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Psychological Safety as a Strategic Driver of Knowledge-Based Innovation in the Digital Economy

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Abstract. This study Psychological safety has emerged as a critical organizational capability that enables knowledge exchange, creativity, and innovation in the digital economy. This study aims to examine how psychological safety contributes to knowledge-based innovation by synthesizing findings from contemporary literature. Using a narrative literature review approach, this study analyzes empirical and conceptual studies published between 2022 and 2025 on psychological safety, knowledge sharing, organizational learning, employee creativity, and innovation performance. The review identifies three research questions concerning the role of psychological safety in facilitating innovation, the mechanisms linking psychological safety to innovation outcomes, and organizational strategies for strengthening innovation capability. The findings demonstrate that psychological safety encourages employees to share knowledge, express ideas without fear of negative consequences, and engage in collaborative learning, thereby enhancing creativity and innovation performance. Furthermore, knowledge sharing, organizational learning, and employee creativity operate as sequential mediating mechanisms through which psychological safety improves organizational innovation. The study also highlights that leadership support, inclusive organizational culture, digital collaboration technologies, and knowledge management systems are essential for sustaining psychological safety in increasingly digital workplaces. This review proposes an integrative conceptual framework positioning psychological safety as a strategic organizational resource that strengthens innovation capability and long-term competitiveness. The findings provide theoretical insights and practical recommendations for organizations seeking to develop resilient, knowledge-driven, and innovative workplaces in the rapidly evolving digital economy.

Keywords: Employee Creativity; Knowledge Sharing; Knowledge-Based Innovation;Organizational Learning; Psychological Safety.

1. INTRODUCTION

The emergence of the digital economy has fundamentally transformed how organizations create value, compete, and sustain long-term performance. Unlike traditional industrial economies, which relied primarily on physical resources and production efficiency, the digital economy centers on knowledge, creativity, and innovation as the primary drivers of organizational competitiveness. As firms become increasingly dependent on their employees' ability to generate ideas, collaborate across functional boundaries, and adapt to technological change, human psychological factors have shifted from individual concerns to strategic organizational resources. In this volatile landscape, psychological safety emerges as a critical prerequisite for fostering the risk-taking and experimentation necessary for continuous knowledge-based innovation (Luo et al., 2025).

Knowledge-based innovation is a critical determinant of success in digitally connected environments. Organizations that effectively create, integrate, and utilize knowledge demonstrate superior innovation performance, faster adaptation to market dynamics, and stronger competitive advantages. However, successfully implementing knowledge-based

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innovation requires more than technological investment; it demands an organizational culture that encourages employees to openly exchange ideas, challenge existing assumptions, and participate in collaborative problem-solving. In this context, psychological safety functions as a strategic catalyst by mitigating the interpersonal risks associated with sharing tacit expertise, thereby enabling the fluid exchange of information essential for navigating hypercompetitive market shifts (Stăneiu, 2022).

One organizational factor that has received increasing scholarly attention is psychological safety: the shared belief that employees can express opinions, admit mistakes, ask questions, and propose new ideas without fear of negative interpersonal consequences (Stăneiu, 2022). When employees perceive a psychologically safe environment, they are more willing to contribute their knowledge, communicate openly, and engage in the learning behaviors necessary to support innovation (Figueiredo et al., 2025). This atmosphere of mutual trust and respect empowers teams to engage in divergent thinking and collaborative problem-solving, which are essential for generating original ideas in the digital landscape (Kyambade et al., 2024).

In contrast, organizations characterized by low psychological safety often experience knowledge hiding, communication barriers, reduced creativity, and diminished organizational learning, as employees withhold novel ideas due to concerns regarding criticism or social rejection (Li & Wareewanich, 2024). These behaviors significantly impede innovation capability, particularly within digital organizations (Luo et al., 2025). Consequently, empirical investigations have increasingly sought to identify the specific psychological mechanisms and boundary conditions that bridge the gap between perceived safety and innovative work behaviors (Xu & Suntrayuth, 2022).

