



FROM HR DIGITALIZATION TO RESILIENCE: THE STRATEGIC ROLE OF HRM SYSTEM MATURITY

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Abstract

In environments characterized by frequent disruption and uncertainty, organizational resilience has become a critical capability, particularly for firms operating in labor-intensive and export-dependent industries. Drawing on Dynamic Capabilities Theory, this study investigates the relationship between Digital Human Resource Management (Digital HRM) and organizational resilience, with a specific focus on the mediating role of HRM system maturity in Pakistan's textile sector. Using a quantitative, cross-sectional research design, data were collected from 410 textile firms through a structured online survey administered to HR managers, directors, and HR professionals. The data were analyzed using SPSS for descriptive, reliability, validity, and regression analyses, while mediation was tested using PROCESS Macro (Model 4) with bootstrapping. The results reveal that Digital HRM has a significant positive effect on organizational resilience and HRM system maturity. HRM system maturity also demonstrates a strong positive relationship with organizational resilience and partially mediates the Digital HRM-resilience relationship. These findings indicate that while Digital HRM directly enhances organizational resilience by improving information flow and responsiveness, its full potential is realized when digital tools are embedded within mature, integrated, and strategically aligned HR systems. This study makes several contributions to the literature by clarifying the capability-based mechanism through which Digital HRM fosters organizational resilience and by extending Dynamic Capabilities Theory to the HR digitalization context in an emerging economy. Practically, the findings suggest that managers should complement digital HR investments with efforts to strengthen HRM system maturity in order to build sustainable resilience in disruption-prone industries.

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INTRODUCTION

The textile and apparel sector of Pakistan is the most strategically significant manufacturing section in the country. It is export-driven, big and significant to the GDP - approximately 8.5 percent of the entire economy and significant portion of the industrial production (Board of

Investment Pakistan; International Growth Centre). The export statistics support the prevalence of the sector. According to the Pakistan Bureau of Statistics (PBS), the textile group made up 52.33 percent of total exports in Jul-Dec 2024 and 53.47 percent in Jul-Mar



2025. Due to the concentration of exports in textiles, any shock can readily transfer into macroeconomic distress, which has impacts on the foreign-exchange reserves, employment and the general industrial activity.

At the company level, the competition level depends on the human capital, including the labor in the shop-floor, the supervisors, and the quality and safety-sensitive positions. Apparel sector directly employ approximately 2 million workers and hence this sub-sector is among the most employment intensive sectors in Pakistan (International Growth Centre). However, consumers all over the world expect increased compliance, traceability, safety and social standards. Such expectations drive companies to more data-oriented, structured HR systems.

Organizations are increasing the pace of digitisation of HR processes across the world. Digital HRM is the application of digital technologies, including e-recruitment, e-learning, HR analytics, self-service portals, and integrated HR information systems, to enhance speed, transparency, and strategic value (Zhou et al., 2022). Meta-analyses conclude that digital HRM tends to positively affect performance, but the impact is context-dependent and relies on the quality of the implementation (Theres and Strohmeier, 2022). In industries with repeated shocks, such as the textile industry, digital HRM can enable resilience which is defined by the ISO guidelines as the capacity to absorb and respond within a dynamic environment without stopping to present the objectives (International Organization for Standardization, 2017). The ability of resilient firms to learn, reorganize resources, and remain in the turbulence is learned (International Organization for Standardization, 2017).

The textile industry has suffered continuous turmoil and instability in Pakistan despite its economic significance. The issues being experienced in the industry, according to industry reports, are operational pressures, particularly energy cost shocks and competitiveness pressures. An illustration is the All Pakistan Textile Mills Association (APTMA)

which claimed that electricity may occupy 30 to 40 percent of the conversion costs, and high tariffs have caused many textile companies in Punjab to shut down resulting in massive layoffs (APTMA, 2023). Uncompetitive energy pricing and fiscal pressures have also been threatened to cause job losses and closures in business press (Business Recorder, 2023).

Although textile companies have started using HR technologies, including HRIS, digitised attendance and payroll, compliance reporting tools, not all of them achieve the desired benefits of resilience. They tend to have disjointed digitalisation: disconnected modules, weak integration between HR processes, weak analytics, and inconsistent policies between locations. This brings about a digital performance paradox: the technology is available, and the results of resilience are not equal. This issue is acute in Pakistan due to the sensitivity to abrupt buyer demand, change in compliance, and disruption of supply chains, which is enhanced by the use of exports. The figures of PBS export concentration suggest that instability at the sector level may have a wider range of economic implications (Pakistan Bureau of Statistics, 2024, 2025). Therefore, the question on how and when Digital HRM becomes resilience is a challenge in the industry that is not limited to a single firm.

