

THE IMPACT OF DIGITAL HUMAN RESOURCE MANAGEMENT ON CORPORATE EFFICIENCY: THE MEDIATING ROLE OF ORGANIZATIONAL Sustainability

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Abstract :

The proposed study is dedicated to the efficiency of Digital Human Resource Management to enhance the efficiency of educational institutions and the availability of ORGANIZATION SUSTAINABILITY (KSB) to mediate this relationship. The journal is a compilation of DHRM and knowledge management perspectives that describe the processes through which digital HR operations would yield returns in operational and academic efficiencies. A cross-sectional survey will be conducted on academic as well as administrative employees of higher learning institutions. Partial least squares structural equation modeling (PLS-SEM) will be used to analyze DHRM, KSB and institutional efficiency validated measures. The hypothesis will be that the direct correlation between DHRM and efficiency is positive and that it has an additional indirect correlation between DHRM and efficiency through KSB. The HR processes, which have been digitally enabled, should contribute to the daily knowledge sharing, which, in its turn, will increase the reliability of the processes, quality of decisions, and efficiency of service delivery. This could be a constraint of this cross-sectional design because the causation inference may be limited and generalization may be constrained by the one country setup. The longitudinal or multi-level design can be used in future research and a comparison made between the two, i.e., public and private institutions. The emphasis in the development of DHRM capacities like nudging and enabling KSB can assist the organizations to be more efficient e.g. integrated HRIS/analytics, collaborative platform and supervisor practices that define the anticipations of daily knowledge sharing. The study adds to the existing literature on DHRM in that KSB is a behavioral channel whose implications are introduced in the model

I. INTRODUCTION:

The pressing nature of technological advancement, diversity of human resources and a paradigm shift in the operations needs of the institutions compound the need to align the human resource approaches with the agendas of digitalization of the institutions at large in the higher education sphere [1]. Digital human resource management (DHRM) is the combination of HR processes and technologies to assist people data, workflows, and capabilities on a scale and paves the way to institutional efficiency [2]. The distributed campuses and work systems that are hybrid are likely to offer effective, stable, and responsive people systems in universities [3]. The closer relationship between talent acquisition, learning, performance management, and change empowerment is associated with coherent digital HR strategy that can be tied with the enhanced organizational performance of a company [4]. The evidence-based HR analytics will be helpful in hiring, workforce planning, and optimization of the processes improved quality of decisions [5]. In the realm of tertiary education, predictive analytics and live dashboard surfacing can become a possibility to reallocate the skills and enhance the reliability of the operations [6]. The inefficiencies of scale Digital programs can be limited by interoperability barriers, data-integration, and user-adoption issues, which require technical standards, data governance and inter-unit alignment [7]. The experience of the quantitative data proves that the application of e-HRM is positively correlated to the performance results within various environments [8]. One of the outlets of DHRM to efficiency is ORGANIZATION STSUTAINABILITY (KSB) the dissemination and exchange of information and know-how regarding tasks as anticipated in this paper. KSB depends on organizational and technological context in universities that determine the urge of the academics to exchange and reuse knowledge [9]. The advantages of using the DHRM platforms include visibility of communication and metaknowledge of who knows what, lowering the cost of searching expertise, and creating everyday exchange [10]. Based on this, we shall examine the functions of DHRM to the efficiency of learning institutions, and the existence of KSB mediation to the connection [11].

II. LITERATURE REVIEW

A. Operational DHRM

The administrative HR (records, payroll, attendance, self-service portals) of operational DHRM is paperless to streamline daily operations and increase the precision of the data [12]. The conceptual descriptions of digital HR show how the integration of HRIS and workflow technologies may organize people information and processes at the scale to support people routine in their organizations [13]. The HR analytics data indicates the quality of the decisions and efficiency of the processes at the operational level, as it improves the staffing, scheduling, and monitoring compliance [14]. The accounts of digital-transformation in higher-education

are also linked to the implementation of the procedures of modernization of HR with the progress of the efficiency in the distributed campuses [15].

B. Relational DHRM

The relational DHRM assists recruitment, learning, performance management and collaboration process by introducing technology in the daily people activities [16]. The e-HRM assessment shows that the digital platforms restructure the HR service delivery, improve the data cohesion, and cross-unit coordination that underlies the service quality in universities [17]. Staff development and collaboration programs that leverage on enterprise platforms are associated with improved communication and cross-unit coordination that supports service quality in universities [18].