The importance of psychological safety is heightened in digital workplaces, characterized by remote collaboration and virtual teams (Huang & Wang, 2024). Given that digital communication reduces non-verbal cues, leaders must cultivate psychologically safe environments to sustain collaboration (Lechner & Tobias, 2021). Research indicates that in these virtual environments, psychological safety acts as a critical moderator that mitigates the potential negative effects of digital mediation on innovation (Andrade et al., 2025).

Although numerous studies have independently examined these constructs, few have integrated them into a comprehensive framework addressing the digital economy, and empirical findings remain fragmented across disciplines (Figueiredo et al., 2025). This fragmentation limits theoretical integration and practical application, particularly for organizations implementing digital transformation strategies.

Accordingly, this study seeks to bridge these theoretical gaps by examining psychological safety as a strategic driver of knowledge-based innovation. Specifically, the study develops an integrated conceptual model linking psychological safety, knowledge sharing, organizational learning, employee creativity, and innovation performance within digital organizations: (1) How does psychological safety facilitate knowledge-based innovation in digital organizations?; (2) What mechanisms explain the relationship between psychological safety and innovation performance?; and (3) How can organizations leverage psychological safety to strengthen innovation capability in the digital economy?.

2. LITERATURE REVIEW

Psychological Safety: Concept and Organizational Significance

Psychological safety has established itself as a cornerstone construct within organizational behavior, primarily due to its pivotal role in fostering employee learning, collaborative synergy, and innovative capacity (Dekker & Edmondson, 2022). First conceptualized by Amy Edmondson, the term denotes a shared belief among team members that their interpersonal environment supports calculated risk-taking (Dekker & Edmondson, 2022). Within such a climate, employees feel secure enough to voice inquiries, disclose errors, solicit constructive feedback, and critique established paradigms without fear of social stigmatization or professional repercussions (Dekker & Edmondson, 2022). Beyond merely reducing social anxiety, this construct functions as a psychological buffer that facilitates proactive learning behaviors, such as knowledge sharing and feedback-seeking (Abildgaard & Karlsen, 2024), which are vital for mitigating the inherent interpersonal risks of the innovation process (Abildgaard & Karlsen, 2024).

Unlike interpersonal trust which typically centers on expectations regarding specific individual behaviors psychological safety encompasses a collective perception of the organizational climate (Guimarães et al., 2023). It emphasizes the degree to which stakeholders feel confident that voicing concerns or engaging in developmental behaviors will elicit supportive responses from peers and leadership rather than punitive ones (Guimarães et al., 2023). Consequently, psychological safety is increasingly recognized as a prerequisite for high-performing teamwork, organizational learning, and adaptive performance. Beyond its foundational role in team cohesion, psychological safety is crucial for proactive learning behaviors, such as continuous knowledge sharing and feedback-seeking, that inherently involve interpersonal risks (Abildgaard & Karlsen, 2024).

Recent scholarship has expanded beyond traditional team-level dynamics to underscore the strategic significance of psychological safety in digitally transformed organizations. As entities pivot toward remote operational modalities and digital collaborative architectures, employees often navigate heightened interpersonal ambiguity. In these contexts, psychological safety acts as a critical buffer, mitigating communication impediments, facilitating virtual discourse, and bolstering collaborative problem-solving despite geographical dispersion. This transition toward digital operational models necessitates that leadership cultivate organizational ecosystems and infrastructure to fully explore employee expertise.

Knowledge-Based Innovation in the Digital Economy

The digital economy has fundamentally reshaped the paradigms of organizational competitive advantage. Conventional production factors such as tangible physical assets and financial capital are increasingly supplanted by knowledge, information, and intellectual capital as primary organizational resources. Grounded in the Knowledge-Based View, knowledge is regarded as the preeminent strategic asset, largely due to its inimitable nature and potential to continuously catalyze organizational value through sustained innovation. Digital transformation acts as an essential catalyst in this process by providing the technological infrastructure to capture, store, and disseminate intellectual capital across decentralized organizational boundaries (Sjachriatin et al., 2023).

