

Revisiting Entrepreneurial Opportunity Recognition: An Integrative Systematic Review of Human Capita, Cognition, and Capabilities

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Abstrak

This study aims to systematically examine the relationship between human capital, cognitive capital, and capabilities in determining entrepreneurial opportunities. This study is a systematic literature review utilizing 19 articles obtained from Scopus-indexed Google Scholar and selected using the PRISMA protocol. Based on the results of the analysis of these articles, it is evident that human capital, cognitive capital, and capabilities play a significant role in analyzing business opportunities. This finding emphasizes the importance of an integrative approach in understanding the entrepreneurial process, particularly in recognizing and exploiting business opportunities. This study contributes by proposing an integrative framework that links human capital, cognition, and entrepreneurial capabilities, positioning opportunity recognition as a dynamic and multi-layered process. This finding has addressed a literature gap that has not been analyzed in depth, such as integrating the three things discussed in this paper. Therefore, future research is needed that combines these three things (human capital, cognitive capital, and capabilities) with quantitative methods using primary data so that this analysis can be proven accurately.

Keyword

Entrepreneurial Human Capital, Opportunity Recognition, Entrepreneurial Cognition, Entrepreneurial Capabilities, Entrepreneurial Alertness.

INTRODUCTION

Opportunity recognition refers to the process by which individuals identify potential opportunities for new ventures by interpreting information, evaluating market needs, and recognizing viable entrepreneurial possibilities (Allen et al., 2021). Entrepreneurial opportunities are understood as a means of creating new goods, services, or production methods that have the potential to generate profits. Studies on entrepreneurial opportunities have focused on various aspects such as the nature and sources of opportunities, the discovery process, methods of evaluation and exploitation, and the factors influencing the formation of opportunities and an individual's ability to recognize them (Camelo-Ordaz et al., 2020). Entrepreneurial opportunities can be influenced by human capital, cognitive and capability factors (Faroque et al., 2023; Huang et al., 2026).

Entrepreneurial human capital has been widely studied in entrepreneurship research as a key resource that enhances an individual's ability to evaluate information, interpret environmental signals, and identify entrepreneurial opportunities. Empirical evidence supports this argument by showing that experiential knowledge significantly contributes to entrepreneurial opportunity identification because founders and managers with greater experience are better able to recognize emerging market prospects and interpret market signals (Faroque et al., 2023). External market knowledge plays a crucial role in enhancing opportunity recognition and improving firm performance, indicating that knowledge-based human capital is a key driver of entrepreneurial opportunity identification. (Mostafiz et al., 2022).

In addition to human capital components, cognitive abilities are also important in shaping entrepreneurial behavior. Cognitive resources influence how entrepreneurs perceive, interpret, and process information related to potential opportunities. Cognitive characteristics such as alertness, perception, and mental processing play a crucial role in determining how entrepreneurs interpret environmental signals and identify potential business opportunities (Montiel-Campos, 2022). Entrepreneurship education can significantly increase entrepreneurial awareness, which in turn increases individuals' intention to engage in entrepreneurial activities (Wibowo et al., 2023).

The capability-based approach is also gaining increasing attention in entrepreneurship. Capabilities can strengthen entrepreneurial alertness and influence entrepreneurs' ability to return to entrepreneurial activity after failure, suggesting that competencies play a crucial role in shaping entrepreneurial opportunity recognition and decision-making processes (Wang et al., 2025). The increasing development of human capabilities enables entrepreneurs to navigate an increasingly complex and uncertain entrepreneurial environment (Samuvel et al., 2024).

Although research on human, cognitive, and capability capital and entrepreneurial opportunities has been conducted, these studies tend to be conducted separately rather than integrated within a comprehensive theoretical framework. Most previous research was conducted within the context of a specific country or environment, resulting in limited empirical evidence examining the relationship between these three variables in different contexts, particularly in dynamic and evolving entrepreneurial environments. Therefore, this study is important to fill this gap by examining the integrated role of human, cognitive, and capability capital in influencing entrepreneurial opportunity recognition, thereby providing a more comprehensive understanding of the process of business opportunity formation. The purpose of this study is to synthesize the relationship between human, cognitive, and capability capital in recognizing entrepreneurial opportunities. The uniqueness of this study lies in its integrative approach, which combines human, cognitive, and capability capital within a single framework to explain entrepreneurial opportunity recognition. Furthermore, this study offers a holistic model that explains the interaction of knowledge, thought processes, and individual abilities in recognizing business opportunities.

