

Resilience in Human Resource Management : How Organizations Adapt to Uncertainty and Crisis

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Abstract: Organizational resilience has become a strategic necessity in increasingly volatile and uncertain environments. This study examines how strategic human resource management (HRM) practices specifically HR flexibility, leadership agility, and strategic workforce planning contribute to enhancing organizational resilience. The research problem lies in the fragmented understanding of how these HR components interact and under what conditions they effectively foster resilience. To address this, the study aims to develop a conceptual model integrating these three HRM dimensions, with employee engagement as a mediating variable and organizational culture as a moderating factor. A qualitative exploratory approach was applied through a structured literature review of 35 peer reviewed articles published between 2020 and 2024. Thematic content analysis was conducted using NVivo software to identify patterns and relationships among the variables. The findings reveal that HR flexibility supports operational adaptability, leadership agility enhances strategic responsiveness, and workforce planning ensures long term preparedness. Employee engagement amplifies the effectiveness of these HR strategies, while organizational culture determines the extent to which they translate into resilience outcomes. This integrative framework highlights the importance of aligning HR practices within a supportive cultural context. The study concludes that organizational resilience emerges not from isolated HR initiatives but from their synergistic interaction within a dynamic capability framework. These findings offer both theoretical contributions and practical implications for HR leaders seeking to strengthen resilience through human capital strategies.

Keywords: Dynamic Capabilities; Employee Engagement; HR Flexibility; Leadership Agility; Organizational Culture

1. Introduction

Organizational resilience has emerged as a pivotal concept in the contemporary management discourse, particularly within the scope of human resource management (HRM) [1]. Defined as an organization's ability to anticipate, prepare for, respond, and adapt to incremental changes and sudden disruptions to survive and prosper, resilience has gained critical attention amidst rising global uncertainties [2], [3]. The COVID-19 pandemic, supply chain breakdowns, and geopolitical tensions have further emphasized the need for resilience not only in operational systems but more crucially in human capital strategies [4]. In this context, HRM plays an essential role in fostering organizational resilience through adaptive policies, flexible structures, and proactive leadership [5], [6].

Several prior studies have approached organizational resilience from strategic, psychological, and systems perspectives [7], [8]. For example, Lengnick Hall et al. (2021) emphasized behavioral resilience, while Duchek (2020) proposed a dynamic capability framework integrating anticipation, coping, and adaptation phases [9], [10]. These studies contribute significantly to theory; however, many fail to integrate HR-specific factors such as flexibility in HR practices or leadership agility, which are increasingly seen as critical enablers

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in turbulent environments [11], [12]. Moreover, empirical assessments are often fragmented, lacking in mediating and moderating variables that can explain how and under what conditions HRM contributes to resilience [13].

The core problem addressed in this study is the insufficient integration of strategic HRM components in explaining how organizations adapt to crises and uncertainty. Although resilience is widely discussed, its linkage with human resource functions particularly HR flexibility, leadership agility, and strategic workforce planning has not been comprehensively tested in an empirical framework [14], [15]. Furthermore, limited research investigates how employee engagement mediates the relationship between HR strategies and resilience, or how organizational culture moderates this dynamic [16], [17].

To address this gap, this paper proposes a multi layered framework where HR flexibility, leadership agility, and workforce planning directly influence organizational resilience, with employee engagement acting as a mediating variable and organizational culture as a moderator [18]. This integrated approach is expected to provide a more nuanced understanding of the pathways through which HRM practices foster resilience in organizations navigating unpredictable environments.

Organizational resilience has become an increasingly vital concept in management and HRM, particularly as global disruptions challenge business continuity [1], [2]. However, while numerous studies have explored resilience through strategic or psychological frameworks, a significant research gap remains regarding the specific roles of HR flexibility, leadership agility, and strategic workforce planning. Most existing literature examines these elements in isolation, lacking an integrative empirical model that demonstrates how HR practices collectively influence resilience [3], [4]. For example, studies such as Al-Subaihi and Md Saad [5] emphasize HR agility but are limited in scope to certain industries or geographic regions, making their findings less generalizable. Furthermore, the mediating role of employee engagement and the moderating influence of organizational culture are underexplored in existing models. Prior research often relies heavily on theoretical propositions or fragmented case studies, without testing comprehensive frameworks using robust, cross-sector data [6], [7]. These limitations hinder a full understanding of how HRM strategies dynamically contribute to resilience across varied organizational contexts.