Knowledge-based innovation encompasses the systematic processes through which organizations generate, integrate, and apply knowledge to pioneer new products, services, processes, and business models. Diverging from conventional innovation models that prioritize technological outputs, knowledge-based innovation emphasizes continuous organizational learning, synergistic collaboration, and the pervasive exchange of expertise among the workforce. In this context, the platformization of the digital economy creates a complex ecosystem that necessitates continuous feedback loops and creative idea generation to maintain competitive parity (Hosseini et al., 2022).

Digital technologies serve as catalysts for knowledge-based innovation by augmenting communication, information dissemination, and cross-functional collaboration. Through the adoption of artificial intelligence, cloud computing, big data analytics, and digital collaborative platforms, organizations cultivate knowledge ecosystems that transcend geographical constraints, enabling seamless expertise exchange. Nevertheless, technological infrastructure, while necessary, is insufficient to guarantee effective knowledge creation; it

must be complemented by a cultural predisposition toward open communication, experiential exchange, and collective problem-solving.

This socio-cultural readiness, anchored in psychological safety, ensures that the deployment of digital tools successfully bridges the gap between mere data acquisition and the generation of actionable intellectual capital (Yasin et al., 2022). Integrating these socio-technical elements allows firms to move beyond isolated digital initiatives toward a holistic knowledge management process that discovers and sustains innovation opportunities (Chen et al., 2023). Consequently, the extensive adoption of digital technology facilitates swift knowledge dissemination and information sharing while concurrently reducing operational costs, thereby fostering a conducive environment for sustainable business innovation (Rubio-Andrés et al., 2024).

Empirical evidence consistently demonstrates that organizations fostering robust knowledge-sharing cultures achieve superior innovation capability compared with entities that rely exclusively on technological investment (Yuen & Lam, 2024). Therefore, organizational culture and employee behavior have emerged as critical determinants of successful digital innovation. By bridging the gap between technological capacity and human interaction, psychological safety creates the essential conditions for leveraging external resources and managing capability deficiencies (Tao & Tan, 2025). This synthesis of internal cultural readiness and external digital integration allows firms to more effectively leverage open innovation strategies by tapping into diverse knowledge networks (Lam et al., 2021).

Psychological Safety as an Antecedent of Knowledge Sharing and Organizational Learning

Knowledge sharing serves as a pivotal mechanism through which psychological safety fosters organizational innovation (Xu & Suntrayuth, 2022). This process involves the voluntary dissemination of information, expertise, and problem-solving methodologies among organizational members. While explicit knowledge is often codified within documentation or digital repositories, tacit knowledge is embedded within employees' personal experiences, necessitating open interpersonal interaction for effective transfer. Within this framework, psychological safety mitigates the interpersonal risks associated with sharing tacit knowledge, such as the fear of criticism or loss of professional status (Plooy et al., 2024).

Scholarly discourse indicates that psychological safety substantially bolsters employees' propensity to exchange both explicit and tacit knowledge (Li & Wareewanich, 2024). When individuals perceive minimal interpersonal risk, they demonstrate a higher inclination to disclose operational errors, solicit support, provide constructive criticism, and propose

innovative concepts during collaborative endeavors. Conversely, psychologically unsafe climates tend to precipitate knowledge hoarding, defensive communication patterns, and organizational silence—behaviors that fundamentally impede innovation. Furthermore, knowledge-oriented leadership plays a vital role in dismantling these barriers by fostering an environment that rewards intellectual risk-taking and encourages the challenging of existing norms (Ononye & Maduemezia, 2024).

Organizational learning theory posits that knowledge sharing constitutes the cornerstone of collective learning. Through sustained dialogue, reflection, and collaborative inquiry, organizations transform individual insights into institutional knowledge, embedding it within routines, policies, and best practices. By mitigating the apprehension surrounding failure and incentivizing experimentation, psychological safety serves as a catalyst for these critical learning processes. Moreover, empirical results indicate that when teams perceive a climate of safety, they are more likely to engage in the learning behaviors necessary to convert tacit insights into tangible organizational improvements.