Digital HRM organization outcomes relationship is determined, but incomplete in four significant senses. To start with, macro-level reviews are based on the output of the HR efficiency, effectiveness, and overall organisational performance, but not resilience (Theres and Strohmeier, 2022; Zhou et al., 2022). The concept of resilience is conceptually different: resilience deals with continuity, adaptation, and recovery in case of disruption, but not with average performance in case of stability (International Organization for Standardization, 2017). Second, most of the research considers the implementation of HR technologies as intrinsically advantageous, which ignores differences in results depending on organisational factors, alignment, and context (Zhou et al., 2022). There may not be automatic



effects of the digital HRM, as it can be contingent on the embedding and routinisation of the technology. Third, the organisational capability to transform digital tools into coherent and strategic HR implementation is a crucial missing connection. HRM system maturity represents the presence of standardisation, integration, strategic alignment, measurement and continuous improvement of HR activities, which Digital HRM requires to operate as a capability and not a collection of a set of tools. This is in line with the scholarship which focuses on coherent, strong signals in HR systems (Bowen and Ostroff, 2004). In the absence of established HR systems, Digital HRM can hasten administration, but cannot enhance workforce flexibility, learning patterns, and coordination of reactions, which are important elements of resilience. And lastly, the textile industry in Pakistan, such as its concentration of exports (Pakistan Bureau of Statistics, 2024, 2025), intensive employment (International Growth Centre), and vulnerability to shocks (APTMA, 2023; Business Recorder, 2023) is a perfect place to learn about resilience. However, the majority of Digital HRM research is conducted in service-based, developed, or inter-industry samples that might not reflect the manufacturing-specific HR issues (shift work, compliance audits, and multisite standardisation). There is no sector- and country-specific testing to restrict theoretical generalisability and practical applicability to Pakistan. Thus we require a model that does not only describe the relationship between Digital HRM and resilience, but how- by mediating between HRM systems maturity, Digital HRM allows resilient performance in the face of disruption.

Specifically, this study aims to:

Examine the effect of Digital HRM on organizational resilience in Pakistan's textile sector.

Assess the effect of Digital HRM on HRM system maturity.

Determine the effect of HRM system maturity on organizational resilience.

Test HRM system maturity as a mediator in the relationship between Digital HRM and organizational resilience.

The research contributes to scholarship in digital HRM and resilience by connecting Digital HRM with resilience outcomes in terms of the capability-based mechanism of HRM system maturity. It responds to digital HRM research proposals that outcomes are a matter of context and implementation (Zhou et al., 2022) and fits the HR system theory that places system coherence and strength as an influence on organisational effects (Bowen and Ostroff, 2004). The implication, as far as textile managers are concerned, is obvious: resilience benefits become more probable when HR technologies are incorporated into the already developed systems, i.e., integrated processes, standardised policies, and measurement routines. The findings can inform firms to focus on HR integration and capability building instead of buying software due to the exposure of the sector to disruption and export concentration (Pakistan Bureau of Statistics, 2024, 2025; APTMA, 2023). Such insights are also useful to industry bodies and policymakers to design assistance to digital transformation that enhances HR capability maturity-particularly in export business that is sensitive to compliance.

2. Literature Review and Hypotheses

Dynamic Capabilities Theory (DCT) is a concept that describes how organisations feel, capture and rearrange resources in a bid to stay competitive in an environment characterized by turbulence (Teece, 2007; Teece et al., 1997). In contrast with resource-based explanations, which are always static, DCT places more emphasis on processes and capabilities that enable firms to be adaptable, renew, and maintain performance. Organisational resilience, which is the capacity to absorb a shock, adapt to change, and keep operating, fits well within this context, since resilience is considered to be the capacity of a firm to engage in re-configuring (Lengnick-Hall et al., 2011).



In HRM, DCT means that digital technologies in themselves are not dynamic capabilities. The integration of digital tools into established and integrated HR systems is a coordinated action, learning, and quick response (Teece, 2007). Consequently, this paper considers Digital HRM as an enabling input capability, HRM system maturity as a dynamic capability and organisational resilience as the adaptive outcome.

2.1. Digital HRM and Organizational Resilience
 Digital HRM is beneficial to organisations in terms of sensing capability because it provides real-time information on the workforce, predictive analytics, and open communication channels. Digital platforms can be used to track the availability, skills, and performance trends among the employees and identify the emerging threats and opportunities more quickly. They also aid quick coordination and decision-making, which is needed in the time of disturbances. These characteristics facilitate ongoing re-configuration of human resources, which is an element of resilience.