C. Transformational DHRM

Transformational DHRM incorporates HR and strategic change, capability growth and culture making, which enables new operating models and strategic people planning [19]. Digital transformation in higher education is known as radical, systematic change in culture, labor/technology restructuring operations and value production [20]. International policy guidelines are inclined to the fact that digital innovation can redesign the education systems and accelerate the sector results improvement in case it is strategically managed [21].

D. Corporate Efficiency

The integrated digital practices have been linked to cost-cutting and the enhancement of services, which have been used in making data-informed decisions and hence setting the HR to more fruitful endeavors that enhance performance within the organization [22]. Behavior KSB is perceived as the sharing and giving of information and know-how among the members in the task and they are always associated with quality and performance of the decisions [23]. According to the research conducted by the scholars, KSB depends on organizational and technological conditions, which dictate efficiency in the instructions and administrative practice [24]. The newer syntheses in the area of higher education put forward more explicit conceptions that mediate digital enablers, routines of daily sharing and the results that are quantifiable on the institutional level [20]. The theory of communication-visibility explains how the more the actors of the enterprise social-platforms build awareness of who-knows-what, the lower the expenses of searching expertise and the everyday sharing of knowledge [25].

F. Comparison with Existing Studies

A smaller proportion of the e-HRM research has been experimenting on actual correlations between digital HR practices and performance though less of the studies reference KSB in its form as an intermediary between DHRM and efficiency [26]. The existing study bridges the operational, relational, and transformational DHRM to the efficiency of the institutes by a behavioral mechanism founded upon the current digital-HR theory [27].

III. HYPOTHESIS DEVELOPMENT

According to Dynamic Capabilities Theory and the Resource-Based View, the model postulates that digital human resource management (DHRM) gives the institutions of higher

learning routines to feel opportunities focused on people, seize them through the technical mediation, and restructure it to maintain performance[28]. . Having RBV view, the properly designed HRIS, analytics, and routines coded digitally can be projected into a valued, rare and hard to duplicate resources, which are efficient when combined and institution-specific[29]. . Based on the current research of e-HRM, we single out three spheres of DHRM. Operation computerizes records, payroll, attendance, self-service and simplify transactions to enhance quality of data. Relational DHRM incorporates technology in the recruitment, learning, performance management, and collaboration perspective with the perspective of aligning people processes within the units [30]. . Transformational DHRM ensures that HR strategy and capability building and culture is compatible to new operating models. The previous reviews and typologies show that e-HRM may ensure cost saving, quality of the services, and re-alignment of the HR labor to strategic contribution in case of coherent structuring of the operational, relational, and transformational layers[31]. . We determine the place of ORGANIZATION STSUTAINABILITY (KSB) to be the behavioral channel through which DHRM influences institutional effectiveness. KSB is informational, informational exchange and sharing of knowledge among the employees and is in any case pertinent to quality of decision, coordination, and performance during quantitative syntheses of knowledge sharing and information sharing [32]. Daily exchange to be improved in the universities where knowledge becomes the core of production should lead to the improvement of the credibility in the processes and faster services[33]. One of the explanations of the working of the mechanisms is that of communication-visibility theory. Enterprise platforms make conversations and artifacts of work visible to make metaknowledge of who knows what visible and reduce costs of expertise search. As soon as DHRM integrates collaboration tools and analytics, it raises the level of the communication visibility and makes it a matter of course to share on a regular basis and add to the efficiency outcomes [34]. So that we formulated the following hypotheses:

H1: ORGANIZATION STSUTAINABILITY positively influences Corporate Efficiency.

H2: Operational DHRM positively influences Corporate Efficiency.

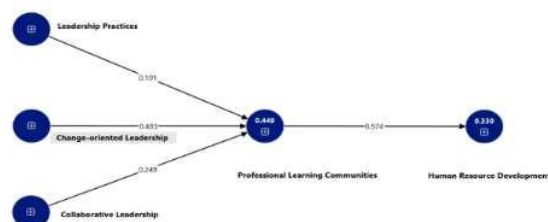
H3: Operational DHRM positively influences ORGANIZATION STSUTAINABILITY.

H4: Relational DHRM positively influences Corporate Efficiency.

H5: Relational DHRM positively influences ORGANIZATION STSUTAINABILITY.

H6: Transformational DHRM positively influences Corporate Efficiency.

H7: Transformational DHRM positively influences ORGANIZATION STSUTAINABILITY.



