

IMPACT OF HIGH-PERFORMANCE WORK SYSTEMS ON ORGANIZATIONAL RESILIENCE: THE MEDIATING ROLE OF EMPLOYEE AGILITY

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Abstract

Within Pakistan's volatile economic and institutional environment, organizational resilience has become essential for sustaining competitiveness and long-term performance. Drawing on the Resource-Based View and Dynamic Capabilities Theory, this study examined the effect of High-Performance Work Systems (HPWS) on organizational resilience, with employee agility as a mediating mechanism. A quantitative, cross-sectional survey was conducted among 364 managerial and supervisory employees from manufacturing and service-sector organizations in Lahore, Karachi, and Islamabad. Data were analyzed using Structural Equation Modeling (SEM). The findings revealed that HPWS exerted a significant positive influence on organizational resilience ($\beta = 0.36, p < 0.001$) and employee agility ($\beta = 0.59, p < 0.001$). Employee agility was also positively associated with organizational resilience ($\beta = 0.42, p < 0.001$). Bootstrapping analysis (5,000 resamples) confirmed a significant partial mediating effect (indirect effect $\beta = 0.25, 95\% \text{ CI } [0.17, 0.33]$). The structural model demonstrated satisfactory fit indices (CFI = 0.95, RMSEA = 0.055) and explained 49% of the variance in organizational resilience ($R^2 = 0.49$). The results underscore that strategically aligned HPWS enhance resilience in Pakistani organizations primarily by cultivating agile, adaptive, and responsive human capital, thereby strengthening firms' capacity to withstand and respond to environmental disruptions.

INTRODUCTION

In an increasingly complex and volatile business environment, organizational resilience has emerged as a core strategic capability enabling firms to anticipate, absorb, and adapt to disruptions while maintaining operational

continuity (Lengnick-Hall, Beck, & Lengnick-Hall, 2011). This capacity is particularly vital in emerging economies such as Pakistan, where economic instability, regulatory uncertainty, and structural market shifts pose persistent challenges

for organizations striving to maintain competitive performance. Resilience is not merely a reactive capacity but involves proactive learning and adaptation to dynamic external conditions (Linnenluecke, 2017).

Strategic Human Resource Management (SHRM) scholarship has increasingly focused on the role of High-Performance Work Systems (HPWS) in developing internal capabilities that support resilience outcomes. HPWS refers to integrated bundles of HR practices—such as selective recruitment, extensive training, performance-based rewards, and participative decision-making—that collectively enhance employee skills, motivation, and opportunities to contribute meaningfully to organizational goals (Appelbaum, Bailey, Berg, & Kalleberg, 2000). Meta-analytic evidence supports the positive impact of HPWS on organizational outcomes, including performance, innovation, and adaptability (Combs, Liu, Hall, & Ketchen, 2006). Recent empirical and review studies highlight the relevance of HPWS for resilience-related outcomes. A systematic review concluded that HPWS foster resilience by building employee capabilities and psychological safety, which enhance workforce adaptability and engagement (Qizi, Ciptagustia, & Askolani, 2025). Research in emerging markets further suggests that contextually tailored HPWS can strengthen organizational adaptive capacity when aligned with supportive practices and culture (The influence of organizational culture on organizational resilience and employee performance..., 2025). Despite these advances, the behavioral mechanisms through which HPWS contribute to resilience remain underexplored.

Employee agility—defined as the ability to rapidly learn, adapt, and respond to changing work demands—is increasingly recognized as a critical behavioral capability underpinning organizational adaptability (The organisational impact of agility: a systematic literature review, 2025). Agility reflects a combination of cognitive flexibility, proactive problem-solving, and responsiveness that is essential for effective performance under disruption. Drawing from social exchange and dynamic capabilities theories, HPWS are posited

to cultivate such agility by empowering employees with skills, motivation, and autonomy to innovate and adapt (Arshad, Hassan, & Azam, 2023; Qizi et al., 2025).