Building on this foundation, a supportive learning climate further accelerates the dissemination of both tacit and explicit knowledge by normalizing the sharing of lessons learned from daily interactions and collaborative experimentation (Kucharska & Bedford, 2024). In this milieu, the acceptance of mistakes acts as a critical component of a continuous learning culture, as it empowers employees to articulate intuitive knowledge through metaphors, demonstrations, and contextual storytelling (Kucharska, 2021). This environment effectively counters the destructive impulse toward knowledge hiding, where individuals might otherwise hoard expertise to protect their relative status or competitive edge (Houten, 2022; Kucharska & Rebelo, 2022).

Within the context of digital transformation, organizational learning has attained a heightened state of dynamism, driven by rapid technological shifts and fluctuating customer expectations. Workforce members are required to concurrently acquire novel competencies and adapt to evolving digital infrastructures and operational paradigms. Under these conditions, psychological safety is essential for bolstering organizational adaptability, thereby facilitating sustained learning and the collaborative creation of knowledge. Ultimately, this environment enables teams to transcend traditional silos, effectively challenging established norms to resolve complex challenges inherent in digitalization projects (Ngereja & Hussein, 2021).

Linking Psychological Safety to Innovation Performance: A Knowledge-Based Perspective

While widespread literature affirms a positive correlation between psychological safety and innovation, emerging research posits that this linkage is largely indirect. Rather than acting as a direct catalyst for immediate innovative output, psychological safety functions as a foundational organizational condition that fosters the knowledge-centric behaviors requisite for innovation. Specifically, this climate mitigates the psychological threats that otherwise trigger defensive orientations, thereby enabling employees to devote their cognitive resources toward creative boundary-crossing and proactive error reporting (Zhu et al., 2022). By facilitating such transparency, organizations gain the agility to identify systemic flaws and implement immediate corrective actions, which are essential for maintaining operational effectiveness in high-pressure, complex environments (Silva et al., 2025),(Negara et al., 2023).

From the Knowledge-Based View, innovation manifests through a sequence of integrated organizational processes. Psychological safety promotes open knowledge exchange, thereby expanding access to diverse information and expertise across the firm. This shared knowledge subsequently bolsters organizational learning by facilitating collective reflection, nuanced problem-solving, and iterative capability development; as employees synthesize broader knowledge and experience, they gain greater proficiency in generating creative solutions and executing innovative initiatives. Furthermore, this cycle of open communication and continuous experimentation is foundational to agile frameworks, where the rapid iteration of ideas necessitates a culture that effectively manages the risks associated with digital disruption (Ajayi & Udeh, 2024).

Employee creativity, consequently, acts as an immediate precursor to innovation performance. Psychologically safe environments nurture a culture where individuals feel empowered to explore unconventional concepts, challenge established norms, and experiment with alternative methodologies, unencumbered by the apprehension of failure. Such creative conduct increases an organization's capacity to develop novel products, optimize operational workflows, and respond effectively to volatile market conditions. These findings underscore the critical role of interpersonal climate in transforming cognitive assets into sustainable competitive advantages within knowledge-intensive digital ecosystems (Yaqoob et al., 2024; Zadow et al., 2023).

In the contemporary digital economy, this sequential dynamic is increasingly paramount, as innovation relies extensively on interdisciplinary collaboration and rapid knowledge integration. Organizations that synthesize psychological safety, knowledge sharing,

organizational learning, and creativity are better positioned to secure a sustainable competitive advantage than those relying predominantly on technological investment. Indeed, the three-dimensional structure of team psychological safety—encompassing team collaboration, information sharing, and give-and-take balance—is intrinsically linked to elevated innovative performance in high-tech enterprises (Jin & Peng, 2024).

