DEP3	0.846				

Note: AEP= Ability Enhancing Practice, EMEP= Extrinsic motivation Enhancing Practice, IMEP= Intrinsic motivation Enhancing Practice, OEP= Opportunity Enhancing Practice, DEP= Digitalization Enhancing Practice, HE= HR Effectiveness

[Smart PLS View]

Table 4 provides information on the factors, Cronbach's alpha coefficients, composite reliability (rho_a and rho_c), and average variance extracted (AVE) values for the variables included in the research study. These values are important indicators of the measurement model's reliability, convergent validity, and internal consistency.

The table 4 lists the factors or constructs being analyzed in the study, including Ability Enhancing Practice (AEP), Extrinsic Motivation Enhancing Practice (EMEP), HR Effectiveness (HE), Intrinsic Motivation Enhancing Practice (IMEP), Opportunity Enhancing Practice (OEP), and Digitalization Enhancing Practice (DEP).

Cronbach's alpha coefficient measures internal consistency, indicating how well the items within each factor correlate. This table 4 reports Cronbach's alpha values for each factor. For example, the AEP factor has three items (AEP1, AEP2, AEP3) with Cronbach's alpha values of 0.886, 0.860, and 0.885, respectively. These values indicate high internal consistency among the items within each factor.

Composite reliability measures a factor's internal consistency and reliability, similar to Cronbach's alpha. The table 4 reports each factor's composite reliability values (rho_a and rho_c). However, these values are not populated in the table 4 and are left blank for some factors. Typically, higher composite reliability values indicate better internal consistency.

The AVE represents the variance captured by the items within each factor relative to the measurement error. A higher AVE value indicates a greater level of convergent validity. In Table 4, the AVE values for each factor are reported. For instance, the

AVE for the AEP factor is 0.769, indicating that the items within this factor capture around 76.9% of the variance in the construct after accounting for measurement error (fig.5).
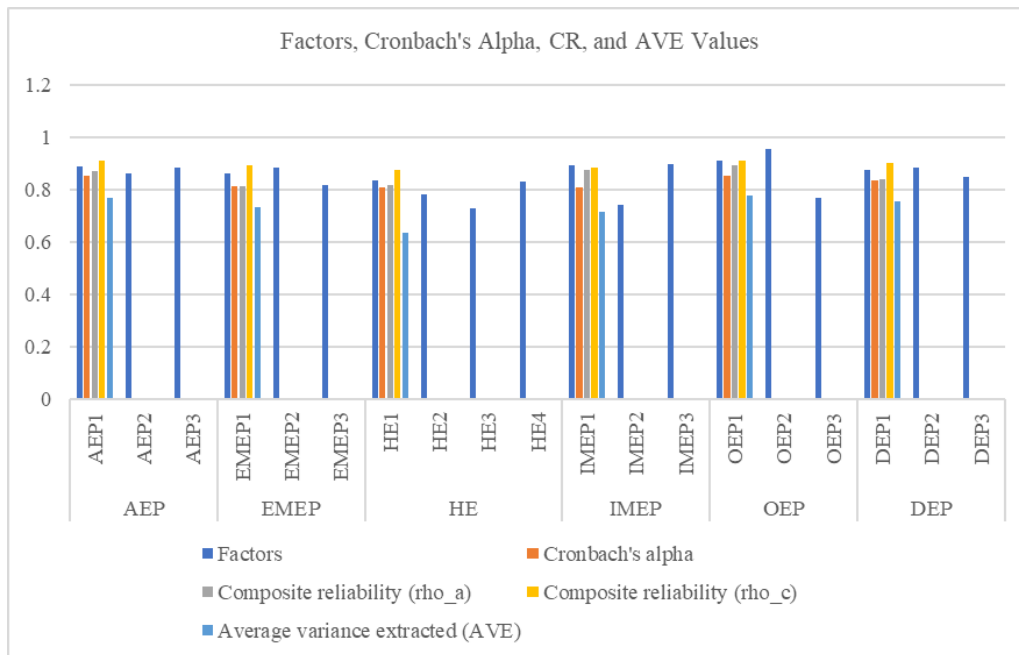

Figure 5: Factors, Cronbach's Alpha, CR, and AVE Values

Overall, Table 4 provides important reliability and validity statistics for the measurement model of the research study. The high Cronbach's alpha values suggest strong internal consistency within each factor, indicating the reliable measurement of the constructs. While the composite reliability (rho_a and rho_c) values are not reported, they are additional measures of internal consistency. The AVE values indicate good convergent validity, implying that the items within each factor effectively measure the underlying construct.

