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Entrepreneurial Human Capital and Organizational Productivity: a Systematic Literature Review

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ABSTRACT

Purpose – This study systematically synthesizes and critically evaluates the empirical literature on entrepreneurial human capital (EHC) to explain how entrepreneurial experience contributes to organizational productivity and firm performance through organizational mechanisms across different organizational contexts. **Methodology/Approach** – a systematic literature review (SLR) was conducted using the Scopus database. Peer-reviewed journal articles published in English between 2022 and 2026 were identified using a search strategy based on the CIMO (Context–Intervention–Mechanism–Outcome) framework. Studies were screened using predefined inclusion and exclusion criteria, assessed with the Mixed Methods Appraisal Tool (MMAT), and synthesized through narrative analysis. a total of 28 empirical studies met the eligibility criteria. **Findings** – Entrepreneurial human capital enhances organizational productivity and firm performance primarily through innovation capability, organizational learning, and managerial capabilities. The findings also show that these relationships are context-dependent, with stronger evidence in SMEs operating in emerging economies. However, current evidence is dominated by cross-sectional studies and SME contexts, limiting broader generalization and causal interpretation. **Novelty/Value** – This review extends the entrepreneurial human capital literature by shifting from a direct-effect perspective to a mechanism-based explanation. It develops an integrative conceptual framework that explains how entrepreneurial human capital, organizational mechanisms, and contextual factors interact to generate organizational outcomes, providing valuable implications for theory development, managerial practice, and future entrepreneurship research

INTRODUCTION

Entrepreneurial human capital is increasingly recognized for improving organizational productivity and company performance, particularly in small and medium-sized enterprises (SMEs) operating in dynamic environments with limited resources. Incorporating entrepreneurial skills into SMEs can help increase resilience, foster sustainable growth, and create competitive advantage. Intrapreneurial skills, which include innovation, risk-taking, proactiveness, resource management, and networking, are crucial for SMEs to thrive in a competitive environment. These skills enable companies to adapt to change and seize new opportunities, thereby improving performance and productivity (Yuan et al., 2023). Human intellectual capital, as part of entrepreneurial human capital, significantly impacts the profitability and development of SMEs. Investment in human knowledge and social relationships is crucial for achieving sustainable growth and weathering crises, such as the COVID-19 pandemic (Ashraf et al., 2023). Participating in accelerator programs can help improve innovation performance for startups, especially for founders with higher education. However, the benefits of these programs are not evenly distributed, as entrepreneurial experience and industry skills do not significantly influence the outcomes of accelerator participation (Chowdhury & Audretsch, 2024). Entrepreneurial human capital helps companies manage resources effectively and adapt to volatile market conditions (Ma et al., 2023). Entrepreneurial orientation (EO) is strongly associated with both financial and non-financial performance in small and medium-sized enterprises (SMEs). When entrepreneurial human capital aligns with shared values, it can provide significant social and economic benefits for small and medium-sized enterprises (SMEs) (Seo et al., 2023). While human capital in entrepreneurship is crucial for improving MSME performance, we also need to consider the broader environmental and institutional factors that influence entrepreneurial success. For example, focusing on the sustainability of the entrepreneurial ecosystem and the quality of institutional structures can significantly influence the extent and direction of entrepreneurial growth (Audretsch et al., 2024). Furthermore, challenges such as securing funding and mentorship, seen in emerging economies like Qatar, highlight the importance of supportive policies and infrastructure to maximize the entrepreneurial potential of human capital (Al-Housani et al., 2023). These considerations highlight the complexity of fostering entrepreneurial success and the need for a comprehensive approach that synergizes human resources with conducive external conditions.

Entrepreneurial human capital is a concept that integrates the knowledge, skills, competencies, and entrepreneurial experience possessed by founders, managers, or employees, enabling them to recognize opportunities, innovate, and improve company performance. This concept is crucial for driving innovation and work effectiveness across various sectors. This capability enables organizations to adapt and thrive in dynamic environments by leveraging employee skills and competencies (Yuan et al., 2023). The digital economy improves the allocation and efficiency of human capital, reduces recruitment costs, and improves the quality of corporate innovation (Dong et al., 2023). Investing in human and relational intellectual capital can increase profitability and asset growth (Ashraf et al., 2023). Employee development practices significantly influence human capital through knowledge management (Al-Tit et al., 2022). The creation of innovative digital startups is influenced by the availability of local digital knowledge and skills, which are integral components of entrepreneurial human capital (Colombelli et al., 2024). Entrepreneurship education and digital government initiatives can enhance entrepreneurs' entrepreneurial competencies (Xiang et al., 2023). The effectiveness of human capital investments can be influenced by external factors such as competitive intensity and economic conditions, which can moderate the relationship between human capital and organizational performance (Alves & Carvalho, 2023). This underpins the importance of a deeper understanding of the factors influencing the development and impact of entrepreneurial human capital.

The relationship between human capital in entrepreneurship and firm performance is complex and multifaceted. This is because it involves organizations transforming entrepreneurial experiences into productivity enhancements. While previous research has examined this relationship, it often lacks a clear understanding of the underlying processes. Recent research has identified several important factors and pathways that play a role in this translation process, such as intrapreneurial capabilities, intellectual capital, entrepreneurial orientation, and leadership style. These elements interact within organizations to enhance performance and resilience, particularly in changing and uncertain environments. Entrepreneurial orientation (EO), characterized by innovation, proactiveness, and risk-taking, is positively related to firm performance. Shared value creation (CSV) acts as a bridge, enhancing the positive impact of EO on financial and non-financial performance (Seo et al., 2023). Active managerial and entrepreneurial capabilities significantly impact operational capabilities, which in turn impact overall performance (Alves & Carvalho, 2023). Entrepreneurial leadership (EL) and transformational leadership (TL) share many similarities, with both types of leadership helping companies perform better by increasing innovation and adaptability. However, the specific contribution of EL requires further investigation to fully understand its impact on firm productivity (Ravet-Brown et al., 2024). Entrepreneurial teams, by leveraging existing resources, enhance the resilience of new ventures. Good governance structures within these teams, such as managerial freedom, are crucial for harnessing human entrepreneurial capabilities and enhancing organizational resilience (Mai et al., 2023). While this research provides important insights into how human capital in entrepreneurship can enhance firm performance, it also highlights areas that require further research. For example, the specific role of different leadership styles in enhancing entrepreneurial capabilities and the specific ways in which knowledge contributes to firm growth remain understudied. This insight underscores the importance of a more holistic approach to understanding the complex relationship between human skills in entrepreneurship and firm performance.

