



## ENTREPRENEURIAL RECOGNITION: A REVIEW AND BIBLIOMETRIC ANALYSIS

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### ABSTRACT

**Phenomenon/Issue:** Entrepreneurial recognition is a pivotal but underexplored concept in entrepreneurship studies, particularly in understanding how individuals identify and act upon business opportunities. The current literature lacks conceptual clarity and systematic mapping of this domain.

**Purpose:** This study aims to conduct a comprehensive bibliometric analysis to map the landscape of entrepreneurial recognition research and identify key themes, gaps, and directions for future inquiry.

**Novelty:** Unlike prior studies that focus narrowly on opportunity recognition, this paper provides the first systematic bibliometric overview of "entrepreneurial recognition" using co-word analysis to uncover structural relationships between key concepts and trends.

**Research Methods:** A total of 198 publications from 2011 to 2021 were retrieved using the Publish or Perish software from Google Scholar. After applying selection criteria, 97 articles were analyzed using VOSviewer to conduct co-word mapping, and performance and science mapping approaches as suggested by Zupic & Čater (2015).

**Results:** The findings reveal that scholarly discussions around entrepreneurial recognition remain in early development, with core themes including opportunity identification, entrepreneurial alertness, and the role of human and social capital. The visualization outputs identify five research clusters and highlight a need for further exploration into conceptual clarity, theoretical diversity, and the role of entrepreneurial alertness.

**Research Contributions:** This study contributes to the entrepreneurship literature by providing a visual and thematic synthesis of entrepreneurial recognition research. It offers a foundation for scholars to refine theoretical frameworks, broaden methodological approaches, and investigate under-researched constructs such as entrepreneurial alertness and its impact on opportunity identification.

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## INTRODUCTION

Opportunity is the heart of entrepreneurship (Hanohov & Baldacchino, 2018). Opportunity is a condition when new goods and services can be introduced and sold to the market at a higher cost than the cost of production (Chang & Chen, 2020b). The existence of opportunity can not be identified by every people (Shane & Venkataraman, 2000), and it will lead to creating a new business idea (Gray et al., 2019).

The ability to recognize opportunity is called opportunity recognition. Opportunity recognition refers to an action taken by people to find and create a business because of market imperfection (Alvarez et al., 2015). Opportunity recognition results from discovery, intuition, and creation (Gray et al., 2019). According to this information, opportunity recognition can be divided into two: opportunity recognition is a creating process, and opportunity recognition is a searching process.

Opportunity recognition is an essential step in entrepreneurship (Hanohov & Baldacchino, 2018; Kuckertz et al., 2017). Entrepreneurs tend to recognize the opportunity when they can relate events that do not appear unrelated to a get profit (Santos et al., 2020). Successful entrepreneurs tend to see opportunities from the changing event, such as changing the market, government policies, demographics, and technology (Santos et al., 2020), while others tend to see the risk (Shane & Venkataraman, 2000).

Even though the previous research acknowledged the importance of opportunity recognition in entrepreneurship, the discussion related to sustainable entrepreneurial recognition is early (Hanohov & Baldacchino, 2018). This issue still lacks clarity in defining domains (Hansen et al., 2016; Wood, 2017). Some researchers put different attention to this issue, such as human capital and prior knowledge (Chen et al., 2020; Gray et al., 2019; Hansen et al., 2016), creativity and career success (Chang & Chen, 2020a), social capital (Gray et al., 2019; Hansen et al., 2016), and systematic search (Mary George et al., 2016).

According to these issues, this study conducts a bibliometric analysis to show the relevant research issues related to entrepreneurial recognition. The researchers obtained the data from Google Scholar (GS) database from 2011 to 2021. The researchers used Publish or Perish (PoP) software to collect data. The collected data were analysed by using co-word analysis in VOS Viewer software.

## LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

Entrepreneurial Opportunity Recognition (EOR) is a foundational concept in entrepreneurship, describing the process by which individuals identify viable business opportunities. Scholars have identified six primary factors influencing EOR: prior knowledge, social capital, cognitive and personality traits, environmental conditions, entrepreneurial alertness, and systematic search strategies. These factors collectively shape an entrepreneur's ability to perceive and act upon emerging market opportunities.