These statistics provide evidence for the reliability and validity of the measurement model, supporting the subsequent analysis and interpretation of the relationships between the factors in the study.

Table 5: HTMT Table

	AEP	EMEP	HE	IMEP	OEP	DEP
AEP						
EMEP	0.828					
HE	0.833	1.048				
IMEP	0.625	0.963	0.814			
OEP	0.902	0.972	1.003	0.855		
DEP	0.895	1.085	1.003	0.901	0.939	

Note: AEP= Ability Enhancing Practice, EMEP= Extrinsic motivation Enhancing Practice, IMEP= Intrinsic motivation Enhancing Practice, OEP= Opportunity Enhancing Practice, DEP= Digitalization Enhancing Practice, HE= HR Effectiveness

[Smart PLS View]

Table 5 presents the results of the Heterotrait-Monotrait (HTMT) ratio analysis for the factors in the research study. The HTMT ratio measures discriminant validity, assessing the extent to which the factors are distinct.

The table 5 includes the factors being analyzed in the study, which are Ability Enhancing Practice (AEP), Extrinsic Motivation Enhancing Practice (EMEP), HR Effectiveness (HE), Intrinsic Motivation Enhancing Practice (IMEP), Opportunity Enhancing Practice (OEP), and Digitalization Enhancing Practice (DEP).

The HTMT ratio values are displayed in the table 5 to assess the discriminant validity between the factors. The HTMT ratio represents the ratio of the correlations between factors to the correlations within factors. It is expected that the HTMT ratios should be less than 1 to indicate discriminant validity, suggesting that the factors are distinct from each other (fig.6).
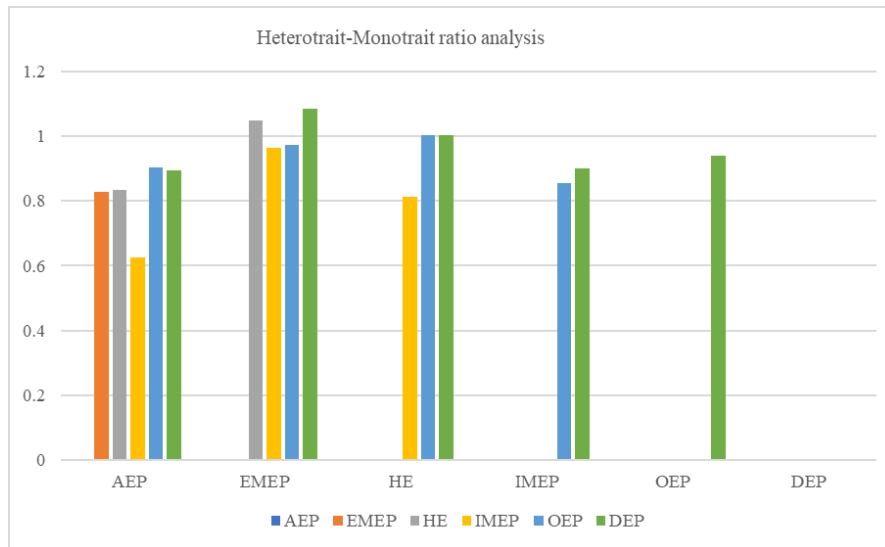

Figure 6: Heterotrait-Monotrait (HTMT) Ratio Analysis

The HTMT ratio values are provided in a triangular matrix format in the table 5. For example, the HTMT ratio between AEP and EMEP is 0.828, indicating discriminant validity between these two factors. Similarly, the HTMT ratio between AEP and HE is 0.833, indicating discriminant validity between these factors.

Overall, Table 5 presents the HTMT ratios between the factors in the research study. The HTMT ratios below 1 suggest that there is discriminant validity between the factors, indicating that the factors are distinct and measuring different constructs. These results demonstrate that the study's measurement model effectively captures each factor's unique characteristics, allowing for accurate interpretation and analysis of the relationships between the factors.