Entrepreneurial human capital, encompassing skills, knowledge, and experience, plays a critical role in enhancing organizational performance and adaptability. This synthesis draws from a range of studies to explore the diverse impacts of entrepreneurial human capital on organizational outcomes, such as innovation, leadership, and resilience. Intrapreneurial capabilities, including innovation, risk-taking, and proactivity, are crucial for fostering a culture of innovation and adaptability in firms (Yuan et al., 2023). High-growth entrepreneurship research underscores the importance of building a knowledge base to foster innovation and growth, emphasizing the role of entrepreneurial human capital in sustaining a high-growth trajectory (Lechuga-Sancho et al., 2023). Entrepreneurial human capital, a balance between exploration and exploitation, is supported by entrepreneurial human capital through leadership styles and organizational learning, enabling firms to remain competitive in dynamic environments (Saleh et al., 2023). Entrepreneurial leadership is closely linked to organizational culture and learning organizations; leaders with strong entrepreneurial human capital can foster an environment conducive to innovation and adaptability(Shiferaw et al., 2023). The role of diverse passions and compassion in entrepreneurial teams highlights the importance of emotional intelligence and interpersonal skills as components of entrepreneurial human capital that enhance team performance and outcomes (Ginting-Szczesny et al., 2024). Entrepreneurial human capital is crucial for organizational resilience, particularly in high-tech SMEs facing an adaptive environment. The interaction of resources, capabilities, and environmental factors, driven by entrepreneurial human capital, determines organizational resilience and sustainability (Ma et al., 2023). In the hospitality industry, human intellectual capital has been shown to positively impact profitability and growth, highlighting the importance of investing in human capital to overcome crises and ensure long-term success (Ashraf et al., 2023). Entrepreneurial human capital influences scaling strategies in SMEs, particularly in the agribusiness sector, where vertical and horizontal scaling strategies are used to achieve growth. Entrepreneurial skills and knowledge facilitate partnership formation and market expansion (Begimkulov & Darr, 2023). The concept of the "entrepreneurial university" illustrates how entrepreneurial human capital developed through education can influence regional socioeconomic development, with alumni influencing innovation policies and fostering a startup-centric environment (Klingler-Vidra & Chalmers, 2023). While entrepreneurial human capital is a crucial driver of organizational outcomes, it is important to consider the broader context in which it operates. Factors such as environmental dynamics, market conditions, and institutional pressures can significantly influence the effectiveness of entrepreneurial human capital. Furthermore, the interaction between individual and organizational factors, such as organizational culture and leadership style, can enhance or hinder the impact of entrepreneurial human capital on organizational outcomes. Understanding these dynamics is crucial for effectively leveraging entrepreneurial human capital across multiple contexts and mechanisms.

Entrepreneurial experience contributes to firm success, with a focus on factors such as innovation, resource management, and leadership. Entrepreneurial experience not only fosters innovation and adaptability but also enhances the ability to navigate complex business environments, ultimately leading to improved firm performance. The ability to innovate and manage resources effectively is a key component of entrepreneurial human capital, enabling firms to adapt to changing market conditions and seize new opportunities (Zhu & Sun, 2023). Entrepreneurial experience facilitates the effective organization of resources, which is crucial for overcoming resource constraints and achieving sustainable growth. This involves strategic partnerships and leveraging external resources through service intermediaries (Mirkovski et al., 2024). Entrepreneurial leadership, shaped by experience, influences organizational culture and fosters a learning environment. These relationships are crucial for fostering innovation and improving firm performance (Shiferaw et al., 2023). The development of a supportive organizational culture, facilitated by entrepreneurial leadership, enhances a firm's ability to respond to environmental dynamics and institutional pressures, contributing to long-term success (Hasanah et al., 2023). Entrepreneurial experience contributes to the development of intellectual capital, which in turn enhances a firm's ability to innovate and maintain competitive advantage (Klingler-Vidra & Chalmers, 2023). These factors highlight the complexity of the relationship between entrepreneurial experience and firm success, suggesting that a holistic approach is needed to fully understand and leverage the benefits of entrepreneurial human capital.

Recent research has focused on understanding the dimensions of entrepreneurial human capital, including its antecedents, characteristics, and impact on organizational performance. Startup employees often prioritize independence and responsibility over job security and salary, distinguishing them from employees in established companies. This motivational difference contributes to higher innovative performance in startups, as these employees are more willing to take risks and embrace entrepreneurial challenges (Sauermann, 2017). Entrepreneurial communication is crucial for resource acquisition and stakeholder relationships in startups. Effective communication skills are part of the human capital that enables entrepreneurs to secure investment and build networks with venture capitalists and angel investors (Kaiser & Kuckertz, 2024). Employees with entrepreneurial skills contribute to innovation and competitive advantage, highlighting the importance of nurturing such talent within the organization (Blanka, 2019). Microenterprises, as a subset of SMEs, face unique growth constraints due to their owner-manager-centric nature and underdeveloped capabilities. These challenges underscore the need for targeted human capital support and development to facilitate growth and overcome constraints (Gherhes et al., 2016). Understanding how governance mechanisms interact with human capital can provide insights for improving firm outcomes and fostering an environment conducive to entrepreneurship (Chen et al., 2024). A more comprehensive understanding of corporate entrepreneurship, including its antecedents and consequences, is needed. Future research should explore the various dimensions of corporate entrepreneurship and how they relate to human capital development (Urbano et al., 2022). The field of high-growth entrepreneurship requires further exploration of its foundational work to build coherence and legitimacy. Understanding the role of human capital in fostering high-growth ventures can inform strategies for scaling up and sustaining growth (Lechuga-

Sancho et al., 2023). While a focus on entrepreneurial human capital highlights its crucial role in innovation and growth, it is important to consider broader organizational and environmental factors that influence its effectiveness. For example, the role of business incubators and accelerators in supporting technology-based ventures underscores the importance of external support structures in enhancing human capital capabilities (Pereira, 2022). This perspective suggests that a holistic approach, considering both internal and external factors, is necessary to fully leverage entrepreneurial human capital within an organizational context.