Furthermore, recent findings demonstrate that fostering such environments is vital for optimizing digital trust and organizational learning cultures, which together facilitate the seamless integration of AI-driven insights into core business strategies (Alshammari & Alshammari, 2026). By empowering employees to contribute novel perspectives without the fear of social or professional reprisal, leaders can effectively dismantle the barriers to tacit knowledge transfer (Uddin et al., 2022). This structural shift creates an ecosystem where approachable leadership and transparent decision-making foster the mutual support required for sustained cognitive integration (Wilfi & Lakshmipriya, 2025).

3. RESEARCH METHOD

This study adopts a narrative literature review approach. We systematically searched major academic databases including Scopus, Web of Science, Emerald Insight, ScienceDirect, Wiley Online Library, SpringerLink, Taylor & Francis, and Google Scholar for publications released between 2020 and 2025. The search strategy employed specific Boolean combinations of key terms related to psychological safety, digital innovation, and knowledge management to address the scope of modern organizational behavior.

The inclusion criteria focused on empirical and conceptual studies addressing psychological safety, knowledge sharing, organizational learning, creativity, digital transformation, innovation capability, and knowledge management. This selection process resulted in a corpus of approximately 80 peer-reviewed articles, which formed the primary analytical basis. These studies were then subjected to a thematic synthesis to identify recurring constructs and boundary conditions, allowing for the construction of an integrative model.

Data analysis used thematic synthesis procedures, encompassing literature selection, coding, categorization, concept mapping, and theoretical integration to develop a comprehensive conceptual framework. This synthetic approach clarifies how psychological safety serves as a foundational enabler for both exploratory and exploitative knowledge processes, which are critical for maintaining competitive advantage in rapidly evolving digital ecosystems (Tao & Tan, 2025; Figueiredo et al., 2025).

4. RESULTS AND DISCUSSION

The synthesis of recent literature demonstrates that psychological safety has evolved from being an interpersonal construct into a strategic organizational capability that enables knowledge-based innovation in digitally transformed organizations. Across the reviewed studies, three major findings emerged, corresponding to the research questions proposed in this study. These findings reveal that psychological safety not only facilitates knowledge creation and sharing but also strengthens organizational learning processes that ultimately improve innovation performance.

RQ1. How Does Psychological Safety Facilitate Knowledge-Based Innovation in Digital Organizations?

The scholarly literature identifies psychological safety as a fundamental prerequisite for knowledge-based innovation within digital organizations. When employees perceive their work environment as secure, they are more likely to articulate novel concepts, question existing operational routines, and candidly address errors, without fear of negative interpersonal consequences. Such behaviors collectively engender an organizational climate that sustains continuous knowledge exchange and collaborative learning processes. Moreover, empirical evidence suggests that inclusive leadership and team trust serve as critical enablers that transform this perceived safety into tangible knowledge-sharing activities (Kumar, 2025).

Furthermore, the integration of digital tools significantly enhances these dynamics, as technology-enabled practices provide platforms that streamline the dissemination of tacit knowledge and improve collaborative problem-solving capabilities (Naseem et al., 2025). Indeed, research highlights that a robust psychological safety climate effectively strengthens AI-enabled dynamic capabilities, which subsequently accelerate both exploratory and exploitative innovation trajectories (Tao & Tan, 2025). This climate of interpersonal risk-taking fosters an innovation commitment that is essential for navigating the complexities of the digital economy (Elshanhaby et al., 2026). By mitigating the anxiety associated with technological disruption, psychological safety transforms organizational uncertainty into a catalyst for iterative experimentation and rapid adaptation (Edmondson & Bransby, 2022).

Psychological safety substantially encourages the inclination to disseminate both explicit knowledge such as documented protocols and technical information and tacit knowledge, including individual intuition and experiential insights, which constitute primary catalysts for organizational innovation (Figueiredo et al., 2025). This is especially vital in digitally mediated workplaces, where collaboration occurs through virtual platforms and across geographically distributed teams. In these contexts, the lack of face-to-face interaction often

exacerbates communication ambiguity, potentially compromising employee self-efficacy. Psychologically safe environments effectively attenuate these impediments by nurturing interpersonal trust and incentivizing transparent discourse, thereby facilitating collaborative knowledge creation despite physical dispersion (Hao et al., 2022).