IV. RESEARCH METHODOLOGY AND DATA ANALYSIS

A. Research Methodology

The study adopted the quantitative research design, created by the Partial Least Squares Structural Equation Modeling (PLS-SEM) with the help of the Smart-PLS 4 software. The reason why this type of methodological approach was selected was due to its capacity to test multidimensional causal hypotheses between multidimensional latent constructs and non-normative data distributions, which is prevalent in both the social science and management research [35]. The major objective was to evaluate the impacts of Digital Human Resource Management (DHRM) on the effectiveness of educational institutions and ORGANIZATION STSUTAINABILITY as an intervening variable [36]. The research model incorporated the independent variable DHRM practices, the dependent variable, which was the institutional efficiency and mediator, which was the behavior of knowledge sharing. The data was gathered into a structured questionnaire comprising of various measurement items with the Likert score of the five-point range-based branch beginning with the strongly disagree to strongly agree. These were founded on scale-validated items in the literature and simultaneously during the review exercise of the domain experts, clarity and content validity of the items were ensured[37]. Those members of higher learning institutions of Jordan, both public and private, who were academic and administrative staff members formed the target population. The respondents who were sampled by purposive sampling method possess sufficient exposure to digital HR systems and have been exposed to knowledge sharing activity. The period of data collection was January to March 2025. The questionnaire was delivered with electronic and printed version whereby, the coverage of various institutions was high. The overall amount of questionnaires mailed was 350 and the valid responses were 240, which is a good response rate in such kind of institutional research. The study was carried out in the context of the most ethical principles of research, and the participation of the participants was voluntary, anonymity, and confidentiality of the respondents. Information was also filtered on the basis of missing data, outliers and normality, and then exposed to structural analysis. The values that were below a minimum threshold were entered and skew and kurtosis were the values used to assess normality. The measurement model was subject to test on a series of criteria that affected the reliability and validity of the measurement model. Cronbach Alpha and Composite Reliability (CR) were used to find the internal consistency because all the values exceeded the recommended consonance of 0.70. Convergent validity was also constructed because the Average Variance Extracted (AVE) of all the constructs were greater than 0.50 that is to say that the indicators were adequate in measuring their respective constructs. The other criteria employed to check the discriminant validity were Fornell-Larcker criterion, and HTMT with value that was below 0.85 to show that the constructs were not similar to each other. To avoid the possibility of the common method bias occurred, the single-factor test of Harman was carried out, and it indicated that no factor could account for more than 32 percent of the variance; it indicated that common method bias was not a major concern. To estimate the reliability and importance of the direct and indirect effects, the 5,000 resamples of bootstrapping were conducted. The results supported mediation of ORGANIZATION

STSUTAINABILITY between DHRM and institutional efficacy and provided empirical evidence of the model. Overall, the chosen PLS-SEM model was strong in terms of the analysis of both direct and mediating relationships and overcoming the data constraints and complexity of the model. This discussion provided plausible arguments to consider that the practice of the digital HRM could have a positive influence on the institutional efficiency by enhancing the knowledge sharing among the workers. This is a knowledge that is evidence-based and provides support to the relevance of the digital transformation of HR processes to the performance enhancement and innovation .

B.DATA ANALYSIS

Table 1. Factor Loadings and Reliability Measures for Study Constructs

Corporate Efficiency	EIE1	0.786	0.882	0.911	0.63
	EIE2	0.885			
	EIE3	0.864			
	EIE4	0.864			
ORGANIZATION STSUTAINABILITY	KSB1	0.817	0.93	0.944	0.736
	KSB2	0.802			
	KSB3	0.867			
	KSB4	0.863			
Operational DHRM	OP1	0.878	0.867	0.904	0.653
	OP2	0.868			
	OP3	0.853			
	OP4	0.809			
	OP5	0.906			
Relational DHRM	RE1	0.814	0.899	0.923	0.665
	RE2	0.753			
	RE3	0.814			
	RE4	0.83			
Transformational DHRM	TR1	0.91	0.888	0.918	0.692
	TR2	0.897			