The integration of entrepreneurial human capital into organizational productivity is a multifaceted process involving various mechanisms, contexts, and outcomes. Entrepreneurial human capital plays a critical role in driving innovation, competitive advantage, and overall firm performance. This framework considers the interplay between individual-level intrapreneurship, corporate entrepreneurship, and the broader entrepreneurial ecosystem, highlighting the importance of human capital in these areas. Entrepreneurial employees, or intrapreneurs, contribute significantly to innovation within organizations. Their ability to identify opportunities and drive change is crucial for maintaining competitive advantage (Blanka, 2019). Individual-level intrapreneurship is crucial for fostering a culture of innovation and creativity within the firm (Alam et al., 2020). Corporate entrepreneurship involves organizational-level initiatives that leverage entrepreneurial human capital to enhance productivity. The dynamics of human capital accumulation and depletion, particularly in failing organizations, impact productivity. Understanding these flows can help organizations retain talent and prevent failure (Amankwah-Amoah, 2018). Effective corporate governance mechanisms can enhance the impact of entrepreneurial human capital by aligning individual and organizational goals. These interactions are crucial for achieving desired firm outcomes (Li et al., 2020). The broader entrepreneurial ecosystem, including regional and institutional factors, influences how entrepreneurial human capital contributes to productivity (Alvedalen & Boschma, 2017). The integration of artificial intelligence and other Industry 4.0 technologies can enhance entrepreneurial human capital capabilities, leading to improved decision-making and performance (Giuggioli & Pellegrini, 2022). Entrepreneurial human capital is a crucial factor in shaping regional and organizational performance (Audretsch et al., 2024). Entrepreneurial human capital contributes to various dimensions of firm performance, including financial success, workplace relationships, and personal satisfaction (Wach et al., 2020). Furthermore, the interaction between corporate governance mechanisms and entrepreneurial human capital requires further exploration to fully understand its impact on firm outcomes (Li et al., 2020).

Although numerous studies have examined the relationship between entrepreneurial human capital and firm performance, most studies have focused on direct effects, thus providing limited understanding of the organizational mechanisms through which entrepreneurial experience translates into organizational productivity and firm outcomes. This study addresses this gap by systematically synthesizing and critically evaluating existing empirical evidence to identify the mechanisms and organizational contexts that shape the effectiveness of entrepreneurial human capital. The novelty of this review lies in its mechanism-based perspective, explaining direct effects by integrating insights from human capital theory, the resource-based view, and the dynamic capabilities perspective into a unified framework. Thus, this systematic literature review aims to examine how entrepreneurial human capital, specifically entrepreneurial experience, contributes to organizational productivity and firm performance, identify the organizational mechanisms that mediate these relationships, explore the contextual conditions under which these effects occur, and develop an integrative conceptual framework that advances theoretical understanding and informs managerial practice and future research.

METHOD

Research Design and Review Approach

This study adopts a systematic literature review (SLR) approach to synthesize empirical evidence on the relationship between entrepreneurial human capital and organizational productivity. The review follows established guidelines for systematic reviews in management research, emphasizing transparency, reproducibility, and theory-driven analysis. The objective of the review is to integrate existing empirical findings and develop a comprehensive understanding of how entrepreneurial human capital, particularly entrepreneurial experience, contributes to organizational productivity and firm outcomes. To structure the review process, the study follows a multi-stage procedure consisting of research question formulation, systematic literature search, study selection, quality assessment, data extraction, and synthesis of findings. The review process is guided by the CIMO framework (Context–Intervention–Mechanism–Outcome), which is widely used in management and organizational research to explain how specific resources or practices produce outcomes within particular organizational contexts.

Research Question Development

The research question is developed using the CIMO framework, which allows for a thorough investigation of the causal mechanisms that link organizational resources to performance outcomes. In this framework, Context means the organizational setting where entrepreneurial activities take place, specifically in small and medium-sized enterprises and startups. Intervention represents the main focus of this review, which is entrepreneurial human capital, especially highlighting the experiences and skills of the founders or managers in entrepreneurship. The mechanism includes the organization process where entrepreneurial human capital affects the company's results. This includes innovation abilities, organizational learning, and management skills. Finally, the results refer to the organization's productivity indicators and the company's performance. Based on this framework, this study discusses the following research question: Through what mechanisms and in which organizational contexts does entrepreneurial human capital, particularly entrepreneurial experience, contribute to organizational productivity and company outcomes? This research question allows this review to go beyond just identifying a simple link between human capital and performance. Instead, it focuses on the mechanisms that explain how this relationship develops within organizations.

Literature Search Strategy

A systematic search strategy was created to find relevant empirical studies that address the research questions. The search was conducted in the Scopus database, which is widely recognized as one of the most comprehensive databases for peer-reviewed academic literature in business and management research. The search query is created by putting together keywords related to human capital in entrepreneurship, organizational mechanisms, company outcomes, and the organizational context. The search strategy was created using Boolean operators to capture the different terms used in the literature. The final summary includes keywords such as entrepreneurial experience, entrepreneurial human capital, innovation ability, organizational learning, company performance, and small and medium-sized enterprises (SMEs). The search was intentionally designed to be broad enough to include a variety of studies that examine the connection between entrepreneurial human capital and organizational outcomes. After the initial search, some filters were used to make sure the studies found were relevant and of good quality. Only journal articles published in English are included, and the search is limited to articles that have been published. To capture the latest developments in this field, the publication period is limited to studies published between 2022 and 2026. This criterion creates an initial set of articles that serves as a starting point for the screening process.

Study Selection Procedure

The study selection process consisted of several steps designed to ensure that only studies that align with the research questions were included in the final dataset. The screening process began with title screening, followed by abstract screening and full-text review. During the title screening process, each article was assessed based on its relevance to the main concepts of the review, which include entrepreneurial human capital, how organizations operate, and company outcomes. To maintain objectivity during the title screening stage, a scoring matrix based on the CIMO framework was used. Titles were assessed based on their relevance to the organizational context, entrepreneurial human skills, mediation methods used, and organizational outcomes. Articles with a clear relationship to the research topic were retained for further evaluation, while those not relevant to the topic were excluded. During the abstract screening stage, studies were assessed based on predetermined inclusion and exclusion criteria derived from the research question. This study aimed to examine human capital in entrepreneurship or entrepreneurial experiences within an organizational context. Furthermore, it analyzed the relationship between this human capital and company outcomes such as productivity, growth, or performance. Studies that only looked at psychological outcomes at the individual level, entrepreneurship education, or macroeconomic issues that had no bearing on firm-level outcomes were not included in this research.