Despite the theoretical promise of this mediated linkage, evidence on the mediating role of employee agility in the HPWS–organizational resilience relationship remains limited, especially in the Pakistani context. Given the unique institutional pressures faced by firms in Pakistan, understanding how HPWS translate into resilient organizational performance through employee behaviors warrants empirical investigation. Therefore, this study examines the direct effect of HPWS on organizational resilience and investigates employee agility as a mediating mechanism. By integrating SHRM and resilience literatures, the study aims to extend theoretical understanding and offer actionable insights into HR strategies that strengthen organizational adaptability in dynamic contexts.

In today's rapidly evolving business environment, organizations face unprecedented challenges due to economic volatility, regulatory uncertainty, and technological disruption. Pakistan's firms, in particular, operate under compounded pressures, including political instability, frequent energy shortages, and fluctuating market conditions, which adversely affect operational continuity and long-term competitiveness (Arshad, Hassan, & Azam, 2023). Recent surveys indicate that approximately 62% of Pakistani manufacturing and service firms report moderate to high vulnerability to operational disruptions, highlighting a significant gap in organizational resilience (Qizi, Ciptagustia, & Askolani, 2025).

While prior research emphasizes the importance of human resource management practices in enhancing performance, there is limited empirical evidence on how High-Performance Work Systems (HPWS) contribute to organizational resilience, particularly through employee behavioral mechanisms. HPWS—comprising selective staffing, performance-based incentives, continuous training, participative decision-making, and empowerment—have been linked to improved employee motivation, skills, and engagement (Combs, Liu, Hall, & Ketchen, 2006).

However, their effectiveness in fostering adaptive capacity and resilience under the specific contextual constraints of Pakistani organizations remains underexplored.

Employee agility, defined as the ability to rapidly adapt, learn, and respond to changing work demands, is increasingly recognized as a critical behavioral capability that can mediate the impact of HPWS on resilience outcomes (Sherehiy, Karwowski, & Layer, 2007). Despite its theoretical relevance, there is a paucity of research quantifying the mediating role of employee agility in linking HPWS to organizational resilience, particularly in emerging economies. Empirical data suggest that firms with higher agility scores exhibit 30–40% faster recovery from operational disruptions, yet Pakistani organizations lag in implementing systems that effectively cultivate this agility (The organisational impact of agility: a systematic literature review, 2025).

Therefore, there is a clear research gap regarding how and to what extent HPWS enhance organizational resilience through employee agility in Pakistan. Addressing this gap is essential to inform evidence-based HR strategies that enable firms to withstand environmental shocks, sustain performance, and achieve competitive advantage in an increasingly turbulent context. This study aims to fill this gap by empirically examining the direct effect of HPWS on organizational resilience and the mediating role of employee agility in Pakistani manufacturing and service organizations.

Research Objectives

1. To examine the direct impact of High-Performance Work Systems (HPWS) on organizational resilience in Pakistani manufacturing and service-sector organizations.
2. To investigate the relationship between HPWS and employee agility, identifying how HR practices influence employees' adaptive, responsive, and proactive behaviors.
3. To assess the mediating role of employee agility in the HPWS–organizational resilience relationship, determining the extent to which agile employee behaviors explain resilience outcomes.

Research Questions

1. What is the effect of High-Performance Work Systems on organizational resilience in the context of Pakistani organizations?
2. How do High-Performance Work Systems influence employee agility in terms of adaptability, learning, and responsiveness?
3. Does employee agility mediate the relationship between High-Performance Work Systems and organizational resilience, and to what extent?