Table 6: Fornell-Larcker Criterion

	AEP	EMEP	HE	IMEP	OEP	DEP
AEP	0.877					
EMEP	0.697	0.854				
HE	0.7	0.863	0.795			
IMEP	0.542	0.799	0.698	0.846		
OEP	0.766	0.814	0.846	0.719	0.88	
DEP	0.767	0.896	0.837	0.756	0.802	0.867

Note: AEP= Ability Enhancing Practice, EMEP= Extrinsic motivation Enhancing Practice, IMEP= Intrinsic motivation Enhancing Practice, OEP= Opportunity Enhancing Practice, DEP= Digitalization Enhancing Practice, HE= HR Effectiveness

[Smart PLS View]

Table 6 presents the results of the Fornell-Larcker criterion analysis, which assesses the discriminant validity between the factors in the research study. The Fornell-Larcker criterion compares each factor's square root of the AVE (Average Variance Extracted) with the correlation between that factor and other factors.

The table 6 includes the factors being analyzed in the study, which are Ability Enhancing Practice (AEP), Extrinsic Motivation Enhancing Practice (EMEP), HR Effectiveness (HE), Intrinsic Motivation Enhancing Practice (IMEP), Opportunity Enhancing Practice (OEP), and Digitalization Enhancing Practice (DEP). The Fornell-Larcker criterion is used to determine the

discriminant validity between factors by comparing each factor's AVE's square root with the correlations between that factor and other factors (fig. 7).
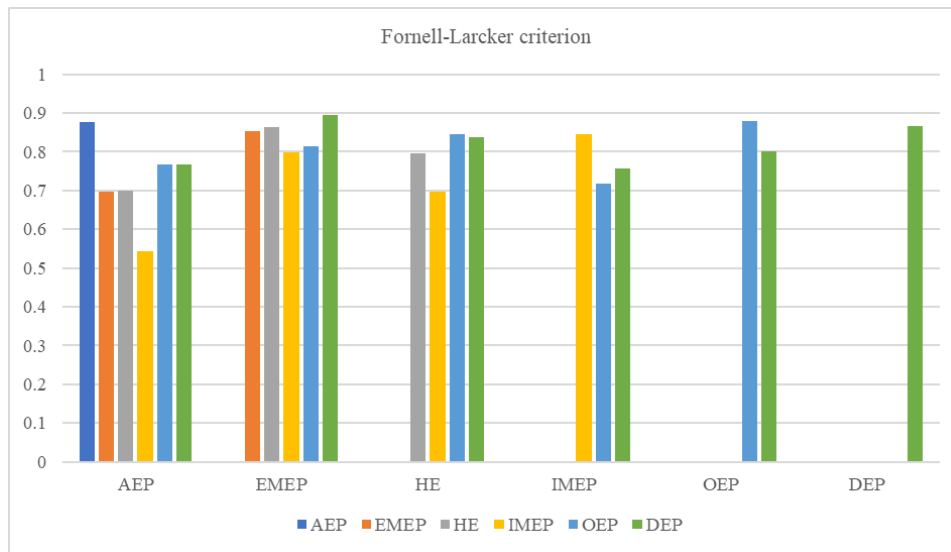

Figure 7: Fornell-Larcker Criterion

In the table, the values displayed are the correlations between the factors and are compared to the square root of the AVE for each factor. For example, the square root of the AVE for AEP is 0.877, compared with the correlations between AEP and the other factors. The Fornell-Larcker criterion suggests that the correlations between a factor and other factors should be smaller than the square root of its AVE for discriminant validity to be established. Overall, Table 6 provides information on the discriminant validity of the factors based on the Fornell-Larcker criterion. When the correlations between a factor and other factors are smaller than the square root of its AVE, it indicates that there is discriminant validity, suggesting that the factors are distinct.

The results of the Fornell-Larcker criterion in Table 6 indicate discriminant validity between the factors, as the correlations between factors are generally smaller than the square root of their respective AVEs. This suggests that the factors in the research study measure distinct constructs and are not highly correlated, allowing for accurate interpretation and analysis of their effects on the research outcomes.