Empirical studies also indicate that digital HR practices enhance organisational responsiveness, agility, and adaptability which are major components of resilience. The meta-analytic data indicates that Digital HRM has a positive impact on organisational performance, especially in dynamic settings, but the magnitude of the effects depends on the quality of implementation (Theres & Strohmeier, 2022). Other researchers conclude that e-HRM improves the speed of communication, continuity of processes, and flexibility of the workforce, which helps to become resilient in the face of uncertainty (Zhou et al., 2022). Digital HR tools have been associated with enhanced crisis response and HR business continuity in industries that are susceptible to disruption (Lengnick-Hall et al., 2011).

H1: Digital HRM is positively related to organizational resilience.

2.2. Digital HRM and HRM System Maturity

DCT assumes that dynamic capabilities are acquired in a learning process, routinisation, and process integration (Teece et al., 1997). Digital HRM functions as an accelerator, standardisation of workflows, integration of HR functions, and making decisions based on data. The frequent utilization of digital HR systems promotes integration of the HR practices such as recruitment, training, performance management, promoting maturity of HRM systems. In this way, Digital HRM leads to a coherent and strategy-oriented HR system, which is a prerequisite in the development of dynamic capabilities.

Empirical literature demonstrates that companies that embrace the use of digital HR technologies are more likely to have more formalised, standardised, and strategic HR systems (Bondarouk et al., 2017; Zhou et al., 2022). There is evidence that the adoption of digital HR enhances consistency of HR processes, quality of data, as well as strategic orientation, which are fundamental aspects of HRM system maturity. It has also been found that through digital HRM, organisational learning in HR functions is accelerated, which allows the organisation to keep improving and sophisticating its systems (Theres & Strohmeier, 2022).

H2: Digital HRM is positively related to HRM system maturity.

2.3. HRM System Maturity and Organizational Resilience

Mature organisational systems in DCT are reconfigurable capabilities that allow firms to effectively react to environmental shocks. HRM system maturity is the extent to which the HR practices are internally consistent, strategically aligned, and integrated in normal operations. This maturity improves coordination, flexibility, and learning that enable organisations to redeploy human resources within a short period, stability in workforce, and operations in crisis, which are fundamental resilience characteristics.

The earlier studies show that well-established, integrated HR systems are a factor in organisational flexibility and long-term



performance in the face of uncertainty (Bowen and Ostroff, 2004; Lengnick-Hall et al., 2011). Research indicates that the mature HR systems enhance clarity in roles, trust, and commitment of the employees, which is important in times of disruption. Moreover, well-integrated and coordinated HR systems are also associated with improved recovery and adaptation performance in turbulent environments (Duchek, 2020). H3: HRM system maturity is positively related to organizational resilience.

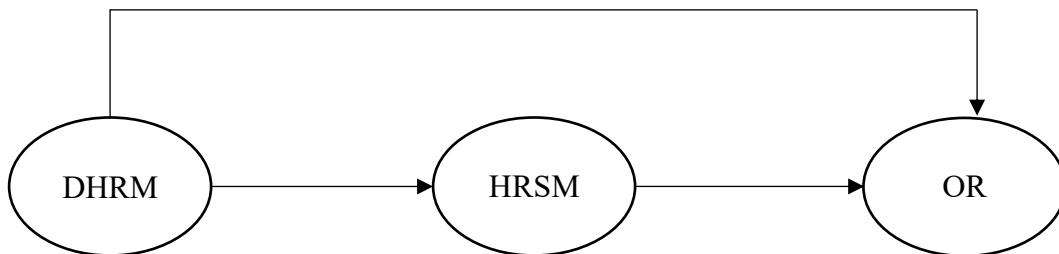
2.4. The Mediating Role of HRM System Maturity

According to DCT, resources do not yield results directly; results come about in the form of dynamic capabilities that combine and reorganise such resources. Digital HRM is one of the technological resources in this study that improves the availability of information and increases efficiency in processes. Nevertheless, digital tools can be disjointed and poorly used

without a developed HRM system. HRM system maturity is the dynamic capability that converts the digital inputs to the coordinated HR activity, learning practices, and responsive actions- hence organisational resilience.

There is empirical evidence that the advantages Digital HRM has are contingent on organisational condition and integration of systems (Zhou et al., 2022). It is regularly noted in the studies that technology implementation produces more powerful results when it is provided as part of consistent and strategically integrated HR systems (Bondarouk et al., 2017; Theres and Strohmeier, 2022). Resilience studies also indicate that the capabilities at system-level, as opposed to individual tools, are the ones that contribute to sustained adaptive performance (Duchek, 2020; Lengnick-Hall et al., 2011).

H4: HRM system maturity mediates the relationship between Digital HRM and organizational resilience.