LITERATURE REVIEW

1. The Concept of Supply and Demand

The concept of demand–supply was developed as an analytical approach to more deeply identify changes in market conditions. Changes in price and quantity do not directly indicate whether the cause is demand- or supply-side, so it is necessary to distinguish between movements along the supply curve and shifts in the demand curve. (Lusk & Tonsor, 2021). Supply-demand is defined as the interaction between customer needs for products (demand) and the availability and distribution of goods in the supply chain (supply), which must be dynamically aligned through inventory control and the flow of goods so that the supply chain system runs efficiently, responsively, and is able to minimize imbalances such as excess or lack of stock (Kegenbekov & Jackson, 2021). So, understanding supply and demand is not only theoretically important for reading market changes, but is also crucial practically in managing the supply chain to keep it balanced and optimal.

2. Islamic Economics

Islamic economics is an economic system and study based on Islamic values to create justice, prosperity and a social order oriented towards the common good, not just individual profit (Zaman, 2022). Islamic economics is a system based on Sharia principles, which rejects the practice of interest (riba) and replaces it with profit-sharing and risk-sharing mechanisms such as mudarabah and musharaka. This system also prohibits investment in businesses that are inconsistent with Islamic values, emphasizing real-sector economic activity and avoiding speculation, excessive uncertainty (gharar), and gambling (maisir) (Ghlamallah et al., 2021). Thus, this system rejects the practice of usury and replaces it with profit and risk sharing mechanisms such as mudarabah and musharaka, and prohibits investment in activities that are not in accordance with Islamic values.

Table 1. Perbandingan Ekonomi Syariah dengan Ekonomi Konvensional

Draft	Socialist	Capability	Islamic
Source	Very limited	Very limited	Unlimited
Riches	Scarcity of Resources	Scarcity of Resources	
Ownership	Every individual is free to own all the wealth he acquires.	The source of wealth is obtained from empowering the workforce	The source of wealth that we have is a trust from Allah SWT.
Objective	Personal satisfaction	Optimizing income	Prosperity in this world and the hereafter

Source: Wijayanto (2023)

3. Human Capital Towards Entrepreneurial Opportunities

Human Capital Theory states that individuals possess accumulated knowledge, skills, education, and experience that enhance productivity and economic performance. In the context of entrepreneurship, entrepreneurial human capital is viewed as a critical resource that enables individuals to more effectively identify and evaluate business opportunities. Prior experience, market knowledge, and skill diversity contribute significantly to enhancing an individual's ability to recognize potential business opportunities (Faroque et al., 2023; Krieger et al., 2022). In addition, human capital also plays a role as a factor that strengthens the relationship between individual personality characteristics and entrepreneurial behavior, so that individuals with higher human capital tend to be more responsive in taking advantage of existing opportunities (Zhuang & Sun, 2024).

Entrepreneurial intelligence, in turn, is a key ingredient in the entrepreneurial process, helping individuals recognize and manage business opportunities more effectively. In this process, the emergence of a tendency to experience fear of failure in various contexts can play a dual role, to some extent providing an advantage to founder-managers in managing the companies they run (Montiel-Campos, 2022). However, if this fear becomes excessive, it can become a psychological barrier to entrepreneurship. This barrier can reduce an individual's courage to take risks, weaken their intention to start a business, and hinder the decision-making process in exploiting existing business opportunities (Gao et al., 2024). Referring to this opinion, human capital is the main foundation that determines the quality of an individual's ability to recognize and evaluate entrepreneurial opportunities, but its effectiveness is greatly influenced by the individual's cognitive and psychological conditions.