Prior knowledge and social capital are particularly significant in the opportunity recognition process. Individuals with extensive industry experience and robust networks are better positioned to identify and exploit entrepreneurial opportunities. Access to diverse information through social connections enhances the ability to recognize patterns and gaps in the market. This underscores the importance of both individual competencies and external relationships in successful entrepreneurship.

Entrepreneurial Alertness (EA) is a critical cognitive capability that enables individuals to notice and interpret information about potential opportunities. EA comprises three dimensions: scanning and search, association and connection, and evaluation and judgment. Research indicates that EA significantly contributes to opportunity recognition and is influenced by factors such as creativity, prior knowledge, and environmental dynamism. Developing EA can thus enhance an entrepreneur's ability to identify and capitalize on new ventures.

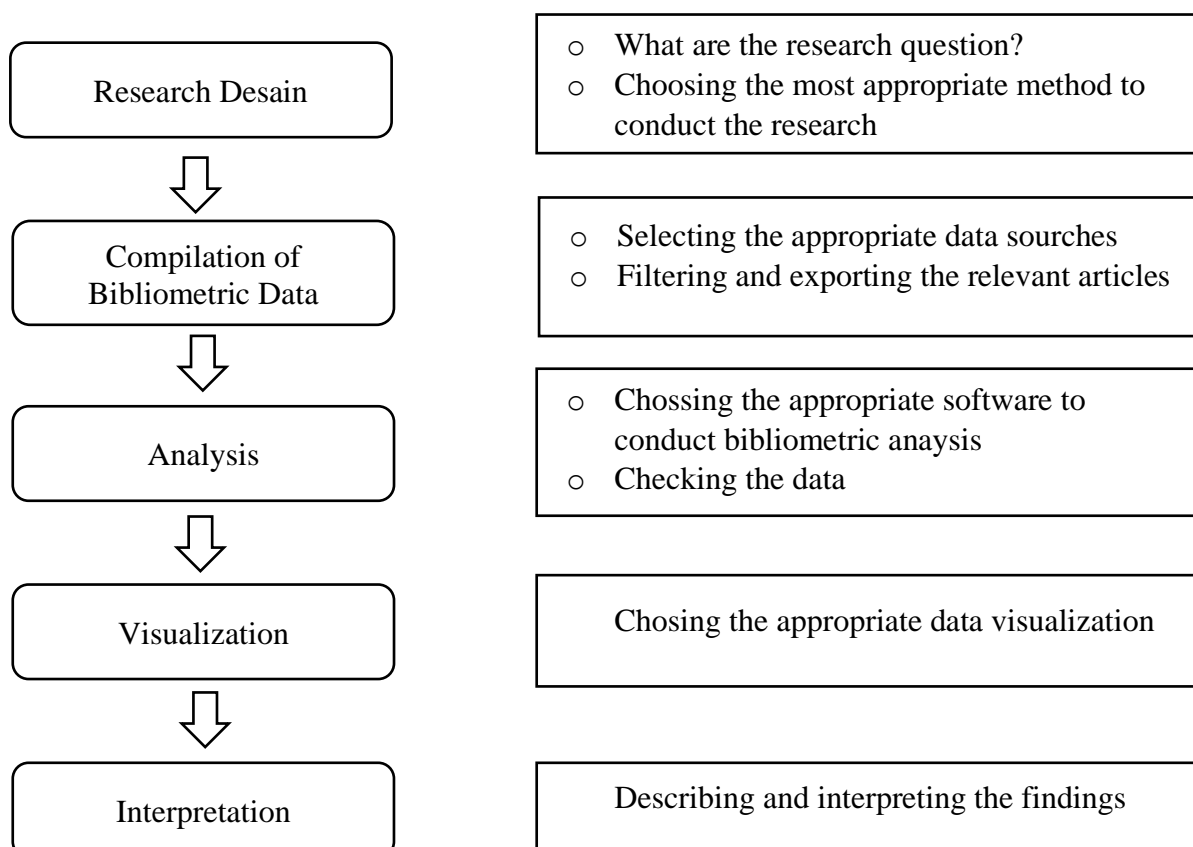
The interplay between EOR and EA is evident in various studies. For instance, psychological resilience has been found to predict EA, which in turn facilitates opportunity recognition. This relationship highlights the role of individual psychological traits in entrepreneurial processes. Additionally,

educational interventions aimed at fostering EA have shown promise in enhancing students' entrepreneurial intentions and capabilities. Despite the growing body of research, gaps remain in understanding the mechanisms linking EA and EOR. Future studies should explore the moderating effects of contextual factors, such as cultural and institutional environments, on this relationship. Moreover, longitudinal research designs could provide deeper insights into how EA develops over time and influences opportunity recognition across different entrepreneurial stages.