3. Research Methodology

The paper employed a quantitative, cross-sectional study that investigated the connections between Digital Human Resource Management (Digital HRM), HRM system maturity and organisational resilience in the Pakistani textile industry. A survey methodology was selected because it is appropriate in testing theory and mediation between latent constructs. The target group included textile companies in Pakistan since the industry has economic significance and faces turbulence. A total of four hundred ten firms took part. Likely to enhance representativeness, probability sampling methods were used. The organisation was the unit of

analysis; HR managers, directors, and professionals in the sampled firms were the unit of observation since they are considered the best key informants because they were directly engaged in the HR systems, digital practices, and strategic workforce decisions.

The collection of data was done through a questionnaire that was structured and self-administered. Since the study is geographically dispersed and the survey is limited to access, the online method was chosen, and the survey links were shared on WhatsApp, email, and professional social media. The academic purpose was explained to the respondents, they were assured of confidentiality, and it was made clear to them that their participation was not



mandatory. Reminders were also sent after some time to enhance response rates. The online collection ensured that the respondents in the various regions were reached in time and error in data entry was reduced. Ethical concerns were properly handled: the participation was free of charge, anonymity was maintained, and the data were utilized with academic purposes only, no information that may identify a respondent was gathered, and the respondent could pull out at any point.

Constructs were all measured in validated scales which were modified where appropriate. The answers were based on a five-point Likert scale of disagree (1) to strongly agree (5). Digital HRM was measured with six items from Hu and Lan (2024), HR system maturity with nine items based on Kearns and Woppard (2018) as applied by Botelho et al. (2023), and organizational resilience with four items from Bode and Macdonald (2017) and Ji et al. (2020), validated by Xue and Wang (2024).

Data analysis was done in SPSS to do preliminary analysis and in PROCESS Macro (Version 4.0) to test mediation. To begin with, descriptive statistics were used to discuss central tendencies and dispersion. Measurement quality was then measured using reliability and validity analyses. Cronbach alpha was applied in internal consistency reliability and average variance

extracted (AVE) and factor loading were applied in convergent validity according to the standards. Thereafter, the direct relations between Digital HRM, HRM system maturity, and organisational resilience were tested using regression analysis. Lastly, the mediation was analyzed through PROCESS Model 4, and a bootstrapping of 5,000 resamples to obtain bias-corrected confidence intervals was done.

4. Findings and Discussion

4.1. Descriptive Statistics

Table 2 displays correlations and descriptive statistics. Digital HRM mean = 3.62 (SD 0.64), HRM system maturity mean = 3.71 (SD 0.59), organisational resilience mean = 3.68 (SD 0.61). The standard deviations are small, which means that there is moderation in the variability. Correlations: Digital HRM has a positive relationship with the maturity of HRM system ($r = 0.45$, $p < 0.001$) and organisational resilience ($r = 0.38$, $p < 0.001$). There is a strong correlation between organisational resilience and HRM system maturity ($r = 0.41$, $p < 0.001$). These strong positive correlations confirm the hypothesised associations and indicate that the more developed digital HRM and mature HR systems correlate with the resilience.

Table-2: Descriptive Statistics

Variable	Mean	SD	DHRM	HRSM	OR
DHRM	3.62	0.64	1		
HRSM	3.71	0.59	0.45***	1	
OR	3.68	0.61	0.38***	0.41***	1

4.2. Reliability and Validity Analysis

The outcome of the measurement model evaluation with respect to indicator reliability, internal consistency reliability, and convergent validity of Digital HRM (DHRM), HRM System Maturity (HRSM), and Organizational resilience (OR) is provided in Table 3. The reliability of indicators was initially assessed using the standardized factor loading. The loading of all the items of the three constructs is above the

recommended minimum of 0.70 and this means that each of the items has a significant proportion of variance with its underlying construct (Hair et al., 2019). In particular, factor loading of DHRM and HRSM varies between 0.71 – 0.82 and 0.75 – 0.80, respectively, and the measurement items are good strong and reliable indicators of their corresponding latent variables. Cronbach alpha was used to measure internal consistency reliability; it is one of the most



acceptable measures of reliability in social science research (Nunnally and Bernstein, 1994). The alpha values of DHRM (0.82), HRSM (0.88) and OR (0.84) are all greater than the recommended alpha cutoff of 0.70 which implies that there is a high degree of internal consistency among items within each construct. According to these findings, the items are always used to measure the same concept and the constructs are valid to be analyzed further (Hair et al., 2019).

The Average Variance Extracted (AVE) criterion was used to test convergent validity. In accordance with the suggestions of Fornell and Larcker (1981), the values of AVE should be greater than 0.50 in order to ascertain that a construct accounts over half of the indicators

variance. The AVE values of DHRM (0.57), HRSM (0.52), and OR (0.60) exceed this value, which is a very good indicator of convergent validity. It means that the indicators of both constructs overlap effectively and are sufficient to represent the target latent variables.