Furthermore, psychological safety is essential for fostering a learning-oriented organizational culture. By promoting an openness to experimentation, constructive feedback loops, and reflective inquiry, organizations can continuously generate, integrate, and operationalize new knowledge, thereby augmenting innovation capacity within highly dynamic digital ecosystems. However, organizations must remain vigilant, as systemic stressors like AI-induced job insecurity can erode this foundational safety, leading to defensive reasoning and the deliberate withholding of critical insights (Kim & Kim, 2024). Accordingly, fostering "AI relational safety"—the specific perception of security during human-AI interactions—becomes a critical managerial imperative for ensuring that employees effectively utilize advanced digital tools without apprehension (Rajagukguk, 2025).

Moreover, recent empirical data confirms that while psychological safety is essential for employees to adapt to artificial intelligence tools, fostering this safety can help mitigate the perceived threats associated with role displacement (Kim & Kim, 2024). By facilitating a shift from anxiety toward productive engagement, this interpersonal security encourages the adoption of guided-autonomy frameworks that pair innovative experimentation with necessary psychological support (Sarkar, 2025). Specifically, high self-efficacy in AI learning has been identified as a critical buffer that protects this sense of psychological safety from the destabilizing effects of AI-induced job insecurity (Kim & Kim, 2024).

Consequently, organizations that cultivate such resilience can help employees mitigate technological job insecurity and prevent knowledge-hiding behaviors, thereby empowering them to integrate disruptive technologies for sustained innovation (Zhang et al., 2025),(Li et al., 2025). Furthermore, institutional alignment through recognition and reward systems that incentivize collaborative AI usage can formalize these behaviors, encouraging employees to embrace AI as a tool for success rather than a threat, which can shift the organizational narrative towards proactive augmentation (Fenwick et al., 2024). This strategic integration of technological and interpersonal resources enables firms to architect innovation-centric ecosystems by deploying intelligent systems as cognitive augmentation levers (Wang & Lin, 2025).

Ultimately, psychological safety serves as a strategic organizational resource that transforms individual expertise into collective intelligence. According to the Knowledge-Based

View, organizational knowledge functions as a critical strategic asset; however, it yields sustainable competitive advantage only when personnel are motivated to share and integrate such insights. Psychological safety facilitates this by mitigating interpersonal risk. By fostering a climate where human-AI co-creation is perceived as a collaborative partnership, firms can effectively leverage digital integration to enhance exploratory capabilities, creativity, and strategic agility, showing that AI's value is realized through quality human-AI collaboration (Magsi et al., 2026).

In the digital economy, where interdisciplinary collaboration and rapid knowledge integration are imperative, this strategic role is amplified. Consequently, organizations navigating technological uncertainty and rapid change must acknowledge psychological safety as a core component of their digital transformation strategies, rather than categorizing it solely as an initiative for employee well-being. By anchoring AI transformation within these socio-technical frameworks, firms can foster a culture where human creativity and machine intelligence operate as complementary forces (Westover, 2025). This synergy necessitates a strategic shift wherein management prioritizes integrating AI as a complement to human capabilities to minimize tensions between workforce reduction and human capital preservation (Westover, 2025).

RQ2. What Mechanisms Explain the Relationship Between Psychological Safety and Innovation Performance?

Extant literature suggests that the relationship between psychological safety and innovation performance is primarily indirect. Empirical research consistently identifies several mediating mechanisms that delineate the pathway through which psychological safety contributes to organizational innovation. One prominent mechanism is that psychological safety promotes engagement and facilitates the transition from AI-driven decision-making to improved organizational agility (Soomro et al., 2026). Additionally, studies indicate that psychological safety and self-extension function as critical sequential mediators that empower non-technical personnel to participate meaningfully in AI-driven innovation processes (Guang-jun et al., 2025).