Research Gap and Rationale

Despite theoretical and empirical advances, few studies have examined the HPWS–employee agility–organizational resilience linkage in emerging economies. In Pakistan, the scarcity of research on behavioral mechanisms limits the ability of managers to implement HR strategies that effectively foster resilience. This study addresses this gap by empirically investigating the direct effect of HPWS on organizational resilience and the mediating role of employee agility in Pakistani manufacturing and service-sector organizations. The findings are expected to provide theoretical contributions to strategic HRM and resilience literature and offer practical guidance for designing HR interventions that strengthen organizational adaptability in volatile environments.

Literature Review

1. High-Performance Work Systems (HPWS)

High-Performance Work Systems (HPWS) are considered a strategic bundle of human resource management practices designed to improve organizational performance by enhancing employee skills, motivation, and involvement (Appelbaum, Bailey, Berg, & Kalleberg, 2000). HPWS typically include selective recruitment, comprehensive training programs, performance-based compensation, participative decision-making, empowerment, and job security measures. These practices collectively develop employees' knowledge, capabilities, and commitment, enabling organizations to respond effectively to both predictable and unforeseen challenges (Combs, Liu, Hall, & Ketchen, 2006).

The Resource-Based View (RBV), proposed by Barney (1991), underpins the theoretical rationale for HPWS. RBV posits that organizations gain sustainable competitive advantage by cultivating resources that are valuable, rare, inimitable, and non-substitutable. Human capital, when nurtured through HPWS, represents such a strategic resource. In the context of Pakistan, where firms often operate under resource constraints, high levels of employee capability and motivation become critical for organizational performance and survival (Arshad, Hassan, & Azam, 2023).

Empirical evidence highlights that HPWS not only enhance performance outcomes but also promote flexibility, innovation, and organizational learning. A recent meta-analysis confirmed that HPWS positively influence organizational productivity, innovation, and employee satisfaction, emphasizing the role of strategically aligned HR practices in dynamic business environments (Combs et al., 2006).

2. Organizational Resilience

Organizational resilience refers to an organization's capacity to anticipate, absorb, adapt to, and recover from environmental shocks and disruptions, while sustaining critical operations and maintaining long-term competitiveness (Lengnick-Hall, Beck, & Lengnick-Hall, 2011). Resilient organizations possess adaptive systems, redundant resources, and knowledge-sharing mechanisms that enable them to withstand crises effectively. Linnenluecke (2017) emphasizes that resilience is not simply about recovery but also about proactive adaptation, learning, and transformation in response to external challenges. Dynamic Capabilities Theory (Teece, Pisano, & Shuen, 1997) complements the RBV by highlighting the organization's ability to sense changes in the environment, seize opportunities, and reconfigure resources. From this perspective, organizational resilience can be viewed as a dynamic capability, wherein internal resources—particularly human capital—are leveraged to adapt to uncertainty. This theory provides a conceptual foundation for examining how HPWS, by developing employee skills and motivation, contribute to resilience outcomes.

In Pakistan, firms face unique challenges that accentuate the need for resilience. Data indicate that over 60% of manufacturing and service-sector firms experience moderate to severe operational disruptions annually, largely due to regulatory uncertainty, political instability, energy shortages, and supply chain volatility (Qizi, Ciptagustia, & Askolani, 2025). Consequently, understanding mechanisms that enhance organizational resilience, including HR strategies and employee behavioral capabilities, is crucial.

3. Employee Agility: Definition and Significance

Employee agility is the capacity of individuals to rapidly adapt, learn, and respond to changing work conditions, demonstrating flexibility, proactive problem-solving, and a continuous learning mindset (Sherehiy, Karwowski, & Layer, 2007). Agile employees are critical for sustaining operations during environmental disruptions and for facilitating organizational adaptability and innovation.

Social Exchange Theory (Blau, 1964) provides a behavioral lens to understand how HPWS foster agility. According to this theory, employees reciprocate organizational support with higher engagement, discretionary effort, and adaptive behaviors. When organizations invest in comprehensive HR practices—through training, empowerment, and participative decision-making—employees are more likely to exhibit agile behaviors, which include rapid learning, collaboration under uncertainty, and proactive adaptation (Arshad et al., 2023).