On the whole, the findings in Table 3 indicate that the measurement model meets the requirements of established criteria of the reliability of the indicator, internal consistency reliability, and convergent validity. As a result, the constructs that have been used in this study are psychometrically sound, which makes them worth using in the further analysis of the structural model and testing the hypothesis.

Table-3: Reliability and Validity Analysis

Construct	Item	Factor Loading	Cronbach's α	AVE
DHRM	DHRM1	0.78	0.82	0.57
	DHRM2	0.74		
	DHRM3	0.79		
	DHRM4	0.71		
	DHRM5	0.76		
	DHRM6	0.73		
HRSM	HRSM1	0.75	0.88	0.52
	HRSM2	0.72		
	HRSM3	0.78		
	HRSM4	0.70		
	HRSM5	0.76		
	HRSM6	0.74		
	HRSM7	0.71		
	HRSM8	0.77		
	HRSM9	0.73		
OR	OR1	0.80	0.84	0.60
	OR2	0.77		
	OR3	0.75		
	OR4	0.78		

4.3. Regression Results

Table 4 shows the regression findings of the direct relationships between Digital HRM (DHRM), HRM System Maturity (HRSM), and Organizational Resilience (OR). In general, the findings are a good empirical evidence of the proposed direct paths and are consistent with the

theoretical implications of the Dynamic Capabilities Theory.

The findings show that Digital HRM positively and significantly influences organizational resilience ($\beta = 0.38$, $SE = 0.07$, $t = 5.43$, $p < .001$). The value of R^2 is 0.14, which implies that Digital HRM is the sole predictor of



organizational resilience variance of 14 percent. The implication of this observation is that organizations that have more digital HR practices, i.e., HR analytics, digital communication platforms, and integrated HR systems are more likely to foresee disruptions, keep the workforce coordinated, and continue to operate under the conditions of uncertainty. Regarding the DCT approach, Digital HRM also improves the sensing and seizing capabilities of an organization through real-time access of information about the workforce and accelerated decision-making (Teece, 2007). This finding has been supported empirically by previous literature that found that digital HR practices enhance organizational agility, responsiveness, and adaptive capacity (Lengnick-Hall et al., 2011; Theres and Strohmeier, 2022). These abilities are especially important in disruption prone settings, like the textile industry, where companies need to maintain a constant dynamism in the deployment of labor, compliance practices and routine operations.

Digital HRM to HRM System Maturity is a positive and very important relationship ($\beta = 0.45$, $SE = 0.06$, $t = 7.50$, $p < .001$) with an R^2 of 0.20. This shows that Digital HRM accounts 20% of the variation in HRM system maturity and it is important to note that digitalization is involved in the formation of more organized, integrated, and strategically oriented HR systems. In theory, the DCT elucidates that the dynamic capabilities are developed as a result of repetition, learning and routinization of the processes (Teece et al., 1997). The digital HRM supports this process through standardization of the HR workflow, better quality of data, and even cross-functional integration of HR systems. This interpretation is supported by empirical evidence because the studies indicate that organizations that have embraced digital HR technologies are more likely to have more coherent and mature HR systems in the long-term (Bondarouk et al., 2017; Zhou et al., 2022). Digital HRM seems to serve as an initiator of HR system development in the context of the textile industry of Pakistan

where HR practices tend to be disjointed across units and locations.

The findings also indicate that the maturity of HRM systems has a positive and a significant influence on organizational resilience ($\beta = 0.41$, $SE = 0.08$, $t = 5.13$, $p < .001$) and contributes to 27 percent of the variance in the resilience outcomes ($R^2 = 0.27$). This comparatively increased explanatory power highlights the key aspect of mature HR systems in promoting resilience. On a DCT perspective, HRM system maturity is an organizational capability that can be reconfigured to allow firms to match human capital to strategic requirements in dynamic environments. Mature HR systems lead to an increase in the clarity of roles, coordination, and trust, which are vital in ensuring the stability and flexibility of the workforce in case of crisis. The discovery is consistent with previous studies that identify that coherent and robust HR systems facilitate organizational adaptation and recovery (Bowen and Ostroff, 2004; Duchek, 2020). Additionally, the strategic HRM studies indicate that the capabilities of mobilizing and redeploying the human resources are facilitated by well-integrated HR practices so that organizations manage to respond to the environmental shocks effectively (Lengnick-Hall et al., 2011).