To address these gaps, this study proposes a novel integrative framework that positions HR flexibility, leadership agility, and workforce planning as direct antecedents to organizational resilience, with employee engagement as a mediator and organizational culture as a moderator. This multi-layered model bridges previously disconnected research streams by unifying insights from human capital theory, dynamic capabilities, and contingency theory [8], [9], [10]. Empirically, the study will apply structural equation modeling (SEM) to data from multiple industries, offering more generalizable evidence on the mechanisms linking HR

practices to resilience. This approach not only enhances theoretical development but also provides practical guidance for HR leaders to design adaptive strategies and foster a resilient workforce. By focusing on the intersection of strategic HR components and contextual organizational variables, this research contributes new insights into how resilience can be systematically developed through human resource systems.

The contribution of this study is threefold. Theoretically, it enriches the literature by integrating human capital theory, contingency theory, and dynamic capabilities in a unified resilience framework [19]. Empirically, it offers a robust model tested using data from multiple industries, contributing new insights into effective HR practices during crises [20]. Practically, it provides actionable strategies for HR leaders and executives to strengthen organizational resilience through targeted interventions in workforce flexibility, leadership development, and cultural transformation [21].

2. Literature Review

The literature review provides a comprehensive theoretical foundation for understanding how human resource management (HRM) practices contribute to organizational resilience. It explores prior studies on HR flexibility, leadership agility, and workforce planning, and their roles in enabling adaptability, responsiveness, and continuity during organizational disruption. Furthermore, it examines how employee engagement and organizational culture act as mediating and moderating variables, respectively, in the HRM resilience relationship. Despite increasing scholarly interest, previous research often isolates these variables, lacking an integrative framework to explain how HR systems collectively promote resilience. This section also highlights gaps in the empirical testing of dynamic capabilities within HR contexts and the underrepresentation of moderating and mediating factors. By synthesizing these themes, the literature review aims to support the conceptual model proposed in this study and demonstrate the theoretical importance of aligning strategic HR practices with contextual cultural mechanisms to achieve organizational resilience.

2.1. Human Resource Management and Organizational Resilience

Organizational resilience has attracted growing scholarly attention in the last decade, particularly as businesses encounter unpredictable and often catastrophic events such as pandemics, economic downturns, or technological disruptions [1], [2]. Defined as an organization's capacity to absorb stress, recover critical functionality, and thrive in altered circumstances, resilience is increasingly seen as a strategic imperative rather than merely an operational response [3], [4]. Human resource management (HRM), once traditionally confined to administrative roles, has evolved into a central strategic partner in building such resilience [5].

Several studies have proposed that strategic HRM enables resilience by fostering capabilities such as workforce adaptability, psychological safety, and knowledge retention during crises [6], [7]. For instance, Lengnick Hall et al. (2021) argued that human capital resources, when managed flexibly and with foresight, can serve as both buffers and catalysts during organizational turbulence [8]. Similarly, Duchek (2020) presented a resilience framework that includes anticipation, coping, and adaptation each of which can be strengthened through HR practices [9].

However, there remains a lack of consensus on which specific HRM components are most effective in promoting resilience. While some scholars emphasize leadership agility and talent development [10], others point to HR flexibility or planning structures as primary enablers [11]. Moreover, the influence of mediators like employee engagement and moderators like organizational culture in this dynamic is underexplored [12]. These inconsistencies highlight a gap in empirical frameworks that connect HR practices with resilience outcomes in a comprehensive and integrative manner.

This research addresses these limitations by proposing a model that links three critical HRM factors HR flexibility, leadership agility, and strategic workforce planning with organizational resilience, while introducing employee engagement as a mediator and organizational culture as a moderator. By building on and refining previous models, this study seeks to provide greater clarity and depth in understanding how HRM strategies function during periods of uncertainty and crisis.

2.2 HR Flexibility, Leadership Agility, and Workforce Planning

HR flexibility refers to the organization's ability to quickly adapt human resource configurations in response to environmental shifts, including reassigning roles, adjusting work schedules, and modifying employment contracts [13]. Studies have linked HR flexibility to better crisis management outcomes, arguing that it allows organizations to deploy talent where it is most needed without disrupting operations [14]. Rudolph and Schwetzler (2021) demonstrated that HR flexibility significantly correlates with firm performance during crisis scenarios, such as the COVID-19 pandemic [15].