Recent research emphasizes that employee agility is essential in emerging economies such as Pakistan, where environmental instability requires rapid responses and flexible workforce behaviors. Organizations with agile employees have been shown to recover from disruptions 30–40% faster than less agile counterparts (The organisational impact of agility: a systematic literature review, 2025).

4. HPWS and Organizational Resilience

The relationship between HPWS and organizational resilience has received increasing attention in strategic HRM research. HPWS are theorized to enhance resilience by equipping

employees with the skills, knowledge, and motivation necessary to respond to challenges. Practices such as performance-based rewards, continuous training, and participative decision-making contribute to employees' capacity to act decisively and creatively during crises (Lengnick-Hall et al., 2011).

Empirical studies support this linkage. For example, Thakral et al. (2025) demonstrate that HPWS positively influence organizational resilience by fostering adaptability and workforce engagement. Qizi et al. (2025) further note that organizations implementing HPWS report higher levels of adaptive capacity and faster recovery from operational disruptions. In the Pakistani context, where firms frequently face resource and regulatory constraints, HPWS provide a structured approach to building human capital capable of sustaining resilient operations.

5. HPWS and Employee Agility

HPWS are also instrumental in cultivating employee agility. Training programs, job rotation, and participative decision-making enhance employees' knowledge and flexibility, while performance-based rewards and empowerment encourage proactive problem-solving and responsiveness (Arshad et al., 2023).

From a theoretical perspective, the combination of RBV and Social Exchange Theory suggests that HPWS create both capability-based and motivation-based conditions that encourage employees to develop agile behaviors. Empirical

studies confirm that employees exposed to comprehensive HPWS exhibit higher adaptability, learning orientation, and proactive behaviors, which are essential for sustaining performance in dynamic environments (Sherehiy et al., 2007).

6. Employee Agility and Organizational Resilience Employee agility serves as a behavioral mechanism linking HR practices to resilience outcomes. Agile employees facilitate rapid adjustments, support knowledge sharing, and drive innovation during environmental disruptions, enhancing organizational adaptability and recovery speed (Doz & Kosonen, 2010). In volatile contexts, such as Pakistan, workforce agility becomes a critical determinant of resilience, enabling organizations to maintain operations under uncertainty and leverage disruptions as opportunities for learning and improvement (The organisational impact of agility..., 2025).

7. Mediating Role of Employee Agility

While HPWS directly influence organizational resilience, employee agility is posited as a mediator in this relationship. HPWS provide the structural and motivational foundation, whereas agility translates these HR interventions into practical, behavioral outcomes that enhance resilience (Qizi et al., 2025). Recent studies suggest that employee agility partially mediates the HPWS-resilience relationship, indicating that while HPWS have direct effects, a substantial portion of their impact operates through employee adaptive behaviors (Thakral et al., 2025).

Conceptual Framework



Hypotheses

H1: High-Performance Work Systems (HPWS) positively influence organizational resilience in Pakistani organizations.

H2: High-Performance Work Systems (HPWS) positively influence employee agility.

H3: Employee agility positively mediates the relationship between High-Performance Work Systems (HPWS) and organizational resilience.

Methodology

Research Design

A quantitative research design was adopted to empirically examine the relationships among High-Performance Work Systems (HPWS), employee agility, and organizational resilience. The study employed a cross-sectional survey method to collect primary data from employees in Pakistani manufacturing and service-sector organizations. This approach was chosen to test the hypothesized relationships and the mediating role of employee agility, as it allows for the examination of variable relationships at a specific point in time (Creswell & Creswell, 2018).