Cumulatively, the findings of the regression analysis are very strong evidence in favor of the direct impact of the hypothesized effects of this research. Although the direct impact of Digital HRM is to improve the resilience of an organization, it has a relatively greater impact on the maturity of HRM system which also has significant impact on the resilience. This trend is aligned with Dynamic Capabilities Theory according to which technological resources have a major contribution to the performance results in terms of higher-order organizational capabilities and not only direct effects (Teece, 2007). These observations indicate, that especially in turbulent industries like the textiles, resilience is not assured by simple adoption of digital HRs but through the evolution of mature HRs systems



that integrate digital tools in the coordinated and

dynamic organizational practices.

Table-4: Regression Results for Direct Paths

Path	Beta (β)	SE	t-stat	PAKISTAN-value	R-square
DHRM → OR	0.38	0.07	5.43	0.000	0.14
DHRM → HRSM	0.45	0.06	7.50	0.000	0.20
HRSM → OR	0.41	0.08	5.13	0.000	0.27

The findings of the mediation analysis on the role of HRM System Maturity (HRSM) on the relationship between Digital HRM (DHRM) and Organizational Resilience (OR) are reported in Table 5 and Table 6. Collectively, these results give a solid empirical evidence of the hypothesized mediating mechanism and explain the manner in which Digital HRM is transformed into strong organizational outcomes. Table 5 indicates that the direct impact of Digital HRM on organizational resilience is still positive and significant even with the addition of HRM system maturity to the model (Effect = 0.20, SE = 0.06, t = 3.33, p = .001). The strong effect of this is proved by the fact that the 95 percent confidence interval (LLCI = 0.08, ULCI = 0.32) does not cover 0. Nevertheless, the direct effect is significantly smaller when it is controlled by the HRM system maturity compared to the direct effect which is estimated in the main regression model (β = 0.38). This lessening implies that a significant part of the effect of Digital HRM on organizational resilience works via HRM system maturity. In terms of the Dynamic Capabilities Theory, this finding indicates that although Digital HRM has a direct positive effect on resilience through the improvement of information flow and the speed of response, the full effect is achieved once it is integrated into established HR systems that coordinate and routinize adaptation responses (Teece, 2007).

Table 6 shows the bootstrapped indirect impact of Digital HRM on organizational resilience via an HRM system maturity. The findings indicate that there is a significant indirect effect (Effect = 0.18, BootSE = 0.04), and the bias-corrected bootstrapped confidence interval (BootLLCI = 0.11, BootULCI = 0.27) does not cover the zero value. This proves that the relationship between

Digital HRM and organizational resilience is greatly mediated through HRM system maturity. The fact that there is a substantial direct effect and a substantial indirect effect is an indication of a partial mediation. This conclusion is very close to that of DCT which assumes that resources like digital technologies have more effects on the results of higher-order organizational capability, but also some direct ones (Teece et al., 1997). HRM system maturity is one of such dynamic capabilities in the current study, where it allows organizations to integrate, reconfigure, and use digital HR tools to create resilience.

The findings of the mediation support the idea that Digital HRM cannot help to explain the organizational resilience entirely. Rather, resilience is created through the integration of digital HR practices with mature HR systems that have alignment, integration and continuous improvement. This observation confirms the previous studies in HRM which have stressed that HR systems in organizations are not a single practice that leads to organizational performance but rather a coherent system (Bowen and Ostroff, 2004). These findings are empirically consistent with the literature regarding the performance impacts of digital HRM that organizational context and system-level capabilities play a critical role (Bondarouk et al., 2017; Zhou et al., 2022). Moreover, the literature on resilience emphasizes that the adaptive capacity lies within organizational routines and mechanisms of learning as opposed to individual technological devices (Duchek, 2020; Lengnick-Hall et al., 2011). The high intervening nature of HRM system maturity thus explains the process by which Digital HRM leads to resilience, especially in disruptive-prone environment. All of the



mediation findings indicate that HRM system maturity is a key mechanism of translation between Digital HRM and organizational resilience. This observation is particularly applicable to the labor-intensive and export-oriented industries like textiles where digital

investments in HR can be ineffective in providing resilience benefits in case of a fragmented or feebly aligned HR processes. The results indicate that organizations that aim to be resilient should focus on developing well-developed HR systems and digitalization processes.