Quality Assessment

To ensure the credibility of the evidence combined in this review, the methodological quality of the selected studies was assessed using the Mixed Methods Assessment Tool (MMAT). The MMAT was chosen because it was specifically designed to assess the quality of studies using various design types, including quantitative, qualitative, and mixed methods, which are frequently used in entrepreneurship research. Each study was assessed separately by two external reviewers using the MMAT criteria. The assessment focused on such aspects as the appropriateness of the research design, the adequacy of the sampling procedures, the validity of the measurement instruments, and the appropriateness of the analytical methods. Disagreements between the reviewers were discussed until consensus was reached. The resulting scores were recorded and incorporated into the synthesis process to demonstrate the accuracy of the methods used in the included studies.

Data Extraction

Following the quality assessment process, key information was extracted from each selected article using a structured data extraction form. This extraction process focused on variables directly related to the research questions and the CIMO framework. Information extracted from each study included bibliographic details, study design, geographic location, population or sample characteristics, methodological approach, organizational context, outcome variables, ways in which entrepreneurial human capital relates to firm outcomes, key findings, study limitations, and MMAT quality scores. The extraction process helped us organize information across studies and identify patterns in how entrepreneurial human capital has been understood, applied, and linked to organizational outcomes in the literature. The structured extraction table also assisted in further integrating findings across different aspects of the analysis.

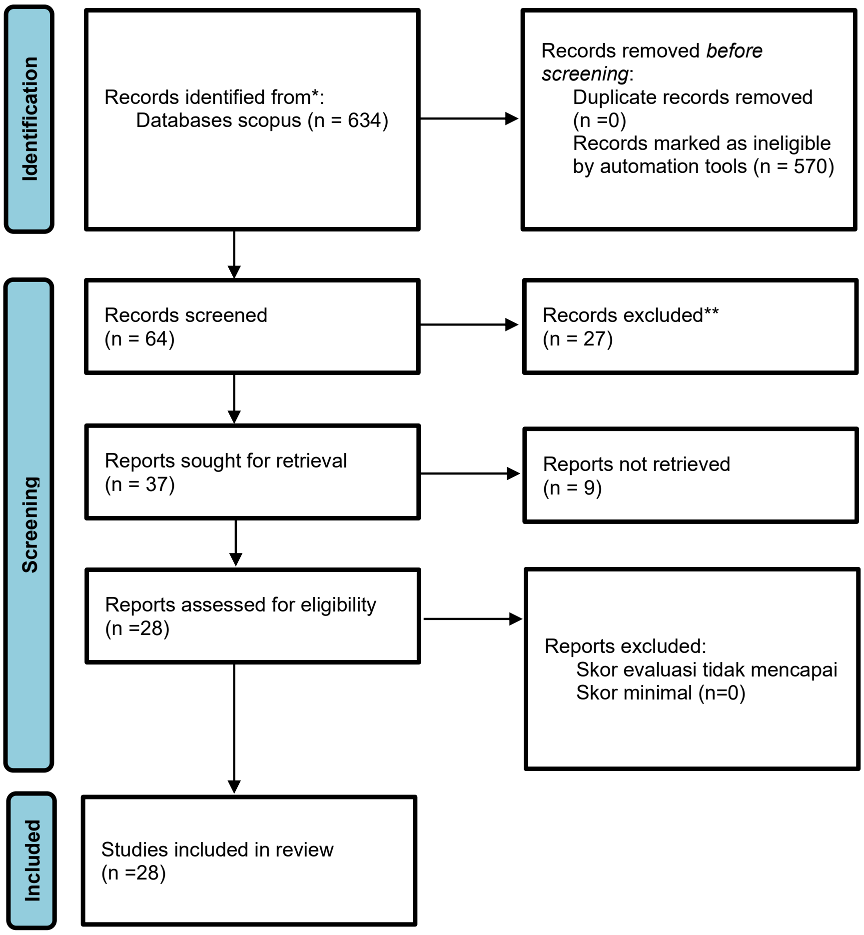
Data Synthesis

The final stage of the review involved combining the extracted data to identify patterns, relationships, and gaps in the existing research in the literature. A narrative synthesis approach was used to combine the results from multiple studies, as differences in research methods and measurement methods made statistical meta-analysis inappropriate. The synthesis process aimed to identify recurring themes and relationships among key elements of the CIMO framework. The synthesis was conducted across multiple analytical dimensions, including the characteristics of the reviewed literature, understandings of entrepreneurial human capital, the ways in which human capital relates to organizational outcomes, the organizational environments in which these relationships occur, and the outcomes used to assess firm performance. Furthermore, the synthesis examined the findings of the studies, evaluated the methodological quality of the available evidence, and identified gaps in the existing literature. By combining these analytical aspects, the review provides a comprehensive understanding of how entrepreneurial human capital can enhance organizational productivity and firm performance through specific organizational mechanisms within specific contexts. The synthesis also served as a foundation for building a conceptual framework that integrates insights from the reviewed research and suggests directions for future research.

RESULT AND DISCUSSION

Studi Selection

Based on a search of the Scopus database, 634 articles were found. No duplicate records were removed. Articles were then filtered, resulting in articles, of which 570 remained. The titles and abstracts of the 64 articles were read, and 27 articles were discarded, leaving 37 articles. Of the articles downloaded, 9 failed, leaving 28 articles. The 28 articles were submitted to the validator and all met the quality requirements, and all 28 articles were retained. (Fig 1)



Source: Data processed by researcher, 2026

Fig. 1. PRISMA Flow-Chart of studi selection

Characteristics of Literature

The reviewed literature indicates that research on entrepreneurial human capital and organizational performance has increased in recent years, particularly during the 2022–2026 period. Most studies were conducted in the context of small and medium-sized enterprises (SMEs) and startups, focusing on the role of entrepreneurial experience, skills, and competencies in enhancing firm performance. Geographically, the research is dominated by developing countries such as Indonesia (Harini et.al, 2023; Fiernaningsih et.al, 2024; Mawardi et,al 2025; Gaffar et.al, 2022; Komalasari et.al 2024; Yanto et.al, 2022). South Africa (Mabasa et.al, 2023; Andreas et.al; 2025; Harrison &Pooe, 2022; Wube & Atwal, 2023;), Malaysia (Ahmad et.al, 2024), China (Ding & Li, 2023; Jiang, He & Ye, 2025; Shao et.al, 2024), Turki (Dinibutun & Sait, 2024), India (Dominic et.al, 2023), Spain (Alzate et.al 2025; Botella et.al, 2024; Griva et.al, 2023), Amerika Serikat (Woods et.al, 2022), Denmark (Braunerhjelm & Lappi, 2023; , Ethiopia (Gebrekidan,T.H, & Tessema,2024), Peru (Bejarano et.al, 2024), Inggris (Brown et.al, 2025), Germany (Heubeck,2023) and Marocco (Mouhtat et.al, 2025).