## METHOD

This study uses bibliometric analysis to reach the aims of the research. The bibliometric analysis uses secondary data (Terán-Yépez et al., 2021) and has two main functions: performance analysis and science mapping. Performance analysis evaluates the performance of institutions and authors in their research and publications. Science mapping aims to show the dynamics and structure of the scientific field (Zupic & Čater, 2015). Bibliometrics shows how the fields, specialists, disciplines, documents, and authors relate to each other (Terán-Yépez et al., 2021). Various fields have used bibliometric methods in their research (Zabavnik & Verbič, 2021).

This study adopts five bibliometrics stages developed by Zupic & Čater (2015): Research design, a compilation of bibliometric data, analysis, visualization, and interpretation. Figure 1 shows the details steps of this research.



Source : Resercher, 2025

**Figure 1 BIBLIOGRAPHIC STEPS**

### *Research Design*

Research design is the essential step in the research. The author should determine the research question developed and then decide the most appropriate bibliometric method to answer research questions

(Zupic & Čater, 2015). There are different methods in the bibliometric analysis: Citation, Co-citation, Bibliometric Coupling, Co-author, and Co-word. According to the research question developed in this study, the researchers used Co-word analysis. Co-word analysis connects keywords when they appear in the same title, abstract, or keyword list (Zupic & Čater, 2015).

### **Compilation of Bibliometric Data**

This study uses a Google Scholar database to collect the articles needed. Google Scholar is the biggest database source to get articles (Hudha et al., 2020). Google scholar is an alternative database source, and it covers complete citations in the humanities (Baneyx, 2008). The author uses Publish and Perish (PoP) software to collect the relevant articles. Publish and Perish (PoP) is a software that can retrieve and analyze articles provided by various databases such as Google Scholar, Microsoft Academic Search, and others. This software offers raw citations and then explores the h-index, g-index, the number of papers and citations, etc. (Parmar et al., 2019).

This study takes data from 2011 to 2021. Based on recommendation for a bibliometric time frame is five to ten years (Anand et al., 2021; Fonteyn et al., 2020). The authors use the keyword “Entrepreneurial Recognition.” The authors set 1000 articles because the maximum data search for PoP is 1000 articles. Based on the data searched on 18 January 2022, the author found 198 data. The authors filtered the collected data based on some criteria. The data included in the analysis must be in the form of an article. The author excluded the data because the data do not use the English language consisting of 7 data, without a year of publishing 13 data, the name of journal 17 data, the name of publisher 4 data, book form 8 data, and missing URL 2 data. The final data meeting the criteria consist of 97 articles.

### **Analysis**

This study conducts two steps to analyze the data; checking the data and choosing the appropriate software (Zupic & Čater, 2015). Checking the data means ensuring the element of data needed. Data saving in Research Information System (RIS) format were transferred to the Mendeley software. The authors checked all data manually to ensure titles, authors, journals, years, volumes, issues, abstracts, and keywords were available

This study uses VOS Viewer Software to analyze the data. This software is used because of its ability to analyse the big data sets, and able to visualise, analyse, and investigate the data effectively and interesting results (van Eck & Waltman, 2010). Some researchers have used this software to do bibliometric analysis (Anand et al., 2021; Hudha et al., 2020; Terán-Yépez et al., 2021). VOS Viewer can also create the author maps, journal maps, and co-citation maps according to the keyword searched (Hudha et al., 2020). The data was analyzed using co-word analysis. Co-word analysis analyzes data according to the connection of concepts appearing in the document’s titles, abstracts, and keywords (Zupic & Čater, 2015).

### **Visualization**

The authors used VOS Viewer to visualize the complete data. The visualization consists of network visualization showing the cluster and link of the concept. Overlay visualization showing the recency of concepts, and density visualization presenting the level of exploring to each concept.