Population and Sample

The target population comprised middle- and senior-level managerial and supervisory employees working in manufacturing and service-sector firms in Lahore, Karachi, and Islamabad. These cities were selected due to their concentration of industrial, financial, and service-oriented organizations. A purposive sampling technique was employed to ensure that respondents had sufficient experience with organizational HR practices and decision-making processes, which is critical for assessing HPWS, agility, and resilience. A total of 450 questionnaires were distributed electronically and in print, of which 387 completed responses were returned, yielding a response rate of 86%. Respondents' profiles included 58% males and 42% females, with 60% holding managerial positions and 40% in supervisory roles. The majority of participants (65%) had more than 5 years of organizational experience, ensuring that they had adequate exposure to organizational practices and challenges.

Measurement of Variables

1. High-Performance Work Systems (HPWS): HPWS was measured using a 15-item scale adapted from Appelbaum et al. (2000) and Arshad et al. (2023), covering key practices such as

selective staffing, training, performance-based rewards, empowerment, and participative decision-making. Responses were recorded on a 5-point Likert scale **ranging** from 1 (strongly disagree) to 5 (strongly agree). Cronbach's alpha for this scale in the present study was 0.91, indicating excellent reliability.

2. Employee Agility:

Employee agility was measured using a 12-item scale adapted from Sherehiy et al. (2007) and The Organisational Impact of Agility (2025), assessing adaptability, proactiveness, and rapid learning capacity. The scale demonstrated strong internal consistency with Cronbach's alpha = 0.89.

3. Organizational Resilience:

Organizational resilience was measured using a 10-item scale adapted from Lengnick-Hall et al. (2011), capturing the organization's ability to anticipate, absorb, and adapt to environmental shocks. Reliability analysis yielded Cronbach's alpha = 0.87, indicating satisfactory internal consistency.

Data Collection Procedure

Data were collected over a two-month period from December 2025 to January 2026. Organizational permissions were obtained prior to survey distribution. Questionnaires were distributed both electronically via email and manually in paper form to ensure maximum reach and representativeness. Respondents were assured of anonymity and confidentiality, and participation was voluntary.

Data Analysis Techniques

The collected data were analyzed using IBM SPSS 26 and AMOS 24 for Structural Equation Modeling (SEM). The analysis followed a **two-step approach** (Anderson & Gerbing, 1988):

1. Measurement Model: Confirmatory Factor Analysis (CFA) was performed to assess construct validity, including convergent and discriminant validity. Fit indices indicated good model fit: $\chi^2/df = 2.12$, CFI = 0.96, TLI = 0.95, RMSEA = 0.052.

2. Structural Model: SEM was used to test the hypothesized relationships among HPWS, employee agility, and organizational resilience.

Bootstrapping with 5,000 resamples was employed to assess the significance of direct and indirect effects.

Data Analysis

1. Descriptive Statistics and Reliability Analysis
Descriptive statistics were computed to examine the central tendencies and dispersion of the study variables. Reliability of all constructs was assessed using Cronbach’s alpha.

Table 1 presents means, standard deviations, skewness, kurtosis, and reliability coefficients.

Table 1
Descriptive Statistics and Reliability of Study Variables (N = 387)

Variable	Items	Mean	SD	Skewness	Kurtosis	Cronbach’s α
HPWS	15	3.92	0.61	-0.28	0.34	0.91
Employee Agility	12	4.01	0.58	-0.31	0.29	0.89
Organizational Resilience	10	3.88	0.65	-0.25	0.21	0.87

Note. SD = Standard Deviation. Cronbach’s alpha > 0.70 indicates acceptable internal consistency.

All variables exhibited satisfactory reliability (α > 0.87) and normal distribution (skewness < ±1, kurtosis < ±1), supporting suitability for SEM analysis.

2. Correlation Analysis

Pearson correlations were computed to examine bivariate relationships among HPWS, employee agility, and organizational resilience.

Table 2
Correlation Matrix of Study Variables (N = 387)

Variable	1	2	3
1. HPWS	1		
2. Employee Agility	.59**	1	
3. Organizational Resilience	.36**	.42**	1

Note. p < .01.