Table 1. Charateristics of the studies included

No	Author	Design	Sample	Result
1	Alzate et.al, 2025	Qualitative	106 countries	Entrepreneurs need to prioritize experienced teams and innovative, technology-based business models. Meanwhile, policymakers must

				strengthen human capital, technological innovation, and access to funding. Both are crucial to driving sustainable growth in NTBF.
2	Mouthtat & Fatima, 2025	Qualitative	339 companies	The relationship between organizational learning and entrepreneurial competency development can improve performance.
3	Mawardi et.al, 2025	Qualitative	110 culinary small to medium size	Developing good financial behavior and entrepreneurial skills can improve the business performance of SMEs.
4	Brown et.al, 2025	kualitatif	metode etnografi	The success of a company's scaling is determined by the entrepreneur's ability to manage relationships and actively orchestrate various growth triggers amidst managerial challenges.
5	Andreas et.al, 2025		217 young entrepreneur	Higher levels of education can increase the impact of entrepreneurial skills on business performance.
6	Bado et.al, 2025	Qualitative	600 seaweed MEMEs	Positive psychological capital influences the growth of entrepreneurial mindset through mediating the transfer of entrepreneurial knowledge.
7	Jiang; He; Ye, 2025	Kuatitatif	6198 firms	Business relationships have a significant positive impact on innovation, but the impact of business relationships on product and process innovation is asymmetric.
8	Shao et.al, 2024	Qualitative	2,350 companies	The level of managerial competence, entrepreneurial competence, and technological competence in the executive team has a positive impact on the company's innovation performance.
9	Komalasari et.al, 224	Qualitative	156 SMEs	Management knowledge has a positive effect on business performance, with dynamic capabilities and entrepreneurial competencies acting as key mediators. However, government policies do not significantly moderate this relationship. This study highlights the importance of internal organizational capabilities in improving SME performance.
10	Fiernaningsih et.al. 2024	Qualitative	400 SME respondents	Entrepreneurial competencies and intentions significantly influence entrepreneurial resilience and SME performance
11	Botella et.al, 2024	fsQCA	employees of different organizations	New insights that enable business development and growth enhancement.
12	Bejarano et.al, 2024	Qualitative	91 business people	Develop strategies and policies to strengthen entrepreneurship and quality management in SMEs, thereby contributing to sustainable growth and competitiveness of the business sector.

13	Ahmad et.al, 2024	Qualitative	265 owners/ managers of small and medium enterprises	There is a significant relationship between managerial skills, entrepreneurial skills, business skills, and strategic planning. However, no empirical support was found for the mediator in the relationship between technical skills and firm performance.
14	Dinibutun & Said, 2024	Qualitative	400 business owners of SMEs	Cultivating an entrepreneurial spirit is crucial for the growth of new SMEs. Therefore, entrepreneurship education must inspire entrepreneurs to be innovative and energetic.
15	Gebrekidan & Chebo, 2024	kwantitatif	245 small manufacturing business owners	Small business capabilities are enhanced through a strong entrepreneurial ecosystem, particularly when academia-industry relationships are well-developed. This influence is mediated by entrepreneurial skills and managerial expertise in strengthening a company's technological capabilities and resources.
16	Wube & Atwal, 2023		499 MSE operators	Political-legal aspects of the entrepreneurial ecosystem significantly influence entrepreneurial competence and MSME performance. However, entrepreneurial competence does not significantly influence performance and does not mediate the relationship between policies or the business environment and MSME performance.
17	Mabasa et.al, 2023	Qualitative	the construction SMME owners	SME owners assess that the main contribution of their businesses is job creation and improving entrepreneurial skills.
18	Heubeck et.al, 2023	Qualitative	205 firms	Managers' entrepreneurial skills are key to implementing DBMT, which plays a crucial role in a company's competitive advantage and financial performance in the digital age. This influence is further strengthened when supported by strong social capital and interconnectedness between components of digital management and control.
19	Braunerhjelm & Lappi, 2023	Qualitative	368.993 firms.	The higher the entrepreneurial human capital (EHC) of employees, the higher the company's productivity. This impact is influenced by the diversity of previous entrepreneurial experiences, such as business type, duration, reasons for entry/exit, and technological relevance.
20	Harini et.al, 2023	Qualitative	520 respondents	Entrepreneurial skills and e-commerce adoption have a positive effect on SME performance. Technological readiness, top management support, and competitive pressure influence e-commerce adoption and improve SME performance.
21	Ding & Li, 2023	kwantitatif	414 entrepreneurs	Structural social capital, relational social capital, and social capital influence entrepreneurial performance. Exploratory and exploitative innovation of new ventures play a mediating role in the relationship between social capital and entrepreneurial performance.

22	Moshi & Matotola, 2023	Qualitative	102 firms	Personal, interpersonal, and business competencies have an influence on the profitability of SMEs.
23	Lismah et.al, 2023	Kualitatif	100 respondents	Entrepreneurship has been shown to provide significant financial benefits in various states of India,
24	Gaffar et.al, 2022	Kualitatif	Indonesia's Micro, Small and Medium-sized Enterprises (MSMEs).	MSMEs have played a significant and vital role in the Indonesian economy during the pandemic.
25	Woods et.al, 2022	Qualitative	283 new venture founders	Leveraging guanxi specifically for entrepreneurial experience leads to greater employee growth and conversely, leveraging core family members for management or technical expertise leads to lower levels of the same performance variables.
26	Yanto et.al, 2022	Qualitative	204 MSMEs	The sustainability of MSMEs is influenced by the digital and financial literacy of MSME owners.
27	Hazudin et.al, 2022	Qualitative	543 micro-entrepreneurs	Social capital influences business performance
28	Harrison & Pooe, 2022	Qualitative	207 SMEs	The ability to learn and assimilate new knowledge greatly helps the sustainability of SMEs.