### **Interpretation**

According to the visualization steps, the researchers describe and interpret the findings according to the literature review and previous research.

## Results

According to the search using the keyword “entrepreneurial recognition” in PoP software for 2011 – 2021, the researcher found 198 articles. After filtering by using some criteria, the final results were 97 articles. These data were obtained from the Google Scholar database. Before refining the data from 198 articles, the total citation was 2908, and the citation per year was 264.36. After refining, the final data consisting of 97 articles showed the entire citation was 2516, and citation per year was 228.73. Table 1 shows the details result of this study.

**Table 1.**  
**COMPARISON MATRICS**

Metrics Data	Original Data	Refinement Data
Key word	“entrepreneurial recognition”	“entrepreneurial recognition”
Publication years	2011-2021	2011-2021
Papers	198	97
Citations	2908	2516
Cites/year	246.36	228.73
Cites/paper	14.69	25.94
Authors/paper	1.81	2.14
h-index	24	22
g-index	52	49
hI-norm	18	16
hI-annual	1.64	1.45

Source : Reserchers, 2025

The researchers tried to show the most contributing articles in this study. Based on 99 articles, Table 2 presents the top 10 articles with the most citations.

**Table 2**  
**TOP 10 THE MOST CITATION ARTICLES**

No	Year	Authors	Title	Cites	Journal	Publisher
1	2011	P D Ellis	Social ties and international entrepreneurship: Opportunities and constraints affecting firm internationalization	654	Journal of International business studies	Springer
2	2013	E Chell	Review of skill and the entrepreneurial process	291	International Journal of Entrepreneurial Behavior & Research	Emerald
3	2016	N M George, V Parida, T Lahti, J Wincent	A systematic literature review of entrepreneurial opportunity recognition: insights on influencing factors	263	International Entrepreneurship and Management Journal	Springer
4	2014	M Guerrero, D Urbano, J Cunningham, Damien Organ	Entrepreneurial universities in two European regions: A case study comparison	256	Technological Forecasting and Social Change	Springer

5	2017	C Naumann	Entrepreneurial mindset: A synthetic literature review	64	Entrepreneurial Business and Economics Review	Uniwersytet Ekonomiczny w Krakowie
6	2011	B Lange	Professionalization in space: Social-spatial strategies of culturepreneurs in Berlin	64	Entrepreneurship and regional development	Taylor & Francis
7	2017	M H Bala Subrahmanya	How did Bangalore emerge as a global hub of tech start-ups in India? Entrepreneurial ecosystem — evolution, structure, and role	63	Journal of Developmental Entrepreneurship	World scientific
8	2018	D Miocevic, R E Morgan	Operational capabilities and entrepreneurial opportunities in emerging market firms: Explaining exporting SME growth	62	International Marketing Review	Emerald
9	2017	D Urbano, S Aparicio, M Guerrero, M Noguera, JoanTorrent-Sellens	Institutional determinants of student employer entrepreneurs at Catalan universities	51	Technological Forecasting and Social Change	Elsevier
10	2017	B Urban, E Wood	The innovating firm as corporate entrepreneurship	51	European Journal of Innovation Management	Emerald

Source : Reserchers, 2025

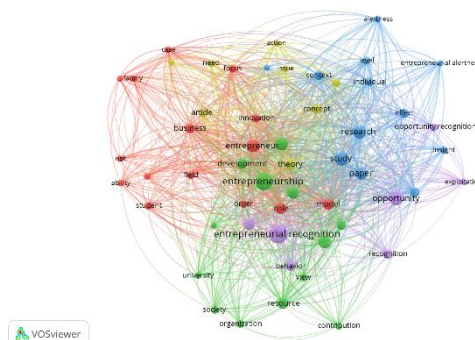
Table 3 shows the top 3 publishers who published articles on this topic.