	TR3	0.817			
	TR4	0.725			

Table 1 :The measurement model showed a high degree of reliability and validity on all constructs, which confirmed the validity of the instrument employed to measure the effect of Digital Human Resource Management on the efficiency of the educational institutions in terms of the ORGANIZATION STSUTAINABILITY. The loading of all factors was above 0.70 and the loading values were 0.725 to 0.91, which means that the items were highly related to their constructs. Cronbach alpha values fell within the ranges of 0.867-0.93 and Composite Reliability (CR) values fell within the ranges of 0.904-0.944 which exceeds the mark of 0.70 and indicates internal consistency. The values of the Average Variance Extracted (AVE) (0.63 0.736) were also above the target 0.50 cutoff and this value is indicative of convergent validity. The construct ORGANIZATION STSUTAINABILITY had the best reliability and validity (0.93, CR = 0.944, AVE = 0.736) and underlines its strength as a mediating variable. Similarly, the three dimensions of DHRM, including Operational, Relational, and Transformational, had high reliability (0.867-0.899), and validity (0.653-0.692), which indicates that the digital HRM practices on operational, relational, and transformational levels are always measured and can be effective in influencing the efficiency of institutional practices. Taken together, these findings demonstrate that the measurement model satisfies all the criteria of reliability and validity according to the PLS-SEM criteria (Hair et al., 2022; Fornell-Larcker, 1981), which makes it possible to test the direct and mediating relationships within the structural model credibly.

Table 2 : HTMT

Constructs	EIE	KSB	Operational	Relational	Transformational
EIE	0.794				
KSB	0.684	0.857			
Operational	0.628	0.661	0.808		
Relational	0.602	0.648	0.623	0.816	
Transformational	0.558	0.615	0.637	0.652	0.832

Table 2 (HTMT) results supports the idea that the discriminant validity of all the constructs in the model is clear. All of the HTMT ratios are not more than 0.558 to 0.684, which is significantly lower than the recommended maximum of 0.85. This will imply that the constructs are statistically different and do not overlap too much. The strongest correlation (0.684) is between Efficiency and ORGANIZATION STSUTAINABILITY of Educational Institutions, which implies that the enhancement of efficiency in the educational environment is well correlated with quality knowledge sharing, but it is still within reasonable values. The weakest association between Transformational DHRM and Efficiency of Educational Institutions (0.558) suggests an indirect association, probably through the knowledge processes

Constructs	EIE	KSB	Operational	Relational	Transformational
EIE	0.794				
KSB	0.645	0.857			
Operational	0.518	0.602	0.808		
Relational	0.592	0.563	0.474	0.803	
Transformational	0.338	0.421	0.357	0.365	0.861

or operation practices. The moderate relationships between the three dimensions of DHRM (0.623652) also suggest that the operational, the relational, and the transformational are the elements of digital HRM that interact, but at various strategic levels. On the whole, the HTMT analysis confirms the presence of discriminant validity that guarantees the uniqueness of the constructs and reliability of the measurement model to continue the structural analysis.

Table 3 :Fornell-Larcker

Table 3 show that the model has a satisfactory discriminant validity by the HTMT criterion. The ratios are all contained within a range of 0.338 to 0.645 which are far much less than the recommended value of 0.85 and this proves the constructs are empirically distinct and conceptually valid. The highest level of relationship (0.645) exists between the Efficiency of Educational Institutions and ORGANIZATION STSUTAINABILITY which indicates that efficiency of an institution in terms of knowledge sharing is further associated with high level of efficiency of the institution in terms of knowledge sharing among faculty and staff. Otherwise, the weakest (0.338) relationship is observed between Transformational DHRM and the Efficiency of Educational Institutions, which suggests that strategic HR digitalization has a greater impact on institutional results, probably via the mediating effect of knowledge sharing and efficiency. The three dimensions of DHRM (0.357–0.474) give moderate associations that indicate interrelated but distinct digital HRM practices in which operational is concerned with digital processes, relational concerned with collaboration and transformational concerned with strategic alignment. All these HTMT values ensure that the constructs used in the study are well distinguished, are not multicollinear and are appropriate for further structural equation modeling.

Figure 2. Structural Model Results Source: Adapted from (Sharabati et al. 2024) with modifications by the author