Source: Data processed by researcher, 2026

The findings indicate that research on entrepreneurial human capital and organizational performance has increased significantly in the 2023–2025 period. Most of the research was conducted on small and medium-sized enterprises (SMEs) and start-ups, focusing on entrepreneurial experience, skills, and competencies in improving company performance. Geographically, research is dominated by developing countries such as Indonesia, China, India, Ethiopia, and Turkey, although some studies also originate from developed countries such as Finland and Spain. From a methodological perspective, the majority of research uses a quantitative, survey-based approach with analytical techniques such as regression or structural equation modeling. The primary unit of analysis in this research is the business owner, founder, or company management team. This indicates that the literature in this field places more emphasis on the influence of individual entrepreneur attributes on organizational performance.

Conceptualizing Entrepreneurial Human Capital

The analysis shows that entrepreneurial human capital is usually understood as a combination of business skills, managerial abilities, business knowledge, and entrepreneurial experience possessed by an entrepreneur or a company's management team. In many studies, this term encompasses the ability to identify business opportunities, manage organizational resources, and develop appropriate business strategies. Many studies highlight entrepreneurial skills and managerial experience as key aspects of entrepreneurial human capital. Furthermore, some studies also use entrepreneurial education and knowledge as important factors in enhancing innovation and managerial capacity within organizations.

Therefore, entrepreneurial human capital in the literature can be understood as a multidimensional construct, reflecting various human capabilities that support business success.

Connecting Mechanisms

A literature synthesis indicates that the influence of entrepreneurial human capital on organizational performance generally does not occur directly, but rather through various organizational mechanisms. The mechanisms most frequently identified in research are innovation, organizational learning, and managerial capability development. Through innovation, entrepreneurial experience and skills enable companies to create new products, enhancing their competitiveness and performance. In addition to innovation, several studies indicate that organizational learning and knowledge sharing play a role in leveraging entrepreneurial experience more effectively within organizations. Managerial skills and dynamic capabilities also emerge as mechanisms that help companies integrate resources and adapt business strategies to changes in the market environment.

Organizational Context

Most of the research in the dataset was conducted on small and medium-sized enterprises and start-ups, demonstrating that entrepreneurial human capital plays a crucial role in organizations with limited resources and relatively simple structures. In this context, the entrepreneurial experience and knowledge of business owners are key factors influencing strategic decisions and company performance. The literature also shows a wide variety of industry contexts and geographic regions. Research covers various sectors such as manufacturing, services, technology, and micro-enterprises. Furthermore, the economic context of developing countries is often the focus of research because entrepreneurial human capital is considered crucial in driving business growth in resource-constrained environments.

Organizational Outcomes

Organizational outcomes are generally measured through various company performance indicators, including financial performance, business growth, operational efficiency, and innovation performance. Many studies use indicators such as profitability, sales growth, or overall company performance as primary measures of organizational success. In addition to financial indicators, some studies also assess organizational performance through operational indicators such as productivity, business process efficiency, and the company's innovation capability. This demonstrates that the influence of entrepreneurial human capital on an organization can manifest itself across various performance dimensions that reflect overall business success.

Research Findings

Most studies show that entrepreneurial human capital has a positive influence on organizational performance. Entrepreneurial experience, managerial competence, and business skills are consistently associated with increased firm productivity, business growth, and profitability. This influence often occurs through organizational mechanisms such as innovation and learning. However, some studies also show that this relationship is not always direct or consistent. In some cases, the impact of entrepreneurial human capital on firm performance is influenced by contextual factors such as the quality of business networks, the institutional environment, or the firm's level of innovation.

Methodological Quality of Studies

The results of the MMAT assessment indicate that most studies in the dataset have moderate to high methodological quality. Many studies used quantitative, survey-based research designs with appropriate statistical analysis techniques to test relationships between variables. However, several methodological limitations were identified, particularly related to the use of cross-sectional research designs, which limit the study's ability to explain causal relationships between variables. Furthermore, some studies had relatively small sample sizes or were limited to specific geographic contexts, which may affect the generalizability of the research findings.

Research Gaps

The literature synthesis shows that although numerous studies have addressed the relationship between entrepreneurial human capital and organizational performance, several research gaps remain. One key gap is the limited variety of organizational mechanisms studied, as most studies focus solely on innovation or organizational capabilities as the primary mediator. Furthermore, the literature also highlights limitations in research context and methodological design. Most studies conducted on SMEs in developing countries use cross-sectional designs, so there is scope for longitudinal research and expanding the study to different types of organizations and economic contexts.

DISCUSSION

The studies reviewed in Table 1 demonstrate that entrepreneurial competence is an important determinant of business performance, innovation, sustainability, and business growth. Across the 28 studies, entrepreneurial competence is generally associated with the ability of entrepreneurs and managers to recognize opportunities, manage resources, develop innovations, adapt to environmental changes, and improve organizational performance. However, the findings also indicate that entrepreneurial competence does not operate in isolation. Its contribution to business outcomes is frequently strengthened or mediated by organizational learning, technological capabilities, social capital, managerial competencies, digital adoption, education, and the broader entrepreneurial ecosystem.

Entrepreneurial Competence and Business Performance

A dominant theme emerging from the reviewed studies is the positive relationship between entrepreneurial competence and business performance. Mawardi et al. (2025), for example, found that financial behavior and entrepreneurial skills contribute to improving the performance of culinary SMEs. Similarly, Fiernaningsih et al. (2024) demonstrated that entrepreneurial competencies and entrepreneurial intentions significantly influence entrepreneurial resilience and SME performance. Moshi and Matotola (2023) further showed that personal, interpersonal, and business competencies influence SME profitability. These findings suggest that entrepreneurial competence encompasses not only technical knowledge but also behavioral and relational capabilities that enable entrepreneurs to manage their businesses more effectively.

This conclusion is reinforced by Ahmad et al. (2024), who found significant relationships among managerial skills, entrepreneurial skills, business skills, and strategic planning. Dinibutun and Said (2024) also emphasized the importance of entrepreneurial spirit in supporting the growth of new SMEs. Collectively, these studies suggest that entrepreneurs with stronger competencies are more capable of formulating strategies, identifying opportunities, managing resources, and responding to competitive pressures.

However, the relationship between entrepreneurial competence and performance is not universally direct. Wube and Atwal (2023) reported that entrepreneurial competence did not significantly influence MSME performance and did not mediate the relationship between policy or the business environment and performance. This finding is important because it indicates that possessing entrepreneurial competence alone may not automatically translate into superior business outcomes. The effectiveness of entrepreneurial competence may depend on the availability of resources, institutional support, market conditions, and the entrepreneur's ability to apply knowledge in practice.