4. Cognition Towards Entrepreneurial Opportunities

Opportunity recognition is a core concept in entrepreneurship research. However, the mechanisms by which passion influences opportunity recognition, and the conditions under which this relationship occurs, are not well understood (Zhu et al., 2025). New opportunities are

potentially open for future business actors and managers to develop a culture of creativity and focus on the adoption of digital technology by considering digital talents in HR activities that bridge the growth of novelty in innovation thinking and real innovation capabilities for entrepreneurial progress (Budiarti & Firmansyah, 2024).

Entrepreneurship is inherently a creative activity, so cognitive flexibility has the potential to positively influence entrepreneurial efficacy. In assessing their own abilities, individuals generally rely not only on rational considerations but are also influenced by their emotions and cognitive processes (Alves & Yang, 2022). So cognitive is a person's ability to read opportunities by utilizing their creativity to make decisions in recognizing and evaluating business opportunities (Nwosu et al., 2022). The argument that can be built from this statement is that the recognition of entrepreneurial opportunities does not only depend on rational and structural factors, but is also greatly influenced by emotional, cognitive and contextual aspects of the ever-evolving digital innovation environment.

5. Capabilities Towards Entrepreneurial Opportunities

Entrepreneurship is a relatively new but rapidly growing field and has been promoted in various countries, thus attracting great attention from academics because of its significant role in shaping the global professional environment (Thai et al., 2023). Along with this increased attention, knowledge production in business research has also experienced rapid growth. However, this rapid development has not always been accompanied by strong knowledge consolidation, as existing studies tend to be fragmented and interdisciplinary in nature. (Snyder, 2019). Entrepreneurship development can be done by using technology (Festa et al., 2023).

The capability-based view emphasizes that entrepreneurial success is determined not only by the ownership of resources, but also by the entrepreneur's ability to manage and transform those resources into valuable strategic actions. This ability is strongly influenced by the environmental context in which entrepreneurship takes place, one of which is the entrepreneurial ecosystem (Pitelis et al., 2024). Entrepreneurial ecosystems provide specialized structures and cluster-based knowledge that support business model experimentation and scale-up. However, each ecosystem offers varying levels of support in facilitating these processes, making these differences important factors to consider when deciding where to establish a new business (Autio et al., 2018).