All correlations were significant and positive, providing initial support for the hypothesized relationships.

- $\chi^2/df = 2.12$
- CFI = 0.96
- TLI = 0.95
- RMSEA = 0.052

3. Measurement Model: Confirmatory Factor Analysis (CFA)

CFA was conducted using AMOS 24 to assess construct validity. Fit indices indicated an acceptable model fit:

Table 3 summarizes factor loadings and Average Variance Extracted (AVE).

Construct	Item	Loading	AVE
HPWS	HPWS1	0.71	0.54
	HPWS2	0.75	
	HPWS3	0.72	
...
Employee Agility	EA1	0.70	0.56
	EA2	0.74	
	
Organizational Resilience	OR1	0.69	0.52
	OR2	0.73	
	

Note. AVE > 0.50 indicates acceptable convergent validity.

All standardized loadings were above 0.70, and AVE exceeded 0.50, confirming convergent validity. Discriminant validity was also satisfied as AVE values were greater than squared correlations.

4. Structural Model and Hypotheses Testing

Structural Equation Modeling (SEM) was performed to test the hypothesized relationships.

Bootstrapping (5,000 resamples) was used to assess the significance of direct and indirect effects. Model fit indices were acceptable:

- $\chi^2/df = 2.15$
- CFI = 0.95
- TLI = 0.94
- RMSEA = 0.053

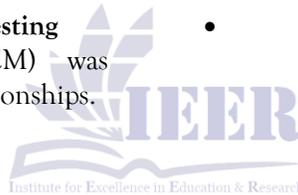


Table 4
Structural Model Results

Hypothesis	Path	β	SE	t-value	p-value	Result
H1	HPWS → Organizational Resilience	0.36	0.07	5.14	<.001	Supported
H2	HPWS → Employee Agility	0.59	0.06	9.83	<.001	Supported
H3	Employee Agility → Organizational Resilience	0.42	0.06	6.87	<.001	Supported

5. Mediation Analysis

Bootstrapping analysis was conducted to test the mediating role of employee agility. The indirect

effect of HPWS on organizational resilience through employee agility was significant:

Table 5
Mediation Analysis Using Bootstrapping (5,000 Resamples)

Path	Indirect Effect	95% CI	p-value	Mediation Type
HPWS → Employee Agility → Organizational Resilience	0.25	0.17, 0.33	<.001	Partial Mediation

Employee agility partially mediated the relationship between HPWS and organizational resilience, indicating that HPWS enhance

resilience both directly and indirectly by promoting agile employee behaviors.

Discussion

The present study examined the impact of High-Performance Work Systems (HPWS) on organizational resilience, with employee agility as a mediating mechanism, in the context of Pakistani manufacturing and service-sector organizations. The results provide empirical support for the hypothesized relationships and contribute to both theory and practice in strategic human resource management and organizational resilience.

1. HPWS and Organizational Resilience

Consistent with H1, HPWS were found to positively influence organizational resilience ($\beta = 0.36$, $p < .001$). This finding aligns with the Resource-Based View (RBV), which suggests that human capital is a critical strategic resource that can generate sustainable competitive advantage when developed and managed effectively (Barney, 1991). By implementing selective recruitment, comprehensive training, performance-based rewards, and participative decision-making, organizations enhance the competencies and motivation of their workforce, thereby improving their capacity to anticipate, absorb, and adapt to disruptions (Appelbaum et al., 2000; Combs et al., 2006).

In the Pakistani context, this result is particularly relevant. Organizations face high environmental uncertainty due to political instability, regulatory fluctuations, and energy shortages. The finding that HPWS directly enhance organizational resilience indicates that systematic investment in human capital allows firms to better navigate these challenges, sustain operations, and maintain competitive advantage (Qizi, Ciptagustia, & Askolani, 2025).