Table-5: Mediation Results - Direct Effect

Effect	SE	t	p	LLCI	ULCI
0.20	0.06	3.33	0.001	0.08	0.32

Tale-6: Mediation Results - Indirect effect

Mediator	Effect	BootSE	BootLLCI	BootULCI
HRSM	0.18	0.04	0.11	0.27

5. Conclusion

The aim of the research was to explore the role of Digital Human Resource Management (Digital HRM) and organizational resilience in the textile industry of Pakistan, with the specific focus on the mediating impact of the maturity of the HRM system. Based on the Dynamic Capabilities Theory, the results of the findings are strong empirical proof that Digital HRM positively and negatively influences organizational resilience by developing mature HRM systems. The findings indicate that the effect of Digital HRM on resilience in the organization is positive, which implies that digital HR practices can make organizations better able to react to turbulence in the environment. More significantly, the results show that the maturity of HRM systems partially mediates the relationship meaning that the resilience-enhancing potential of Digital HRM is already largely achieved in case digital tools are integrated in coherent and integrated HR systems that are strategically aligned. This proves that digital technologies themselves are not enough but it is the institutionalization of the digital technologies within the organizational processes and routines that make them valuable. Comprehensively, the research highlights that the resilience in the disruption-prone sectors is not a byproduct of digitalization but a capability-based deliverable that arises because of the interplay between the digital resources and developed organizational structures.

5.1. Theoretical Implications

The research has a number of valuable theoretical implications on the field of literature on HRM, digitalization, and organizational resilience. In the first place, the research applies Dynamic Capabilities Theory to the sphere of Digital HRM by proving empirically that the HR-related digital technologies are not dynamic capabilities but enable resources. In line with DCT, the results indicate that Digital HRM also leads to resilience by means of the HRM system maturity that is the higher-order capacity to integrate HRM practices, reconfigure and routinize them (Teece, 2007; Teece et al., 1997). This elucidates a significant theoretical difference that is omitted in digital HRM studies. Second, the research contributes to the organizational resilience theory, as it recognizes the HRM system maturity as a key microfoundation of resilience. Although previous studies have put leadership, culture, and strategy as the factors that produce resilience (Duchek, 2020; Lengnick-Hall et al., 2011), this study emphasizes the impact of the HR system-level capabilities to stimulate adaptation and recovery. The study addresses the need to provide more detailed explanations of how resilience can be developed within organizations by empirically verifying that HRM system maturity is a mediating mechanism. Third, the study adds to literature on e-HRM and Digital HRM by resolving the problem that has been long-



standing that the results of digital HR depend on the organizational setting and quality of implementation (Bondarouk et al., 2017; Zhou et al., 2022). The study has modeled HRM system maturity explicitly and hence has offered a conceptually based explanation of the mixed results in the earlier digital HRM studies. Lastly, the research has a contextual addition as it concentrates on the textile industry in Pakistan-a labour-heavy, export-reliant and disruption-sensitive sector that has been relatively under-researched in both HRM and resilience literature. The study can improve the extraneous validity of Digital HRM and resilience theories in new economies by showing the relevance of DCT in this setting.

5.2. Managerial Implications

The research results of this study have a number of practical implications on the managers and practitioners, especially in the manufacturing and export-driven industries. To begin with, managers need to appreciate that investing in Digital HRM is just but not enough in building organizational resilience. Although digital tools make information more accessible and faster, their resiliency advantages can be optimized only with well-developed HR systems. Integration, standardization, and strategic alignment of HR practices as well as digitalization initiatives should thus be given priority by the managers. Second, HR leaders need to emphasize on building maturity of HRM systems through consistency in recruitment, training, performance management and reward systems. Mature systems allow more explicit role expectations, accelerate redeployment of workforce and employee trust which is critical in the times of disruption (Bowen and Ostroff, 2004). Third, Digital HRM should be deployed by organizations working in unstable environments to reinforce learning and reconfiguration processes, including workforce analytics to organize skills, digital training to quickly upskill employees, and integrated HR dashboards to make crisis decisions. The practices promote the dynamic capabilities of the organization through the provision of continuous adaptation (Teece, 2007). Lastly, in the case of

companies in the textile industry and other industries that are labor-intensive, the results indicate that resilience policies must be integrated into HR transformation agendas. This process can be facilitated by policymakers and industry associations who should encourage digital HR standards, HR capability development programs and system-level HR audits instead of technology adoption.

5.3. Limitations and Future Research

Although this study has its theoretical and empirical contribution, it has a number of limitations that need to be known even though it presents future research opportunities. To begin with, the research design used in this study was cross-sectional research design and this does not allow any robust causal inferences to be made on Digital HRM, HRM system maturity, and organizational resilience. Even though the proposed relationships have their foundations in the Dynamic Capabilities Theory and are backed by a solid statistical evidence, future research can adopt longitudinal designs to understand how digital HR initiatives and HRM system maturity can change over time and how it can lead to resilience in the various stages of disruption. Second, self-reported survey data were used as a source of data collection through the survey conducted on HR managers, directors, and HR professionals. Although these respondents are the suitable key informants, as they are the ones in a strategic position in the HR decision making, there is a concern that the use of one respondent per firm might also produce issues of common method bias and perceptual subjectivity. The upcoming studies may overcome this weakness by employing multi-source information, i.e., the combination of HR manager answers with the operational performance indicators or the views of line managers and employees. Third, the research was only conducted in the textile industry in Pakistan, which increases the contextual relevance yet restricts the transferability of the results to other industries or countries. Further study may replicate the model to other manufacturing industries or service