Knowledge sharing serves as the primary mediating mechanism. Psychological safety encourages the voluntary exchange of information, expertise, and experiential insights. By framing knowledge sharing as a collective responsibility rather than a private asset, psychologically safe environments facilitate the aggregation of a diverse knowledge base essential for innovation (Edmondson & Bransby, 2022). Furthermore, by mitigating the fear of intellectual exposure, this interpersonal climate enables the cross-pollination of ideas essential

for digital innovation. This collaborative exchange fosters an iterative cycle of trial and error, allowing organizations to convert the interpersonal transparency required for AI adoption into tangible gains in innovation output (Magsi et al., 2026).

Organizational learning constitutes the subsequent mechanism, facilitating the synthesis of knowledge into organizational value through collective interpretation and integration(Edmondson & Bransby, 2022). Research indicates that psychological safety enhances reflective dialogue, collaborative problem-solving, and continuous learning, thereby transforming individual experiences into organizational memory and bolstering adaptive capacity (Edmondson & Bransby, 2022; Magsi et al., 2026). In this context, inclusive leadership behaviors act as a vital catalyst for these learning processes (Li & Tang, 2022), as they establish the socio-emotional foundation necessary for team members to engage in the interpersonal risk-taking required for iterative innovation. Moreover, employees operating in such environments are more inclined to view errors as constructive feedback loops rather than performance failures, which directly accelerates the cycle of experimentation necessary for navigating technological uncertainty (Elsayed et al., 2023).

Employee creativity emerges as a critical third mediator. Increased organizational learning fosters cognitive flexibility and confidence, enabling employees to experiment with novel solutions(Edmondson & Bransby, 2022). By attenuating the fear of failure and incentivizing intellectual risk-taking, psychological safety stimulates creative ideation, which acts as a proximal antecedent to diverse forms of innovation including product, process, and digital (Edmondson & Bransby, 2022; Magsi et al., 2026). Specifically, when individuals perceive that their creative contributions are safe from criticism, they are more motivated to pursue divergent thinking, which is essential for successfully navigating the complexities of human-AI collaborative workflows (Magsi et al., 2026).

Collectively, these mechanisms delineate a sequential pathway: psychological safety facilitates knowledge sharing, which in turn accelerates organizational learning, subsequently fostering employee creativity and culminating in enhanced innovation performance. This trajectory suggests that prioritizing human-centered AI can buffer the negative effects of AI-induced job insecurity on psychological safety, which is essential for sustainable innovation (Kim & Lee, 2026). Furthermore, the development of organizational trust serves as the bedrock that enables the practical implementation of these insights, ensuring that the knowledge created through these processes is successfully translated into innovation (Ahmad et al., 2024). By endorsing a culture of experimentation, organizations empower their workforce to trial new concepts and extract insights from both triumphs and setbacks (Jasim et al., 2024).

This synthesis confirms that psychological safety influences innovation performance through interdependent, sequential pathways rather than direct causation. Specifically, knowledge sharing, organizational learning, and employee creativity function as integrated stages within the broader innovation process. These findings corroborate organizational learning theory, which posits that innovation emerges through continuous knowledge integration. Psychological safety catalyzes this process by normalizing the discussion of failures and encouraging knowledge exchange, thereby fostering collective reflection and capability development (Elshanhaby et al., 2026; Jasim et al., 2024). Additionally, such a supportive climate mitigates the defensive reasoning often triggered by digital transformation, ensuring that employees are motivated to contribute to organizational adaptability rather than resisting technological change (Tian et al., 2025).

Moreover, this analysis contributes to the innovation literature by proposing an integrated mechanism that synthesizes psychological, behavioral, and organizational perspectives. Unlike previous research that often examines these mediators in isolation, this review situates them as complementary stages within a holistic innovation process. Consequently, innovation represents the cumulative outcome of psychologically safe interactions that catalyze knowledge exchange, organizational learning, and employee creativity.

RQ3. How Can Organizations Leverage Psychological Safety to Strengthen Innovation Capability in the Digital Economy?