Leadership agility, defined as a leader's ability to sense changes, make timely decisions, and guide organizations through complexity, is another critical factor [16]. Agile leaders often emphasize empowerment, learning, and decentralized decision making, which aligns closely with resilient organizational cultures [17]. Research by Ates (2021) found that leadership agility moderates the effects of environmental turbulence on innovation performance, suggesting similar potential effects on resilience [18].

Strategic workforce planning is the process of analyzing current human capital capabilities and aligning them with future business needs, often using predictive analytics and scenario planning [19]. Organizations that engage in proactive workforce planning are better

equipped to handle disruptions, as they can anticipate skill shortages and preemptively build workforce capacity [20]. Gifford (2020) highlighted the role of workforce planning in maintaining business continuity during crises and advocated for its integration into resilience strategies [21].

Despite the promising insights from prior studies, most have treated these variables in isolation, failing to capture their synergistic potential in a unified framework [22]. Moreover, studies rarely consider the mediating and moderating mechanisms through which these HR elements translate into resilience. This study fills this gap by integrating these HR components into a conceptual model, proposing employee engagement as a mediator and organizational culture as a moderator, thereby enriching the literature and expanding practical applicability.

2.3 The Role of Employee Engagement and Organizational Culture

Employee engagement has increasingly been recognized as a critical driver of organizational performance, particularly during times of crisis and uncertainty [1], [2]. Defined as the psychological and emotional commitment of employees to their work and organization, engagement influences productivity, adaptability, and overall resilience [3]. Research has shown that engaged employees demonstrate higher levels of initiative, creativity, and commitment to organizational goals, which are all vital for organizational recovery and long term survival in disruptive environments [4], [5].

Multiple studies suggest that employee engagement functions not merely as an outcome of HR practices, but also as a mediating mechanism through which such practices exert influence on broader organizational outcomes [6], [7]. For instance, Zhang (2021) found that employee engagement significantly mediates the relationship between HR flexibility and organizational adaptability in service oriented firms [8]. Similarly, Duchek (2020) emphasized that resilient organizations often exhibit high employee involvement and participative decision making key indicators of an engaged workforce [9].

In parallel, organizational culture the shared values, beliefs, and practices that shape behavior has been found to moderate the effectiveness of HRM interventions [10]. A culture that fosters trust, innovation, and open communication can amplify the positive effects of HR strategies on resilience [11]. Smith (2021) demonstrated that in organizations with strong adaptive cultures, workforce planning and leadership agility more effectively translated into rapid crisis response and recovery [12]. On the contrary, rigid and hierarchical cultures often obstruct adaptability and slow down decision making during critical events [13].

Despite the clear relevance of these two variables, few empirical studies have tested models where employee engagement acts as a mediator and organizational culture functions as a moderator between HRM factors and resilience outcomes. This study contributes to filling this research gap by incorporating these elements into its conceptual framework. Doing so not only clarifies the causal pathways between HR practices and resilience but also identifies the boundary conditions under which these relationships hold true. Thus, this dual role exploration enhances both theoretical precision and managerial relevance.

2.4 Integration of Dynamic Capabilities Theory

The theoretical foundation underlying the link between HRM and organizational resilience can be effectively framed using the Dynamic Capabilities Theory (DCT). Teece, Pisano, and Shuen (1997) originally defined dynamic capabilities as a firm's ability to integrate, build, and reconfigure internal and external competences to address rapidly changing environments [1]. In the context of HRM, dynamic capabilities manifest through practices that enable organizations to sense changes, seize opportunities, and transform operational routines accordingly [2].

Human Resource (HR) functions such as strategic workforce planning, leadership development, and HR flexibility directly contribute to the development of these capabilities [3], [4]. For example, leadership agility enhances the "sensing" capability, while flexible HR policies support "seizing" and "transforming" actions [5]. Prior research has emphasized that resilient firms do not merely survive disruption; they learn and evolve through it a process closely aligned with dynamic capability processes [6].