Entrepreneurial Competence, Learning, and Knowledge

Entrepreneurial Competence and Innovation

The literature also establishes a strong connection between entrepreneurial competence and innovation. Shao et al. (2024), based on 2,350 companies, found that managerial, entrepreneurial, and technological competencies within executive teams positively influence innovation performance. Jiang, He, and Ye (2025), using data from 6,198 firms, further showed that business relationships have a significant positive effect on innovation, although their effects on product and process innovation are asymmetric.

These findings indicate that innovation requires a combination of entrepreneurial and organizational capabilities. Entrepreneurial competence enables managers to recognize opportunities and take calculated risks, while technological competence enables firms to transform those opportunities into new products, services, or processes. Consequently, firms with entrepreneurial competence but insufficient technological capabilities may face difficulties converting entrepreneurial ideas into commercially valuable innovations.

The role of entrepreneurial competence in innovation is also evident in Ding and Li (2023). Their study showed that structural and relational social capital influence entrepreneurial performance, while exploratory and exploitative innovation in new ventures plays a mediating role. This suggests that entrepreneurs benefit not only from their own competencies but also from their ability to build and utilize relationships that provide access to information, knowledge, resources, and innovation opportunities.

The Role of Managerial and Technological Capabilities

The reviewed studies demonstrate that entrepreneurial competence frequently overlaps with managerial and technological capabilities. Alzate et al. (2025), using evidence from 106 countries, emphasized the importance of experienced teams and technology-based business models while highlighting the need for policymakers to strengthen human capital, technological innovation, and access to finance. Similarly, Gebrekidan and Chebo (2024) found that an entrepreneurial ecosystem strengthens small business capabilities, particularly when academia-industry relationships are well developed. Entrepreneurial skills and managerial expertise mediate the strengthening of technological capabilities and resources.

Heubeck et al. (2023) further demonstrated that managers' entrepreneurial skills are important in implementing digital business management and technology, which subsequently contributes to competitive advantage and financial performance. These findings imply that entrepreneurial competence becomes increasingly important in the digital economy because entrepreneurs must simultaneously manage traditional business activities and understand technological transformation.

Harini et al. (2023) provided further evidence by demonstrating that entrepreneurial skills and e-commerce adoption positively affect SME performance. Technological readiness, top management support, and competitive pressure influence e-commerce adoption. Thus, entrepreneurial competence can facilitate digital transformation, but successful digital adoption also requires organizational readiness and managerial support.

Social Capital and Entrepreneurial Ecosystems

Several studies emphasize that entrepreneurial competence is embedded within a broader social and institutional environment. Hazudin et al. (2022) found that social capital influences business performance, while Ding and Li (2023) demonstrated the importance of structural and relational social capital in entrepreneurial performance. Woods et al. (2022) showed that different forms of social relationships have different consequences for entrepreneurial outcomes. Specifically, leveraging relationships for entrepreneurial experience can support employee growth, whereas excessive reliance on family members for management or technical expertise may produce less favorable outcomes.

These findings indicate that not all relationships generate equivalent benefits. Entrepreneurs need the competence to identify, develop, and strategically utilize appropriate networks. Therefore, social capital should not simply be regarded as the existence of business relationships but also as the entrepreneur's ability to mobilize those relationships effectively.

The entrepreneurial ecosystem provides another important contextual dimension. Gebrekidan and Chebo (2024) showed that relationships among academia and industry contribute to the development of small business capabilities. Wube and Atwal (2023) also demonstrated that political and legal aspects of the entrepreneurial ecosystem significantly influence entrepreneurial competence. These findings imply that individual entrepreneurial capabilities can be strengthened or constrained by the institutional environment. Access to universities, government programs, finance, technology, networks, and supportive regulations can determine whether entrepreneurial competence can be effectively converted into business performance.

Education and Human Capital as Supporting Factors

Education and human capital emerge as important factors that strengthen the relationship between entrepreneurial competence and business outcomes. Andreas et al. (2025) found that higher levels of education can increase the impact of entrepreneurial skills on business performance. Braunerhjelm and Lappi (2023), using a very large sample of 368,993 firms, found that higher entrepreneurial human capital among employees is associated with greater firm productivity. The effect is also influenced by the diversity of employees' previous entrepreneurial experiences.

These findings suggest that entrepreneurial competence should not be viewed exclusively as an attribute of business owners. Entrepreneurial human capital may also exist among employees and managers and can contribute to organizational productivity and innovation. Firms can therefore benefit from developing entrepreneurial capabilities throughout the organization rather than concentrating them solely at the top management level.

The importance of education is also highlighted by Dinibutun and Said (2024), who argued that entrepreneurship education should encourage entrepreneurs to become innovative and energetic. This indicates that entrepreneurship education should move beyond theoretical knowledge toward practical competence development, including opportunity recognition, innovation, strategic decision-making, digital skills, financial management, and networking.

Digitalization and SME Sustainability

The reviewed studies also demonstrate the increasing importance of digital and financial capabilities for SME sustainability. Yanto et al. (2022) found that digital and financial literacy among MSME owners influences business sustainability. Harini et al. (2023) similarly identified e-commerce adoption as an important factor in improving SME performance.

These findings are particularly relevant because digital transformation changes the competencies required of entrepreneurs. Traditional entrepreneurial capabilities such as opportunity recognition, risk-taking, and resource management remain important, but they increasingly need to be complemented by digital literacy, data utilization, e-commerce capabilities, and technological readiness. Therefore, future entrepreneurial competency models should incorporate digital competencies as an integral rather than supplementary dimension.

Entrepreneurial Competence and Business Growth

The literature also indicates that entrepreneurial competence is important during different stages of business development. Brown et al. (2025), using an ethnographic approach, found that successful scaling depends on the entrepreneur's ability to manage relationships and actively orchestrate different growth triggers while dealing with managerial challenges. This qualitative finding complements the quantitative evidence from other studies by showing that business growth is not merely a consequence of possessing entrepreneurial skills but also of applying those skills dynamically during organizational expansion.

Alzate et al. (2025) similarly emphasized experienced teams and innovative technology-based business models as important elements in sustainable growth. Botella et al. (2024), using fsQCA, provided additional evidence that different combinations of organizational conditions can generate business development and growth. The use of a configurational approach is particularly relevant because it suggests that there may be multiple pathways through which firms achieve growth rather than a single universal formula.