**Table 1**  
**TOP 3 PUBLISHER**

No	Publisher	Articles
1	Springer	14
2	Emerald	9
3	Taylor & Francis	9

Source : Reserchers, 2025

According to the network visualization, there are 5 clusters consisting of red, yellow, green, blue, and purple. A cluster is a set of items on a map, and each item will not overlap with other clusters. This map



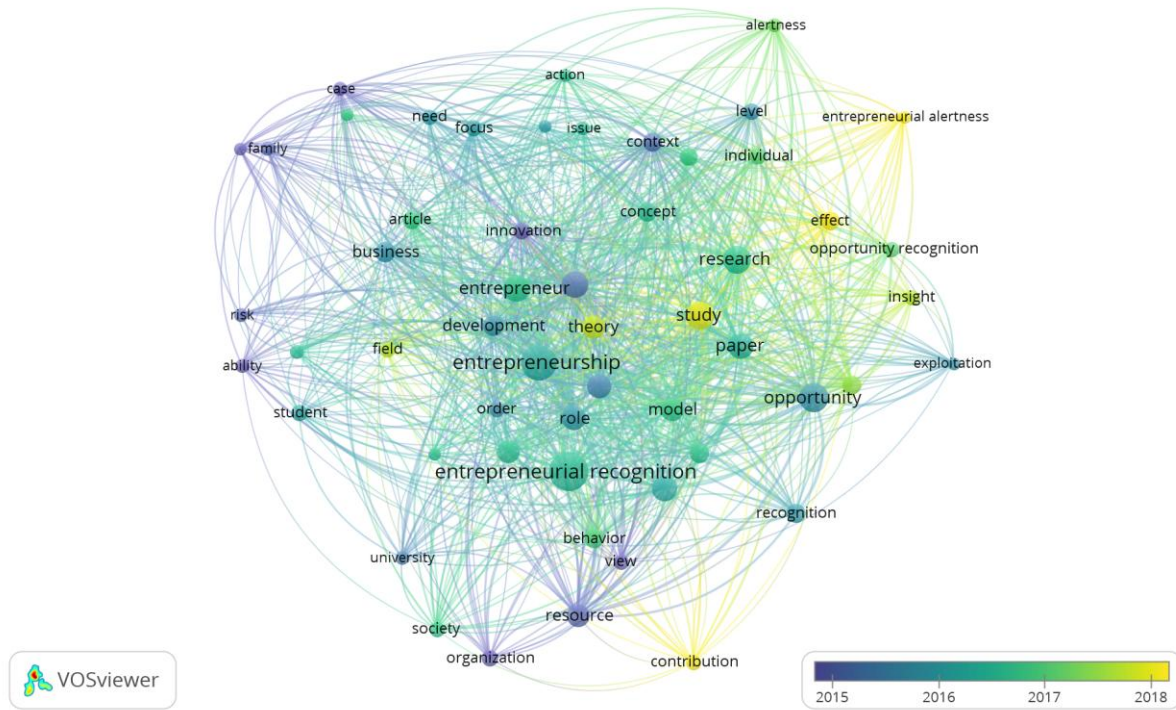


consists of 1082 links and 2665 total link strengths. Figure 1 shows the result of the network visualization.

Source : Reserchers, 2025

### Figure 2 NETWORK VISUALIZATION

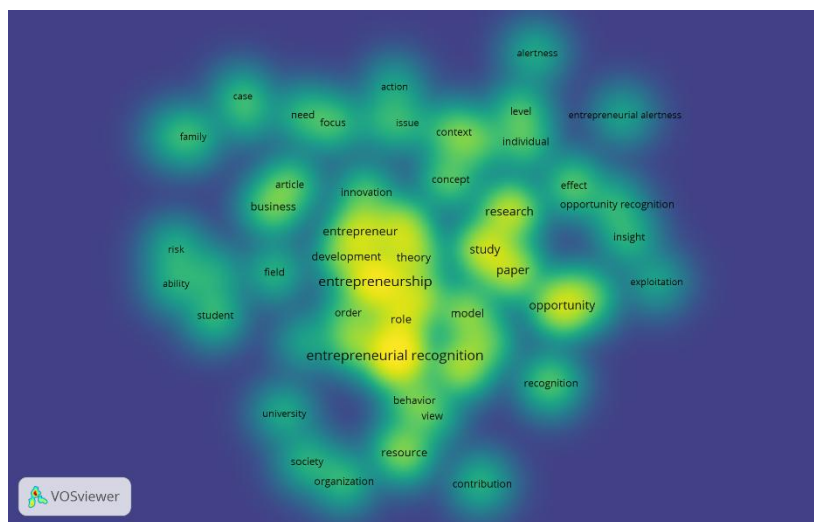
According to overlay visualization, insight, contribution, study, effect, entrepreneurial alertness, and theory discussing entrepreneurial recognition are in the early stage. That information appears on the yellow line. Figure 2 presents the details overlay visualization.