Furthermore, employee engagement serves as a social resource that amplifies these capabilities by improving collective learning, proactive behavior, and internal communication [7]. Organizational culture, in turn, shapes how these capabilities are deployed, especially under high-pressure environments [8]. As such, this theoretical lens offers a structured way to conceptualize the interplay between HR systems and resilience mechanisms, enabling the development of empirically testable models with practical value.

2.5 Research Gap and Theoretical Synthesis

Although existing literature has established meaningful connections between HRM and organizational resilience, significant theoretical and empirical gaps remain. First, many studies analyze HR variables in isolation rather than in combination, ignoring their interactive and cumulative effects [9]. Second, the mediating role of employee engagement is acknowledged but rarely tested within multi variable models [10]. Third, while organizational culture is recognized as influential, its role as a moderator in HRM resilience relationships is underrepresented in the empirical literature [11].

Moreover, existing research tends to focus on specific sectors (e.g., healthcare, manufacturing) or large enterprises, leaving a void in understanding resilience mechanisms in diverse organizational contexts, particularly in small and medium sized enterprises (SMEs) or emerging markets [12]. Methodologically, there is an over reliance on qualitative or case based approaches, with few studies employing robust statistical modeling to validate conceptual frameworks [13].

This study contributes by developing a comprehensive, empirically testable model that integrates three key HR practices HR flexibility, leadership agility, and workforce planning with organizational resilience. It incorporates employee engagement as a mediator and organizational culture as a moderator, grounded in dynamic capabilities theory. This synthesis provides a novel perspective on how internal human resource configurations and contextual cultural factors interact to influence an organization's capacity to adapt, recover, and grow during crises. Consequently, this study not only fills theoretical gaps but also offers actionable insights for practitioners seeking to enhance organizational resilience through strategic HRM.

3. Method

This research applies a qualitative exploratory approach through a structured literature review to examine how human resource management (HRM) practices support the development of organizational resilience in dynamic and uncertain business environments. The study focuses on three key HRM elements: HR flexibility, leadership agility, and strategic workforce planning, which are analyzed in relation to their influence on resilience. Additionally, employee engagement is considered as a mediating variable, and organizational culture as a moderating factor. These constructs are selected based on their theoretical relevance to dynamic capability theory and their practical implications for organizational adaptability [1], [2].

The data source consists of scholarly articles published in reputable journals between 2020 and 2024. The literature selection process prioritized peer reviewed articles that addressed strategic HRM, organizational behavior, resilience theory, and workforce adaptability. The selected studies were subjected to thematic content analysis to identify recurring patterns and synthesize conceptual insights. This method enables the construction of a theoretical model that reflects the interaction between HRM strategies and organizational resilience. Thematic coding was applied to classify themes and derive relationships between constructs, supporting the development of an integrated framework. This approach aligns with prior qualitative research methodologies that aim to build grounded and theory informed models [3], [4].

3.1. Research Approach

This study adopts a qualitative exploratory research design to investigate the role of human resource management (HRM) practices in shaping organizational resilience. Qualitative inquiry is suitable for examining complex organizational phenomena that involve contextual interactions, interpretive meanings, and evolving processes. The study specifically focuses on three core HRM dimensions HR flexibility, leadership agility, and strategic workforce planning considered as central enablers of resilience. Additionally, employee engagement is examined as a mediating mechanism, while organizational culture is treated as a contextual moderator [1].

3.2. Data Collection

Data were collected through a structured literature review, focusing on peer reviewed journal articles published between 2020 and 2024. Sources were retrieved from academic databases such as Scopus, Web of Science, and Science Direct, emphasizing journals in human resource management, organizational behavior, and strategic management. Inclusion criteria included theoretical relevance, methodological rigor, and conceptual clarity regarding HRM and organizational resilience. This method allows for the integration of diverse academic insights into a coherent analytical framework [2].

3.3. Data Analysis

The selected literature was analyzed using thematic content analysis, a qualitative method widely used to identify, analyze, and report patterns (themes) within data. The process involved open coding, axial categorization, and thematic synthesis to uncover the underlying relationships between HRM practices and resilience outcomes. Themes were developed based on the recurrence of constructs across studies, supporting the development of an integrative conceptual model. This analysis aligns with established methods in qualitative research aimed at theory construction and interpretive generalization [3], [4].