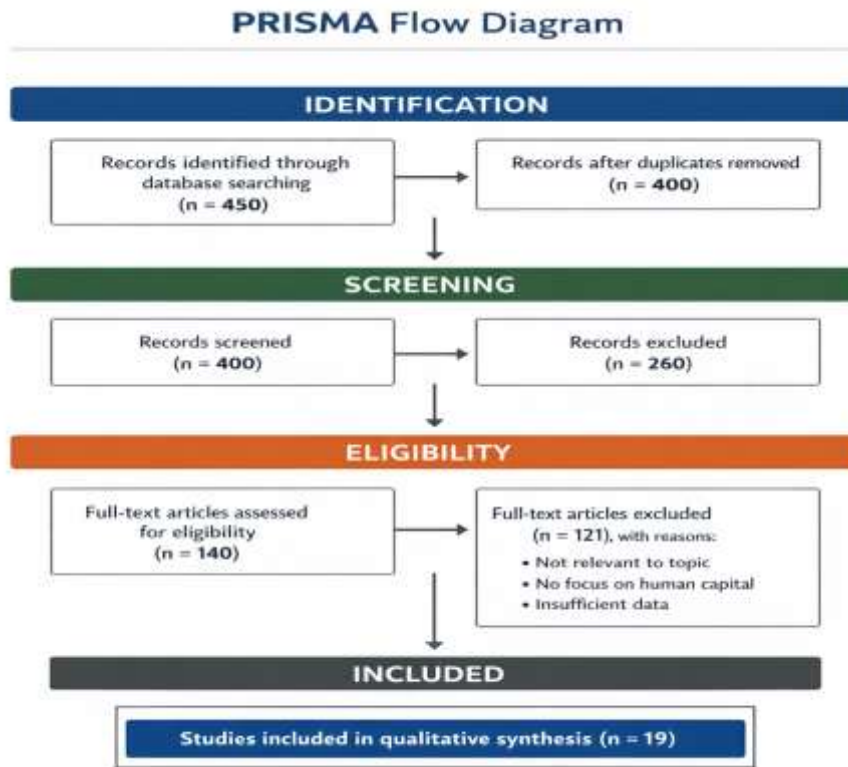
RESEARCH METHOD

This study uses a Systematic Literature Review (SLR) approach to systematically synthesize and analyze existing research on the relationship between human resources, cognition, and capabilities and entrepreneurial opportunities. Systematic literature reviews are widely used in management and entrepreneurship research to provide a structured and transparent synthesis of knowledge by applying explicit procedures to identify, select, and evaluate relevant studies (Page et al., 2021). This research was supported by Scopus-indexed articles from 2020 to 2026. The search for these articles was conducted in March 2026.

The article search process used a structured search series applied to the title and keywords. The search series was compiled using a combination of keywords in Google Scholar with the keywords human capital entrepreneurship, opportunity recognition, cognition, and entrepreneurial ability found a total of 450 articles. Next, a selection was carried out based on the years 2020-2026 found 400 articles. After that, a selection was carried out based on the relevance of the articles according to the topic found 260 articles. Next, the articles were selected again based on indicators so that 140 relevant articles were found. The articles that have been found were selected again based on journal status such as Scopus Q1-Q4 found a total of 121 articles and articles used in the research were the final selection stage of Scopus Q1-Q3 totaling 19 articles.

In this study, the review process followed the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA 2020) guidelines, which provide a standardized framework for conducting and reporting systematic reviews to enhance transparency,

methodological rigor, and reproducibility (Page et al., 2021). Following the PRISMA framework, the study selection process consisted of four sequential stages: identification, screening, eligibility assessment, and inclusion. The systematic methodology adopted in this study ensured that the review process was transparent, replicable, and consistent with best practices in systematic literature review research in entrepreneurship and management (Page et al., 2021; Snyder, 2019).. The PRISM diagram for article selection is shown below:



RESULT

This research is supported by 19 Scopus-indexed articles discussing entrepreneurial human capital and opportunity recognition. The purpose of adopting these articles is to strengthen the theoretical and empirical foundations related to the relationship between human capital, cognitive processes, capabilities, and the ability to recognize and exploit entrepreneurial opportunities. Furthermore, the use of these internationally reputable articles also aims to increase the validity and credibility of the research results. The benefits of adopting these articles include providing a more comprehensive understanding of the factors influencing entrepreneurial success, serving as references in developing research models, and providing relevant scientific contributions for academics and practitioners in designing human resource development strategies oriented towards creating business opportunities.

Table 2: Synthesis of Core Studies on Entrepreneurial Human Capital and Opportunity Recognition

N o.	Author (s) and Year	Journal	Major Theory/Perspe ctive	Research Focus	Method	Key Findings
1	Alomani et al., (2021)	<i>Small Business Economics</i>	Human Capital Theory; Resource-Based Perspective	Human, social, and cognitive resources of nascent	Quantitativ e	Human capital interacts with social and

				entrepreneur s		cognitive resources in shaping entrepreneur ial decision- making and opportunity identificatio n.
2	Faroque et al., (2023)	<i>Asian Business & Management</i>	Human Capital Theory; Experiential Knowledge Perspective	Experiential knowledge and international opportunity identificatio n	Quantitativ e	Founders' experiential knowledge significantly improves the identificatio n of international opportunitie s.
3	Mostafiz et al., (2022)	<i>Strategic Change</i>	Knowledge- Based View; Opportunity Recognition Perspective	Foreign market knowledge and opportunity recognition	Quantitativ e	International market knowledge enhances opportunity recognition and export performance .
4	Wang et al., (2025)	<i>Asia Pacific Journal of Management</i>	Dynamic Capability Theory; Entrepreneurial Alertness Perspective	Digital capability and entrepreneur ial alertness	Quantitativ e	Digital technologica l capability strengthens entrepreneur ial alertness and reentry intention after failure.
5	Samuvel et al., (2024)	<i>Foresight and STI Governance</i>	Capability Approach; Entrepreneurial Ecosystem Perspective	Human capability developmen t in entrepreneur ial ecosystems	Conceptual	Entrepreneur ial ecosystems require capability development to support opportunity discovery.
6	Wibowo et al., (2023)	<i>Cogent Education</i>	Human Capital Theory; Entrepreneurial Alertness Theory	Entrepreneu rial education and alertness	Quantitativ e	Entrepreneur ship education enhances opportunity recognition