The literature outlines several strategic pathways for organizations to cultivate psychological safety and strengthen innovation capabilities in the digital economy. *First*, inclusive leadership serves as a foundational element. Leaders who actively invite participation, value diverse perspectives, and manage errors constructively establish an environment where employees feel interpersonally secure (Guang-jun et al., 2025). By mitigating the perceived risks of contribution, these leadership behaviors bolster employees' confidence to propose and implement innovative ideas, regardless of their hierarchical position (Li & Tang, 2022).

Second, organizations must foster a culture that views failure as a learning opportunity. The literature suggests framing mistakes as essential components of experimentation rather than grounds for punitive action (Jasim et al., 2024), (Tian et al., 2025). When employees perceive that failures are accepted as part of the creative process, they are significantly more inclined to test novel concepts and explore unconventional solutions to technological challenges (Narduzzo & Forrer, 2024). Additionally, organizations should invest

in cultivating digital leadership capabilities that prioritize emotional intelligence and strategic adaptability, ensuring that leaders remain adept at navigating the complexities of modern technological environments.

Third, the implementation of integrated knowledge management systems remains critical. Digital collaboration platforms, communities of practice, and cross-functional teams facilitate continuous knowledge exchange across the organization (Ajay, 2025). However, the efficacy of these technological infrastructures is heavily contingent upon employee willingness to participate a willingness fundamentally underpinned by psychological safety (Ahmad et al., 2024). Moreover, leaders must institutionalize structured, regular interactions that promote transparency and allow for the open expression of concerns, thereby formalizing the transition from passive technology adoption to active, collective pursuit of innovation (Salina, 2023).

Finally, empowering employees through increased autonomy in decision-making and problem-solving enhances their sense of ownership and intrinsic motivation (Aljumah, 2023). Psychological safety reinforces this empowerment by assuring staff that calculated intellectual risk-taking will not jeopardize their professional standing (Weiss et al., 2023). By facilitating such agency, organizations can successfully align individual creative potential with broader strategic goals, ultimately accelerating the pace of digital transformation (Bouncken et al., 2025). Additionally, organizations must prioritize the development of digital culture, as it acts as a primary vehicle for leveraging these psychological foundations to optimize data-driven innovation and enhance cross-departmental collaboration (Mihu et al., 2023).

In summary, the literature emphasizes that psychological safety should be treated as a strategic investment rather than a peripheral human resource initiative. Sustainable innovation in the digital economy requires aligning advanced technologies with organizational cultures that prioritize collaborative inquiry and continuous learning. Failure to foster the psychological capability for open communication and experimentation alongside technological development may lead to suboptimal innovation outcomes. Therefore, organizations must integrate psychological safety into their leadership development, knowledge management, and broader innovation strategies to enhance resilience and sustain a competitive advantage.

5. CONCLUSION

This study demonstrates that psychological safety is a fundamental organizational capability that supports knowledge-based innovation in the digital economy. Through a narrative review of recent empirical and conceptual literature, the findings indicate that psychological safety encourages employees to communicate openly, exchange knowledge,

experiment with new ideas, and collaborate without fear of negative interpersonal consequences. These behaviors establish the foundation for organizational learning and continuous innovation.

The review further reveals that the relationship between psychological safety and innovation performance is indirect and operates through several interconnected mechanisms. Knowledge sharing facilitates the transfer of individual expertise, organizational learning transforms shared knowledge into collective capability, and employee creativity converts these capabilities into innovative products, services, and processes. Together, these mediating factors explain how psychologically safe work environments contribute to sustainable innovation performance.

In addition, organizational leadership, supportive work culture, digital collaboration technologies, and effective knowledge management systems are identified as critical enablers of psychological safety. Organizations that intentionally cultivate these conditions are better positioned to adapt to technological change, enhance resilience, and maintain long-term competitiveness. Overall, this study contributes to the growing body of literature by proposing an integrated perspective that positions psychological safety as a strategic driver of knowledge-based innovation in digitally transformed organizations.

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