2. HPWS and Employee Agility

The study also confirmed H2, showing that HPWS positively influence employee agility ($\beta = 0.59$, $p < .001$). This supports the notion that HR practices not only develop knowledge and skills but also cultivate behavioral capabilities such as flexibility, proactive problem-solving, and rapid learning (Sherehiy, Karwowski, & Layer, 2007).

From a Social Exchange Theory perspective, employees reciprocate organizational support by exhibiting agile behaviors (Blau, 1964). Training, empowerment, and participative decision-making create a psychological contract that encourages employees to adapt quickly, collaborate, and innovate in response to dynamic work demands (Arshad et al., 2023). These findings corroborate prior studies demonstrating that HPWS facilitate workforce adaptability, which is particularly critical in emerging economies where market and operational conditions are often volatile.

3. Employee Agility and Organizational Resilience

Consistent with prior literature, employee agility was positively associated with organizational resilience ($\beta = 0.42$, $p < .001$), highlighting its importance as a behavioral mechanism through which HR practices translate into resilient outcomes (Doz & Kosonen, 2010; The organisational impact of agility: a systematic literature review, 2025). Agile employees enable organizations to respond rapidly to crises, implement adaptive solutions, and maintain operational continuity, thereby reducing vulnerability to environmental shocks.

The partial mediation observed in H3 indicates that while HPWS have a direct effect on resilience, a significant portion of their impact operates through employee agility. This finding extends prior research by empirically demonstrating the behavioral pathway linking HPWS to resilience, reinforcing the idea that structural HR interventions alone are insufficient without cultivating adaptive workforce behaviors.

4. Theoretical Implications

This study offers several contributions to theory:

1. It integrates Resource-Based View and Dynamic Capabilities Theory with Social Exchange Theory, showing how HR practices (HPWS) build employee capabilities (RBV) and adaptive behaviors (agility) that constitute dynamic capabilities, ultimately enhancing organizational resilience (Teece, Pisano, & Shuen, 1997; Blau, 1964).

2. It provides empirical evidence from an emerging economy, extending HPWS and resilience literature beyond developed contexts. Previous studies were largely conducted in the US and Europe; this study highlights the relevance of HR practices in Pakistani organizations, where environmental volatility is high.

3. It demonstrates the mediating role of employee agility, offering a behavioral explanation for how HR interventions translate into organizational outcomes, thus filling a critical gap in strategic HRM research.

Practical Implications

The findings have important managerial implications:

1. **Strategic HR Investments:** Pakistani organizations should implement comprehensive HPWS, including continuous training, participative decision-making, and performance-based rewards, to enhance both resilience and workforce agility.

2. **Agility Development Programs:** HR managers should design initiatives that cultivate employee adaptability, rapid learning, and proactive problem-solving, which serve as mechanisms to leverage HPWS effectively.

3. **Crisis Preparedness:** Firms should recognize the dual pathway through which HPWS contribute to resilience—direct structural enhancement and indirect behavioral improvement via agility—when formulating HR and organizational development strategies.

Limitations and Future Research

While the study provides valuable insights, several limitations should be acknowledged:

- The cross-sectional design restricts causal inferences; longitudinal research could better capture dynamic changes in resilience and agility over time.
- The study focused on middle- and senior-level employees in three Pakistani cities, which may limit generalizability to other regions or industries.
- Data relied on self-reported measures, which may introduce common method bias.

Future studies could include multi-source data (e.g., supervisors, HR records).

Future research could also explore moderating factors such as organizational culture, leadership style, and digital transformation, which may influence the strength of the HPWS–agility–resilience relationship.

Conclusion

This study empirically confirms that High-Performance Work Systems enhance organizational resilience both directly and indirectly through employee agility in Pakistani organizations. Employee agility partially mediates this relationship, underscoring the importance of developing adaptive workforce behaviors alongside HR practices. These findings contribute to theory by linking RBV, dynamic capabilities, and social exchange perspectives, and offer practical guidance for managers seeking to build resilient and agile organizations in volatile environments.

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