						through entrepreneurial alertness.
7	Huang et al., (2026)	<i>Journal of Innovation & Knowledge</i>	3C Framework; Innovation Capability Perspective	Predictors of entrepreneurship using the 3C framework	Machine Learning	Human capital and cognitive capabilities are key predictors of entrepreneurial innovation and opportunity discovery.
8	Fei & Shuangyan (2024)	<i>Humanities and Social Sciences Communications</i>	Cognitive Perspective; Opportunity Recognition Theory	Opportunity recognition abilities among students	Qualitative	Opportunity recognition consists of cognitive perception, opportunity evaluation, and action capability.
9	Partonezhad et al., (2025)	<i>Results in Engineering</i>	Theory of Planned Behavior; Human Capital Perspective	Entrepreneurial behavior formation among students	Quantitative	Psychological traits and human capital jointly influence entrepreneurial capability development.
10	Allen et al., (2021)	<i>Strategic Entrepreneurship Journal</i>	Cognitive Ability Theory; Emotional Intelligence Perspective	Cognitive abilities and entrepreneurial success	Meta-analysis	General mental ability and emotional intelligence significantly influence entrepreneurial outcomes.
11	Montiel-Campos (2022)	<i>Serbian Journal of Management</i>	Entrepreneurial Alertness Theory; Fear of Failure Perspective	Entrepreneurial alertness and fear of failure	Quantitative	Entrepreneurial alertness increases opportunity recognition despite psychological barriers.

12	Krieger et al., (2022)	<i>Small Business Economics</i>	Human Capital Theory; Skill Variety Perspective	Skill variety and entrepreneurial human capital	Quantitative	Diverse skills significantly strengthen entrepreneurial opportunity recognition ability.
13	Tang et al., (2008)	<i>Journal of Business Research</i>	Entrepreneurial Alertness Theory	Entrepreneurial alertness meta-analysis	Meta-analysis	Alertness is a core cognitive mechanism explaining opportunity identification.
14	Alves & Yang (2022)	<i>Journal of Innovation & Knowledge</i>	Cognitive Flexibility Theory; Entrepreneurial Competence Perspective	Cognitive flexibility and entrepreneurship competence	Quantitative	Cognitive flexibility improves opportunity evaluation capability.
15	Zhuang & Sun (2024)	<i>SAGE Open</i>	Institutional Theory; Human Capital Perspective	Human capital and entrepreneurial behavior	Quantitative	Human capital moderates the effect of institutional environment on entrepreneurial actions.
16	Gao et al., (2024)	<i>Heliyon</i>	Psychological Perspective; Fear of Failure Literature	Entrepreneurial fear of failure	Scoping Review	Psychological factors influence entrepreneurial decision making and opportunity perception.
17	Autio et al., (2018)	<i>Digital Economy Research</i>	Digital Capability Perspective; Digital Entrepreneurship Theory	Digital entrepreneurial capability	Conceptual	Digital capability enables opportunity discovery in digital ecosystems.
18	Thai et al., (2023)	<i>SAGE Open</i>	Entrepreneurial Ecosystem Perspective; Capability Development	Entrepreneurial ecosystem literature	Systematic Literature Review	Human capability development supports opportunity

						discovery in complex ecosystems.
19	Snyder (2019)	<i>Journal of Business Research</i>	Literature Review Methodology	Literature review methodology	Methodological	Provides a methodological framework for conducting systematic literature reviews in business research.