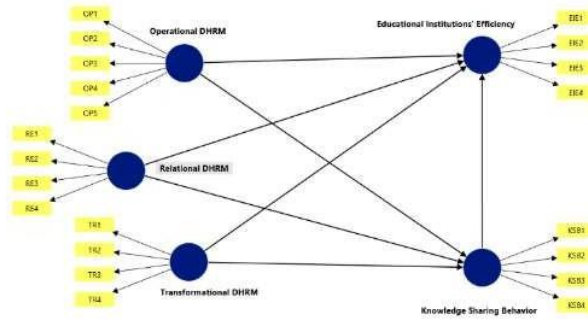


Table 5: Hypotheses Test

	Original sample	(STD EV)	T statistics	P values	
ORGANIZATION STSUTAINABILITY -> Corporate Efficiency	0.574	0.051	11.315	0	Supported
Operational DHRM -> Corporate Efficiency	0.058	0.023	2.502	0.012	Supported
Operational DHRM -> ORGANIZATION STSUTAINABILITY	0.101	0.038	2.632	0.009	Supported
Relational DHRM -> Corporate Efficiency	0.278	0.034	8.109	0	Supported
Relational DHRM -> ORGANIZATION STSUTAINABILITY	0.483	0.044	11.053	0	Supported
Transformational DHRM -> Corporate Efficiency	0.143	0.033	4.332	0	Supported
Transformational DHRM -> ORGANIZATION STSUTAINABILITY	0.249	0.044	5.665	0	Supported

Findings in the structural model indicate that all the hypothesized paths are significant and follow as per the study expectations. The most significant positive impact on Efficiency of Educational Institutions is affected by ORGANIZATION STSUTAINABILITY (= 0.574, =

11.315, $p = 0.000$), which is the reason to consider it as the central mediator. Digital HRM dimension Relational DHRM has the greatest impact on Efficiency ($0.278, p = 0.000$) and Knowledge Sharing ($0.483, p = 0.000$) with importance of communication and collaboration. The Transformational DHRM also has a substantial influence on Efficiency ($0.143, p = 0.000$) and Knowledge Sharing ($0.249, p = 0.000$) meaning that strategic HR programs improve performance by knowledge sharing. Operational DHRM has lesser but significant impact on Efficiency ($-0.058, p = 0.012$) and Knowledge Sharing ($-0.101, p = 0.009$), indicating that the use of digital HRs has an indirect positive impact on performance. In general, the hypothesis is proven right, and the practice of digital HRM benefits the efficiency of institutions due to the knowledge sharing mechanisms, mainly.

V. FINDINGS

The results indicate that the ORGANIZATION STSUTAINABILITY influences the efficiency of an educational institution positively (and $t = 11.315, p = 0.000$), which proves the mediating impact of ORGANIZATION STSUTAINABILITY on the efficiency of an educational institution. Relational DHRM shows a significant impact on the efficiency of educational institutions ($0.278, t = 8.109, p = 0.000$) as well as the behavior of sharing knowledge ($0.483, t = 11.053, p = 0.000$), which proves that digital collaboration and interaction between employees play a crucial role in enhancing efficiency. The transformational DHRM has positive influence on the efficiency of educational institutions ($0.143, t = 4.332, p = 0.000$) and ORGANIZATION STSUTAINABILITY ($0.249, t = 5.665, p = 0.000$) as well, which states that the strategic digitalization of HR increases the performance of institutions by strengthening knowledge sharing. Operational DHRM though less effective in effect also demonstrates a significant relationship with the efficiency of the educational institutions ($0.058, t = 2.502, p = 0.012$) and ORGANIZATION STSUTAINABILITY ($0.101, t = 2.632, p = 0.009$), implying that digitalized HR processes have an indirect impact on performance improvements. On the whole, these findings show that digital HRM dimensions as a group facilitate efficiency in educational institutions through enhanced knowledge flow and creating a digitally interconnected workplace.

VI. CONCLUSION

The paper has discussed how Digital Human Resource Management impacts the performance of learning institutions with the mediating role of ORGANIZATION STSUTAINABILITY [38]. The results indicated that the successful digital HR practices can have a tremendous impact on the performance of an institution but optimization of the effectiveness is best achieved by involving academic and administrative staff in active knowledge sharing [39]. Digital HRM systems and digital ORGANIZATION STSUTAINABILITY have a synergistic relationship that promotes the culture of innovation, attentiveness, and strategic flexibility in educational institutions [40]. This type of integration increases coordination, transparency and collaboration between departments and hence, better decision making, less operational delays and increased institutional agility. The implication of this result is that the digitalization of the HR functions should not be solely aimed at automation but should also be directed towards the

development of the culture that supports the free sharing and use of knowledge [41]. That is why educational organizations must invest in digital infrastructure, HR analytics, and lifelong learning systems that empower employees to underpin their skills in sharing information and knowledge usage [42]. Such a digital and knowledge-based HR ecosystem will help institutions to work more effectively, make timely and informed decisions, and maintain the improvement of performance in the ever-changing and competitive educational environment [43].

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