sectors or other emerging and developed economies to provide the strength of the relationships to test the strength and the boundary conditions of the proposed relationships. Fourth, the HRM system maturity was studied as one of the mediating factors but this research did not investigate the existence of any moderating factors which could affect the success of Digital HRM. The future research would focus on moderators like organizational culture, leadership style, firm size, technological readiness or environmental turbulence to give a more refined picture of when Digital HRM adds most value to resilience. Lastly, further studies would be able to expand the existing model to include other results of Digital HRM and HRM system maturity, including employee well-being, innovation capability, sustainability performance, or compliance effectiveness. Qualitative or mixed-method designs can also deliver more information on the micro-processes by which HRM system maturity facilitates organizations to reorganize human capital in response to disruption.

REFERENCES

All Pakistan Textile Mills Association. (2023). *Industry updates on energy costs and operational challenges in Pakistan's textile sector*. <https://aptma.org.pk>

Board of Investment Pakistan. (n.d.). Textile. Government of Pakistan. <https://invest.gov.pk/textile>

Bondarouk, T., Parry, E., & Furtmueller, E. (2017). Electronic HRM: Four decades of research on adoption and consequences. *The International Journal of Human Resource Management*, 28(1), 98–131. <https://doi.org/10.1080/09585192.2016.1245672>

Bowen, D. E., & Ostroff, C. (2004). Understanding HRM-firm performance linkages: The role of the “strength” of the HRM system. *Academy of Management Review*, 29(2), 203–221. <https://doi.org/10.5465/amr.2004.12736076>

Business Recorder. (2023, June 13). APTMA's North Zone sends out an SOS. <https://www.brecorder.com>

Duchek, S. (2020). Organizational resilience: A capability-based conceptualization. *Business Research*, 13(1), 215–246. <https://doi.org/10.1007/s40685-019-0085-7>

Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18(1), 39–50. <https://doi.org/10.1177/002224378101800104>

Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2019). *A primer on partial least squares structural equation modeling (PLS-SEM)* (2nd ed.). Sage Publications.

Hayes, A. F. (2018). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach* (2nd ed.). Guilford Press.

International Growth Centre. (n.d.). *Phase I research on the garments industry in Pakistan*. <https://www.theigc.org>

International Organization for Standardization. (2017). ISO 22316:2017: Security and resilience—Organizational resilience—Principles and attributes. ISO. <https://www.iso.org/standard/50053.html>

Lengnick-Hall, C. A., Beck, T. E., & Lengnick-Hall, M. L. (2011). Developing a capacity for organizational resilience through strategic human resource management. *Human Resource Management Review*, 21(3), 243–255. <https://doi.org/10.1016/j.hrmr.2010.07.001>

Nunnally, J. C., & Bernstein, I. H. (1994). *Psychometric theory* (3rd ed.). McGraw-Hill.

Pakistan Bureau of Statistics. (2024). *Quarterly review of foreign trade: October–December 2024*. Government of Pakistan. <https://www.pbs.gov.pk>



Pakistan Bureau of Statistics. (2025). *Quarterly review of foreign trade: January–March 2025*. Government of Pakistan. <https://www.pbs.gov.pk>

Sekaran, U., & Bougie, R. (2016). *Research methods for business: A skill-building approach* (7th ed.). Wiley.

Teece, D. J. (2007). Explicating dynamic capabilities: The nature and microfoundations of (sustainable) enterprise performance. *Strategic Management Journal*, 28(13), 1319–1350. <https://doi.org/10.1002/smj.640>

Teece, D. J., Pisano, G., & Shuen, A. (1997). Dynamic capabilities and strategic management. *Strategic Management Journal*, 18(7), 509–533. [https://doi.org/10.1002/\(SICI\)1097-0266\(199708\)18:7<509::AID-SMJ882>3.0.CO;2-Z](https://doi.org/10.1002/(SICI)1097-0266(199708)18:7<509::AID-SMJ882>3.0.CO;2-Z)

Theres, E., & Strohmeier, S. (2022). Performance consequences of digital HRM: A meta-analysis. *The International Journal of Human Resource Management*, 33(14), 2734–2768. <https://doi.org/10.1080/09585192.2021.1953930>

Zhou, Y., Cheng, Y., Zou, Y., & Liu, G. (2022). e-HRM: Antecedents, consequences, and cross-national moderators: A meta-analytic review. *Human Resource Management Review*, 32(4), Article 100862. <https://doi.org/10.1016/j.hrmr.2021.100862>

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