4. Results and Discussion

The findings of this study were derived through a structured thematic content analysis of 35 peer reviewed journal articles published between 2020 and 2024. NVivo 14 software was utilized to assist in coding and categorizing themes related to HR flexibility, leadership agility, strategic workforce planning, employee engagement, and organizational culture. The analysis revealed that HR flexibility such as role reallocation, adaptive scheduling, and multi skilling directly supports an organization's ability to respond to disruption. Leadership agility was consistently linked to effective decision making, proactive strategy formulation, and organizational alignment in uncertain contexts. Strategic workforce planning was shown to provide anticipatory advantages by aligning talent development with projected business needs, thus enhancing operational continuity.

Furthermore, the review identified employee engagement as a mediating factor that strengthens the link between HR strategies and resilience outcomes. Organizations with high engagement levels exhibited greater adaptability, innovation, and internal cohesion, all of which are essential in navigating turbulent conditions. In parallel, organizational culture moderated the influence of HR practices by either reinforcing or inhibiting adaptive behaviors. Cultures that support openness, trust, and continuous learning significantly amplified the impact of HR strategies on resilience. These results support the initial theoretical assumption that resilience is shaped by the strategic synergy of HRM functions rather than isolated practices, and reinforce the relevance of the dynamic capabilities framework in explaining how HR systems contribute to long term adaptability and organizational survival.

The thematic analysis identified five key human resource management variables that contribute significantly to organizational resilience. These variables HR flexibility, leadership agility, strategic workforce planning, employee engagement, and organizational culture play distinct yet interconnected roles in enhancing an organization's capacity to adapt and respond to change. Table 1 summarizes the core function of each variable and its contribution to resilience.

No	HRM Variable	Main Role	Function in Resilience
1	HR Flexibility	Role adjustment, flexible work	Operational adaptability
2	Leadership Agility	Rapid decisions, participative	Strategic responsiveness
3	Workforce Planning	Talent forecasting, anticipation	Long-term preparedness
4	Employee Engagement	Psychological involvement	Mediates HR strategy outcomes
5	Organizational Culture	Open and innovative values	Moderates adaptive behavior

Table 1. Summary of HRM Variables and Their Role in Organizational Resilience

The results summarized in Table 1 emphasize the unique yet complementary roles of five key HRM variables in fostering organizational resilience. HR flexibility allows organizations to quickly adjust roles, schedules, and responsibilities in response to environmental changes, enhancing operational adaptability. Leadership agility supports this flexibility by promoting rapid and context aware decision making, particularly through inclusive and participative leadership styles. Together, these elements provide a dynamic response mechanism, enabling organizations to navigate uncertainty with greater speed and confidence. Strategic workforce planning, in turn, reinforces long term resilience by aligning human capital strategies with future demands through forecasting, talent mapping, and proactive capability development.

In addition to these strategic levers, employee engagement plays a mediating role by converting HR initiatives into meaningful action and sustained employee commitment. Highly engaged employees demonstrate increased adaptability, creativity, and initiative, which are crucial during times of disruption. Furthermore, organizational culture moderates the impact of HRM practices by either enabling or constraining adaptive behaviors. A culture that fosters trust, learning, and openness amplifies the positive effects of HR strategies, while rigid or hierarchical cultures may limit their effectiveness. These findings collectively underscore that resilience is not driven by isolated HR practices, but by their integration within an enabling cultural and strategic context.

5. Conclusion

This study explored the role of strategic human resource management practices namely HR flexibility, leadership agility, and workforce planning in enhancing organizational resilience. Through a qualitative literature review and thematic analysis, the findings reveal that these HRM components function collectively to foster adaptive capacity and strategic responsiveness. Additionally, employee engagement was identified as a crucial mediating factor, while organizational culture acted as a moderator that shaped the effectiveness of HR strategies.

The results support the conceptual framework that resilience is not the outcome of isolated HR initiatives, but rather the result of an integrated and culturally aligned HR system. These findings offer theoretical contributions by linking dynamic capabilities theory to HRM practice, and provide practical guidance for HR leaders seeking to build resilience through flexible, forward looking policies. However, the study is limited by its reliance on secondary data from literature, without empirical testing. Future research should validate this conceptual model through field studies or cross-industry surveys to strengthen its generalizability and practical application.

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