Source : Reserchers, 2025

### Figure 1 OVERLAY VISUALISATION

According to density visualization, concept, contribution, insight, action, ability, and exploitation need deep understanding to be discussed related to entrepreneurial recognition. Figure 3 shows the details visualization.



Source : Reserchers, 2025

#### Figure 4 DENSITY VISUALISATION

### RESULTS AND DISCUSSIONS

The most contribution of this study shows the top articles cited in this area according to the Google Scholar database. Using the keyword “Entrepreneurial Recognition,” the most articles cited by other scholars is an article written by Ellis (2011), cited 654 times. The title of this article is “Social ties and international entrepreneurship: Opportunities and constraints affecting firm internationalization.” Journal of International Business Studies from Springer publisher published this article. This article acknowledged that there is little knowledge related to the entrepreneurial method used for entrepreneurial recognition. This article collected data from 41 managers in China. The findings of this study showed no role in blind luck. Even though most opportunities are found, however, they can be searched. This study also found the important role of relationships in entrepreneurial recognition (Ellis, 2011). The following articles most cited are articles written by Chell (2013) with 291 citations, Mary George et al. (2014) with 263 citations, Guerrero et al. (2014) with 256 citations, etc.

In addition, the top 3 publishers related to this topic are Springer with 14 articles, followed by Emerald with nine articles, and Taylor & Francis with nine articles. Elsevier, one of the biggest publishers, is in four places with seven articles. The top 4 publishers got on the list in Schimago Institution Rankings. According to this result, the research topic related to entrepreneurial recognition can be obtained from the biggest publisher mentioned in this study.

The result of the co-word analysis can appear as a research gap. According to the Co-word analysis presented in the network, overlay, and density visualization, several essential items need to be understood deeply related to entrepreneurial recognition. Some essential items needing discussion include insight, contribution, entrepreneurial alertness, theories used to explore the knowledge, etc.

Scholars have acknowledged that entrepreneurial recognition is one of the most important steps in entrepreneurial activities (Sutter et al., 2019). Entrepreneurial recognition is the ability to recognize the existing opportunities that can be transferred to a business (Asante & Affum-Osei, 2019; Davidsson, 2017; Félix González et al., 2017; Gray et al., 2019). The ability to recognize entrepreneurial opportunity can be conducted by searching and creating (Davidsson, 2017; Mary George et al., 2016).

A deep insight related to entrepreneurial recognition needs to be conducted. This result is in line with previous research explaining that the content domain for this issue still lacks clarity (Hanohov & Baldacchino, 2018; Hansen et al., 2016), and progress for understanding is slow (Hanohov & Baldacchino, 2018).

Entrepreneurial alertness also needs to explore deeply related to entrepreneurial recognition. Understanding the concept of entrepreneurship needs understanding the alertness concept (Mary George et al., 2016). Alert entrepreneurs are creative, imaginative, and explorative, take a broad perspective to bound the multiple inputs, and are likely to be more effective in recognizing and acting in business opportunities (Matos & Hall, 2020). According to VOS Viewer analysis, current research connecting alertness and entrepreneurial recognition is needed.

According to VOS Viewer analysis, exploring entrepreneurial recognition with different theories is still relevant. Theories conducted in the entrepreneurship field are characterized by borrowing ad hoc theories to explain entrepreneurial phenomena (Alvarez & Busenitz, 2001).

### CONCLUSION

This study has three limitations. First, collecting data process only from one resource database (Google Scholar) and using keywords is limited. Second, there is subjective interpretation related to the result



from analysis conducted by VOS viewer software. This condition allows errors to occur. Third, the researcher does not present co-authorship relations that can understand the link between the authors. According to these limitations, future research can use a larger database from different data resources and use combination keywords to see bigger connections and visualization. Co-authorship and affiliation analysis can complete the research results. Eventually, related to this study's findings, researchers suggest that future research use kinds of theories to explore entrepreneurial recognition. Besides that, the researcher suggests making a study that discusses entrepreneurial alertness, the contribution of entrepreneurial recognition in entrepreneurial activities, and factors influencing entrepreneurial recognition.

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