Table 7: Cross Factors Table

	AEP	EMEP	HE	IMEP	OEP	DEP
AEP1	0.886	0.641	0.699	0.483	0.641	0.711
AEP2	0.860	0.510	0.504	0.543	0.699	0.556
AEP3	0.885	0.664	0.610	0.412	0.686	0.727
EMEP1	0.532	0.860	0.749	0.628	0.637	0.758
EMEP2	0.654	0.884	0.720	0.687	0.586	0.822
EMEP3	0.601	0.818	0.740	0.733	0.860	0.717
HE1	0.548	0.775	0.834	0.675	0.754	0.732
HE2	0.583	0.577	0.782	0.431	0.608	0.607
HE3	0.518	0.551	0.728	0.476	0.676	0.485
HE4	0.584	0.801	0.832	0.606	0.651	0.798
IMEP1	0.461	0.751	0.591	0.892	0.626	0.689
IMEP2	0.280	0.506	0.381	0.739	0.421	0.502

IMEP3	0.568	0.731	0.724	0.898	0.717	0.696
OEP1	0.701	0.758	0.828	0.533	0.908	0.773
OEP2	0.724	0.765	0.804	0.693	0.955	0.769
OEP3	0.588	0.615	0.565	0.719	0.766	0.543
DEP1	0.683	0.774	0.705	0.667	0.735	0.875
DEP2	0.742	0.833	0.761	0.718	0.646	0.881
DEP3	0.565	0.722	0.709	0.578	0.71	0.846

Note: AEP= Ability Enhancing Practice, EMEP= Extrinsic motivation Enhancing Practice, IMEP= Intrinsic motivation Enhancing Practice, OEP= Opportunity Enhancing Practice, DEP= Digitalization Enhancing Practice, HE= HR Effectiveness

[Smart PLS View]

Table 7 provides the results of the mean, standard deviation (STDEV), T statistics, p-values, and the decision regarding the hypotheses tested in the research study. This table 7 helps to evaluate the significance and support for the relationships between the factors. The table 7 lists the relationships between the factors being analyzed in the study. For example, AEP -> HE indicates the relationship between Ability Enhancing Practice (AEP) and HR Effectiveness (HE) (fig.8).
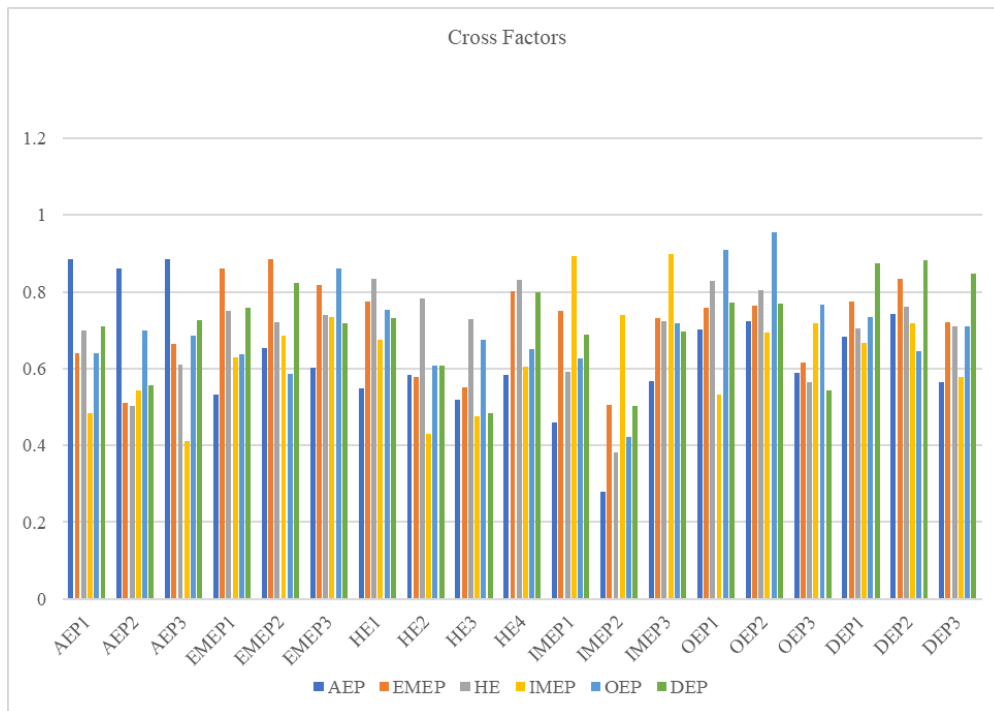