Based on the table presented, a comprehensive analysis can be conducted by grouping the findings into several key patterns that demonstrate the relationship between human capital, cognition, capabilities, and entrepreneurial opportunity recognition. Overall, the literature indicates that entrepreneurial success is determined not only by human capital alone, but also by how that capital is processed through cognitive processes and developed into adaptive capabilities. Opportunity recognition emerges as a result of the interaction between knowledge, experience, thinking skills, and environmental support and psychological factors. Thus, the relationship between variables is a chain, where human capital, cognition, and capabilities drive the ability to recognize and exploit entrepreneurial opportunities. The model diagram of this relationship is as follows:



DISCUSSIONS

Theme 1. Human Capital Towards Entrepreneurial Opportunities

Entrepreneurial human capital refers to the accumulation of education, knowledge, skills, and experience that enable individuals to effectively identify and evaluate potential business opportunities. Individuals with higher levels of human capital are better able to interpret environmental signals, recognize emerging market trends, and evaluate the viability of potential opportunities. Empirical evidence suggests that the diversity of accumulated skills and experiences significantly enhances an individual's entrepreneurial competence and increases their likelihood of identifying viable opportunities. (Krieger et al., 2022). Human resources need to be equipped with entrepreneurship education (e.g., business, opportunities, digital entrepreneurship, funding, market research) can increase students' awareness of new digital business opportunities (Wibowo et al., 2023). Human resource capital includes survival, innovation, and sales growth, profitability, or employment among others (Marvel et al., 2016).

Human resources play a crucial role in identifying entrepreneurial opportunities. A founder's prior experience has been shown to enhance their ability to recognize and develop business opportunities, while managers' market knowledge also positively influences opportunity discovery. However, when combined, the effect is insignificant, suggesting that human resources are more effective individually than collectively in fostering entrepreneurial opportunities (Faroque et al., 2023). However, contemporary entrepreneurship studies increasingly emphasize that human capital alone does not directly lead to opportunity recognition (Tang et al., 2008). By facilitating human capital and social capital, the main focus is to contribute to entrepreneurial outcomes that impact job creation and economic growth, rather than on illegal entrepreneurial activities or businesses with low profit margins, where migrant entrepreneurs only compete through price and are trapped in long working hours with low wages (Polychronopoulos & Nguyen-Duc, 2024).

Entrepreneurial human capital serves as a crucial foundation that shapes an individual's ability to recognize and evaluate business opportunities through education, knowledge, skills, and experience. The higher the human capital, the better an individual's ability to understand the business environment, interpret market changes, and assess the feasibility of business opportunities. However, this influence is not direct or automatic, as it is still influenced by the individual's ability to process information and the context in which they are faced. Therefore, human capital is more appropriately viewed as a fundamental factor that needs to be supported by cognitive processes and experience to truly generate entrepreneurial opportunities.

Theme 2. Cognition Towards Entrepreneurial Opportunities

Human resource cognition plays an important role in encouraging entrepreneurs to develop opportunities because the ability to think, understand information, and process knowledge will help individuals recognize market potential, make the right decisions, and create valuable innovations (Alomani et al., 2021). Cognitive ability has a positive influence on entrepreneurial success, although the magnitude is relatively small compared to other factors such as emotional intelligence. Individuals with high cognitive abilities tend to have better thinking capacity in information processing, problem solving, and decision-making, especially in complex and uncertain situations (Allen et al., 2021).

Cognitive flexibility is an individual's ability to adapt and change their thinking when faced with complex situations. It consists of reactive flexibility (responding to environmental changes) and spontaneous flexibility (producing responses without external prompting), and reflects the ability to adapt and choose from a variety of alternative courses of action (Alves & Yang, 2022). Cognitive factors have the most dominant influence on business opportunities. Cognitive factors encompass motivation, opportunity perception, and how individuals assess the risks and benefits of entrepreneurship. Motivations such as the need to earn a living, the desire to continue family traditions, and the drive to achieve prosperity are key predictors of entrepreneurial engagement. Furthermore, perceptions of business opportunities and environmental support also strengthen an individual's decision to become an entrepreneur (Huang et al., 2026).