Contradictory Findings and Research Gaps

Despite the predominantly positive findings, the reviewed literature contains several inconsistencies. The most notable example is Wube and Atwal (2023), who found that entrepreneurial competence did not significantly affect business performance. Ahmad et al. (2024) also found that although managerial, entrepreneurial, and business skills were significantly related to strategic planning, there was no empirical support for the mediating role examined between technical skills and firm performance. These findings suggest that the relationship between competence and performance may be contingent upon specific organizational and environmental conditions.

Another important gap concerns the predominance of quantitative research. Most of the studies in Table 1 employ quantitative designs, while only a limited number use qualitative, ethnographic, or configurational approaches. Quantitative studies are valuable for identifying relationships among variables, but they may provide limited understanding of how entrepreneurs actually develop and apply competencies in real-world situations. The qualitative findings of Brown et al. (2025), for example, demonstrate the value of examining entrepreneurial behavior and decision-making processes within their organizational and social contexts.

There is also a geographical and contextual gap. The studies involve different countries, industries, and types of enterprises, ranging from culinary SMEs and manufacturing businesses to seaweed micro-enterprises, construction SMMEs, and technology-oriented firms. Such diversity is valuable, but it also makes direct comparison difficult because entrepreneurial competence may operate differently across industries, institutional environments, firm sizes, and stages of business development.

Overall Synthesis

Overall, the evidence from the 28 studies suggests that entrepreneurial competence is a **multidimensional and context-dependent capability**. It contributes to business performance, innovation, resilience, productivity, sustainability, and growth, but its effects are strengthened when combined with organizational learning, managerial capability, technological readiness, digital literacy, social capital, education, and supportive entrepreneurial ecosystems.

The literature therefore supports a shift from viewing entrepreneurial competence as an individual characteristic toward understanding it as part of a broader capability system. Entrepreneurs need not only the ability to identify and exploit opportunities but also the capacity to learn continuously, build strategic relationships, adopt technology, manage financial resources, and mobilize external support. At the organizational level, firms need to create an environment that allows these competencies to be translated into innovation and performance.

Thus, future research should examine **how entrepreneurial competencies interact with digital capabilities, organizational learning, social capital, and entrepreneurial ecosystems to influence SME performance and sustainability**. Greater use of longitudinal, qualitative, and mixed-method approaches would also help explain how entrepreneurial competencies develop over time and under what conditions they produce superior business outcomes. Such an approach would provide a more comprehensive understanding of why entrepreneurial competence generates strong performance in some firms but produces limited effects in others.

The synthesis of the reviewed studies indicates that entrepreneurial human capital plays a significant role in enhancing organizational productivity, primarily through organizational mechanisms such as innovation capability, knowledge transfer, and managerial capabilities. The findings suggest that the influence of entrepreneurial experience on firm outcomes is rarely direct; rather, it operates through internal organizational processes that enable firms to transform human capital into productive activities. Furthermore, the results highlight that the effectiveness of entrepreneurial human capital is strongly conditioned by organizational context, including firm size, industry characteristics, and the institutional environment.

The findings of this review are broadly consistent with earlier research in entrepreneurship and strategic management that identifies human capital as a key determinant of firm performance. However, while previous studies have primarily focused on direct relationships between human capital and firm outcomes, the present review extends the literature by emphasizing the mediating role of organizational mechanisms such as innovation and learning processes. This synthesis also complements prior theoretical perspectives, particularly the human capital theory and the resource-based view, by demonstrating how entrepreneurial human capital interacts with organizational capabilities to generate competitive advantages.

The findings provide practical insights for entrepreneurs, managers, and policymakers regarding the importance of developing entrepreneurial human capital within organizations. For practitioners, the results suggest that investing in entrepreneurial skills development, managerial training, and knowledge-sharing practices can significantly enhance innovation capability and organizational productivity. For policymakers, the review highlights the importance of designing policies and training programs that strengthen entrepreneurial competencies among business owners and managers, particularly within SMEs operating in emerging economies.

Future studies should explore additional organizational mechanisms beyond innovation and organizational learning that may mediate the relationship between entrepreneurial human capital and productivity.There is also a need for more longitudinal and multi-level studies that can better capture the dynamic nature of entrepreneurial human capital and its long-term impact on organizational performance. Expanding research into diverse organizational contexts, including large firms, multinational corporations, and different institutional environments, would further enrich the understanding of how entrepreneurial human capital operates across different settings.

One of the key strengths of this review lies in its systematic and transparent methodology, which ensures that the synthesis of evidence is comprehensive and reproducible.The use of the CIMO framework allows the study to structure the analysis around context, mechanisms, and outcomes, thereby providing a more nuanced understanding of how entrepreneurial human capital contributes to organizational productivity.

Despite its contributions, this review has several limitations that should be acknowledged. First, the review relies on articles indexed in a single database and published within a specific time frame, which may limit the comprehensiveness of the literature included. Second, the heterogeneity of research designs and measurement approaches across the reviewed studies may constrain the comparability of findings and limit the ability to draw definitive causal conclusions.

CONCLUSION

This systematic literature review demonstrates that entrepreneurial human capital, particularly entrepreneurial experience, plays a significant role in enhancing organizational productivity and firm performance. The synthesis of empirical evidence reveals that this relationship is largely indirect and operates through key organizational mechanisms such as innovation capability, organizational learning, and managerial capabilities. These mechanisms enable firms to transform individual-level knowledge, skills, and experience into productive organizational outcomes. Furthermore, the effectiveness of entrepreneurial human capital is influenced by contextual factors, including firm size, industry characteristics, and the economic environment, with the strongest effects observed in SMEs operating in emerging economies.

Despite the overall consistency of positive findings, the review also highlights several limitations in the existing literature. Most studies rely on cross-sectional designs and focus on limited contexts, which constrains the ability to establish causal relationships and generalize findings across different organizational settings. In addition, the literature remains concentrated on a narrow set of mechanisms, primarily innovation and learning, leaving other potential pathways underexplored.

Based on these findings, several recommendations can be proposed. For practitioners, organizations should invest in developing entrepreneurial skills, managerial competencies, and knowledge-sharing practices to enhance innovation and productivity. For policymakers, there is a need to design targeted programs that strengthen entrepreneurial capabilities, particularly within SMEs. For researchers, future studies should adopt longitudinal and multi-level approaches to better capture the dynamic nature of entrepreneurial human capital, explore a broader range of mediating mechanisms, and examine diverse organizational contexts to advance theoretical and empirical understanding in this field.

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