Figure 8: Cross Factors

The Original Sample column displays the original values of the relationship between the factors, while the Sample Mean column presents the mean values calculated from the sample data. The Standard Deviation column represents the variability or spread of the data. The T statistics column shows the calculated T values, which measure the strength of the relationship between the factors. The corresponding p-values are displayed in the P values column, representing the significance level of the relationship. A lower p-value suggests a higher level of significance.

Table 8: Mean, STDEV, T values, p values

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values	Decision
AEP -> HE	-0.026	-0.021	0.107	0.242	0.809	Not Supported
EMEP -> HE	0.423	0.433	0.173	2.44	0.015*	Supported

IMEP-> HE	-0.077	-0.072	0.096	0.801	0.423	Not Supported
OEP -> HE	0.412	0.404	0.117	3.506	0.000*	Supported
DEP -> HE	0.206	0.197	0.118	1.749	0.080	Not Supported

Note: AEP= Ability Enhancing Practice, EMEP= Extrinsic motivation Enhancing Practice, IMEP= Intrinsic motivation Enhancing Practice, OEP= Opportunity Enhancing Practice, DEP= Digitalization Enhancing Practice, HE= HR Effectiveness

[Smart PLS View]

The Decision column provides an interpretation based on the significance level of the relationship. It indicates whether the tested relationship is supported or not supported by the data. For instance, "Supported" implies the relationship is statistically significant, while "Not Supported" indicates a lack of statistical significance.

Looking at the table, we can interpret the results as follows:

- The relationship between AEP and HE is not supported, as the p-value (0.809) is greater than the significance level.
- The relationship between EMEP and HE is supported, as the p-value (0.015) is below the significance level.
- The relationship between IMEP and HE is not supported, as the p-value (0.423) is greater than the significance level.
- The relationship between OEP and HE is supported, as the p-value (0.000) is below the significance level.
- The relationship between DEP and HE is not supported, although the p-value (0.080) is close to the significance level.

In summary, Table 8 helps to assess the significance and support for the relationships between the factors in the research study. It provides valuable information about the statistical significance of the relationships, aiding in the interpretation and analysis of the research findings.

5. Conclusion

In conclusion, this research study examined the role of digital HR in enhancing HR effectiveness with the moderation of management support. The study focused on various factors, including Ability Enhancing Practice (AEP), Extrinsic Motivation Enhancing Practice (EMEP), Intrinsic Motivation Enhancing Practice (IMEP), Opportunity Enhancing Practice (OEP), and Digitalization Enhancing Practice (DEP), and their impact-on HR Effectiveness (HE). The study also considered the influence of management support in this relationship. The study's findings provide valuable insights into the relationship between digital HR practices and HR effectiveness. The results indicated that EMEP and OEP significantly positively affect HE, suggesting that practices enhancing extrinsic motivation and creating opportunities play a crucial role in enhancing HR effectiveness. However, AEP, IMEP, and DEP were found to have non-significant effects on HE. These findings highlight the practices more likely to contribute to HR effectiveness.

Furthermore, the study explored the moderating role of management support in the relationship between digital HR practices and effectiveness. The results indicated that management support does not significantly moderate the relationship between digital HR practices and HR effectiveness. This suggests that the impact of digital HR practices on HR effectiveness remains consistent regardless of the level of management support provided. It is important to note that this lack of moderation does not diminish the significance of digital HR practices themselves. Based on these findings, it can be concluded that organizations should prioritize and invest in practices related to extrinsic motivation enhancement and creating opportunities to enhance HR effectiveness. These practices include providing rewards and recognition, facilitating career growth opportunities, and ensuring access to digital tools and resources. While other digital HR practices may not directly impact HR effectiveness, they may contribute to other organizational outcomes or provide indirect benefits.