Human cognitive resources play a crucial role in shaping entrepreneurial opportunities because the ability to think, process information, and understand knowledge helps individuals identify market opportunities and make informed decisions. Individuals with high cognitive abilities are more effective at processing information, solving problems, and navigating complex and uncertain situations. Furthermore, cognitive flexibility supports adaptability to environmental changes, while motivation and opportunity perception contribute to strengthening entrepreneurial decisions. Thus, cognition is a key factor influencing the formation of business opportunities through a combination of thinking skills, adaptability, and individual drive.

Theme 3. Capabilities Towards Entrepreneurial Opportunities

Human capability development in the entrepreneurial ecosystem plays a vital role in enabling entrepreneurs to adapt to complex and rapidly changing environments, thereby enhancing their opportunity recognition capabilities (Samuvel et al., 2024). Digital and

technological capabilities increasingly enable entrepreneurs to detect opportunities in the digital ecosystem (Wang et al., 2025). Capabilities play a crucial role in mitigating the risks involved in running a business. They help companies identify appropriate international opportunities and improve performance (Mostafiz et al., 2022). The desire to become an entrepreneur occurs because individuals have the competence to carry out an activity and the extent to which individuals feel that they have this competence (Partonezhad et al., 2025).

Explicit capabilities, such as the knowledge and skills needed by entrepreneurs to see entrepreneurial opportunities, can be likened to an iceberg visible on the surface of the water, easily observed and measured, and can be improved through structured training programs. (Fei & Shuangyan, 2024). Capabilities influence business opportunities. Capabilities encompass an individual's abilities, skills, experience, and level of innovation in running a business. While experience starting a business and involvement in business activities can support the creation of business opportunities, capabilities are not the primary determinant. Capabilities play a more supportive role, strengthening the realization of business opportunities when supported by strong motivation and perception (Huang et al., 2026).

Human resource capability is a crucial factor in entrepreneurship because it supports adaptation to change, technology utilization, risk reduction, and the ability to identify business opportunities. However, capability is not the primary factor directly determining the emergence of opportunities; rather, it plays a supporting role, becoming effective when accompanied by strong individual motivation, perception, and self-confidence. Therefore, the successful identification and realization of business opportunities is the result of a combination of capability, technology, experience, and the entrepreneur's internal drive.

CONCLUSION

Based on an analysis of 19 articles used as references in the study, the conclusion is that human resources, cognitive abilities, and capabilities play a crucial role in entrepreneurs' opportunity recognition. These findings suggest that opportunity recognition should be understood as a multi-layered and interactive process involving the interaction between human capital, cognitive mechanisms, and entrepreneurial abilities.

From a scholarly perspective, this study makes important contributions to the entrepreneurship literature in several ways. First, it strengthens previous research by providing empirical and theoretical support for the role of entrepreneurial alertness and cognitive processes in opportunity recognition. Second, it challenges the traditional view that human capital is a direct predictor of entrepreneurial outcomes by demonstrating that its influence is mediated by cognitive mechanisms and ability development. Third, it introduces an integrative conceptual framework linking entrepreneurial human capital, cognition, and abilities to explain opportunity recognition more comprehensively. By combining insights from human capital theory, entrepreneurial cognition theory, and ability-based perspectives, this study enriches the theoretical discussion on opportunity recognition and provides a more holistic understanding of how entrepreneurs identify opportunities in the contemporary entrepreneurial environment. Furthermore, this review highlights the growing influence of digital transformation and the entrepreneurial ecosystem, suggesting that opportunity recognition increasingly relies on the interaction between individual abilities and the technological environment.

Despite these contributions, this study has several limitations. First, the review primarily focuses on studies published in major academic databases and within a specific time period, which may limit the coverage of previous foundational studies and emerging research beyond the selected sources. Second, this synthesis relies on existing empirical and conceptual studies, most of which employ quantitative methodologies, potentially limiting the exploration of contextual and qualitative insights related to the opportunity recognition process. Third, differences in research contexts, such as institutional environments and levels of digital development, may influence the relationships identified in the literature, which may limit the generalizability of the findings across different entrepreneurial ecosystems.

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