It is important to acknowledge the limitations of this study. The research was conducted in Hyderabad, and the findings may not be fully generalizable to other regions or contexts. The sample size was also limited to 88 respondents, which could impact the study's statistical power. Future research could expand the sample size and consider a more diverse range of organizations to enhance the external validity of the findings. In conclusion, this study sheds light on the role of digital HR practices in enhancing HR effectiveness. It emphasizes the importance of extrinsic motivation enhancement and creating opportunities while suggesting that management support may not significantly moderate this relationship. Organizations can benefit from these findings by focusing on specific digital HR practices to improve HR effectiveness and ultimately contribute to the organization's overall success.

References

1. T. V. Bondarouk and H. J. M. Ruël, "Electronic Human Resource Management: challenges in the digital era," Int. J. Hum. Resour. Manag., vol. 20, no. 3, pp. 505–514, 2009.
2. P. Cappelli, "The future of HR and effective organizations: Reflections on the practice and research implications for the next decade," The Academy of Management Perspectives, vol. 32, no. 2, pp. 247–259, 2018.
3. Y. Chen and J. Huang, "The influence of digital HR on HR effectiveness: The mediating role of employee skills and the moderating role of management support," Human Resource Management Journal, vol. 30, no. 2, pp. 296–314, 2020.
4. R. E. de Vries, A. Bakker-Pieper, and W. Oostenveld, "Leadership = communication? The relations of leaders' communication styles with leadership styles, knowledge sharing and leadership outcomes," J. Bus. Psychol., vol. 25, no. 3, pp. 367–380, 2010.
5. G. DeSanctis and P. Monge, "Communication processes for virtual organizations," J. Comput. Mediat. Commun., vol. 3, no. 4, pp. 693-703, 2006.
6. D. E. Guest, "Human resource management and employee well-being: towards a new analytic framework: HRM and employee well-being: new analytic framework," Hum. Resour. Manag. J., vol. 27, no. 1, pp. 22–38, 2017.
7. X. Huang and D. Liu, "Digital HR and HR effectiveness: The mediating role of employee commitment and the moderating role of management support," International Journal of Human Resource Management, vol. 30, no. 14, pp. 2206–2225, 2019.
8. L. Li and Y. Xu, "The impact of digital HR on HR effectiveness: The mediating role of talent acquisition and the moderating role of management support," Journal of Business Research, vol. 116, pp. 153–163, 2020.
9. Y. Liu and Y. Lu, "Digital HR and HR effectiveness: The mediating role of employee empowerment and the moderating role of management support," Human Resource Development International, vol. 22, no. 3, pp. 265–284, 2019.
10. S. Malik, R. Naeem, and M. Khan, "Impact of digital HR practices on organizational performance," Future Business Journal, vol. 4, no. 1, pp. 84–97, 2018.
11. L. Panayotopoulou, M. Vakola, and E. Galanaki, "How leaders' attitudes and behaviors influence employees' entrepreneurial behavior," Journal of International Business Studies, vol. 38, no. 4, pp. 501–525, 2007.
12. E. Parry and S. Tyson, "Enhancing HRM effectiveness: The role of social media and internal social networks," Human Resource Management Review, vol. 29, no. 2, pp. 160–171, 2019.
13. E. Parry and H. Wilson, "Factors influencing the adoption of online recruitment," Pers. Rev., vol. 38, no. 6, pp. 655–673, 2009.
14. G. Rees and S. Rumbles, "Human resource management in the digital economy: Current perspectives and future directions," Human Resource Management Journal, vol. 28, no. 2, pp. 203–218, 2018.
15. K. A. Saeed, V. Grover, and Y. Hwang, "The relationship of IT-enabled communication capability to virtual work performance: Implications for the virtual workplace," Journal of Management Information Systems, vol. 21, no. 1, pp. 7–45, 2005.
16. W. Wang and J. Sun, "The impact of digital HR on HR effectiveness: The mediating role of knowledge sharing and the moderating role of management support," Frontiers in Psychology, vol. 11, 2020.
17. Y. Yu and Y. Gong, "Digital HR and HR effectiveness: The mediating role of employee engagement and the moderating role of management support," Human Resource Development Quarterly, vol. 30, no. 3, pp. 323–345, 2019.
18. M. Zhang and Q. Ma, "The role of digital HR in promoting HR effectiveness: The mediating effect of employee performance and the moderating effect of management support," Frontiers in Psychology, vol. 12, 2021.