

# Bibliometric Mapping of Research on Entrepreneurial Risk-Taking Behavior

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## ABSTRACT

This study utilizes bibliometric analysis to explore the structure and dynamics of global research collaborations, particularly focusing on the field of entrepreneurial risk-taking. Utilizing data sourced from major academic databases and visualized through VOSviewer, we map the collaboration networks between countries, analyzing the roles of central hubs and their influence on global research trends. Our findings highlight the United States' pivotal role in the global research network, acting as a central hub with extensive international collaborations. The study reveals a trend toward multipolar contributions with significant inputs from countries like China, Germany, and Canada. These collaborations not only enhance the diversity and quality of research outputs but also underscore the importance of international cooperation in addressing complex global challenges. The study discusses the implications of these findings for policy-making and academic strategies, emphasizing the need to support international research collaborations to foster innovation and address global challenges effectively.

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## 1. INTRODUCTION

Entrepreneurship plays a pivotal role in economic development and innovation, acting as a catalyst for job creation and economic diversification. An essential aspect of entrepreneurship involves risk-taking behavior, which has been extensively studied due to its significant impact on the success and failure of entrepreneurial ventures. Risk-taking in entrepreneurship is characterized by the willingness to engage in ventures with

uncertain outcomes, and it is often considered a defining attribute of entrepreneurial spirit [1].

The landscape of entrepreneurship has evolved significantly with technological advancements and globalization, altering the risk perceptions among entrepreneurs. Modern entrepreneurial ventures, especially in tech-driven markets, face a plethora of risks ranging from rapid technological changes to fierce global competition [2]. This evolving risk landscape necessitates a thorough

understanding of how entrepreneurs perceive and react to these risks.

Bibliometric analysis offers a methodological approach to quantitatively review the extensive body of literature on entrepreneurial risk-taking. By mapping out the existing research, scholars and practitioners can identify seminal works, emerging trends, and gaps in the literature. This method not only aggregates the collective understanding of risk-taking but also delineates the intellectual structure and evolutionary trajectory of this research theme [3].

However, despite the growing body of literature on entrepreneurial risk-taking, there remains a fragmented understanding of how different types of risks—financial, psychological, and market-related—are integrated and addressed by entrepreneurs across various sectors. The integration of these risk dimensions and their impact on entrepreneurial behavior is crucial for developing robust theoretical frameworks and practical guidelines for upcoming entrepreneurs [4].

While numerous studies have focused on entrepreneurial risk-taking, the research remains scattered across various disciplines and theoretical frameworks, leading to a fragmented academic landscape. This dispersion poses a challenge for scholars and practitioners seeking to build on the existing knowledge and apply it effectively in educational and practical settings. A comprehensive bibliometric analysis is needed to synthesize the existing research, highlight the most influential studies, and uncover areas that lack substantial research. Identifying these gaps will enable a more focused investigation of unexplored dimensions within the entrepreneurial risk-taking domain, enhancing both theoretical and practical understanding.

The objective of this study is to perform a bibliometric analysis of the literature on entrepreneurial risk-taking behavior. This analysis aims to map the research development over time, identify key themes and trends, and reveal the most influential authors, journals, and articles

within this field. By accomplishing this, the study seeks to provide a structured and comprehensive overview of the academic terrain, guiding future research directions and informing educational curricula and entrepreneurial practice.

## 2. RESEARCH METHODS

### 2.1 *The Concept of Entrepreneurial Risk-Taking*

Entrepreneurial risk-taking is a multidimensional construct that has been studied from various theoretical perspectives. Risk-taking is commonly defined as the willingness to engage in a venture that has a significant chance of resulting in a loss but also offers opportunities for substantial rewards [5]. In the context of entrepreneurship, this involves making decisions and taking actions under conditions of uncertainty with the potential for both personal and financial gain or loss [6]. The role of risk-taking in entrepreneurship is deemed essential, as it differentiates entrepreneurs from non-entrepreneurs and is often a predictor of venture success and innovation [7].

### 2.2 *Risk Types and Entrepreneurial Decision Making*

Entrepreneurs face various types of risks, including financial, psychological, social, and market risks. Financial risks concern the potential monetary losses entrepreneurs may encounter, often evaluated against the backdrop of economic theories and models [8]. Psychological risks relate to the personal stress and emotional toll that entrepreneurial endeavors can exert on an individual [9]. Social risks involve the potential loss of status or reputation among peers and within the community [10], while market risks are associated with the unpredictability of market demands and competitive dynamics [11].

### 2.3 *Theoretical Frameworks Exploring Risk-Taking Behavior*

Several theoretical frameworks have been employed to understand entrepreneurial risk-taking. The Trait

Approach suggests that personal characteristics and traits of the entrepreneur significantly influence risk-taking behaviors [12]. This approach posits that entrepreneurs have distinct personality traits such as a high need for achievement, propensity for taking risks, and a strong locus of control, which drive them towards entrepreneurial activities. The Decision Theory Perspective provides another lens through which to view entrepreneurial risk-taking, focusing on the decision-making processes rather than inherent traits. This theory explores how entrepreneurs make choices under conditions of uncertainty and the rationality behind these decisions [13]. It often involves the use of heuristics and biases that entrepreneurs employ to make decisions in complex, uncertain environments [14]. The Behavioral Approach integrates aspects of psychology to understand how entrepreneurs perceive and respond to risk. This approach examines how past experiences, cognitive biases, and emotional states influence the risk-taking behavior of entrepreneurs [15]. It suggests that risk-taking is not solely a rational decision based on economic calculations but is also influenced by psychological and social factors.

**2.4 Empirical Studies on Entrepreneurial Risk-Taking**

Empirical research has provided mixed results on the correlation between risk-taking and entrepreneurial success. Some studies indicate that a moderate level of risk-taking is essential for optimal entrepreneurial performance [16], while others suggest that too much risk-taking may lead to business failure [17]. Research also shows that the relationship between

risk-taking and entrepreneurship varies significantly across cultures and economic systems [18], indicating that environmental and contextual factors play a critical role in shaping entrepreneurial behavior.

The impact of risk-taking on innovation has been another focus of empirical studies, with findings suggesting that risk-taking propels innovations that are crucial for competitive advantage and long-term success [19]. However, the type of risk and the specific context in which the entrepreneur operates can influence the outcomes significantly. For instance, technology-driven ventures often require a higher tolerance for risk due to the volatile nature of tech markets [2].

**3. METHOD**

This study employs a bibliometric analysis to map the research landscape of entrepreneurial risk-taking behavior. We extracted data from Scopus database, focusing on articles published between 2000 and 2023. Utilizing VOSviewer software, we analyzed co-citation, co-authorship, and keyword co-occurrence networks to identify the most influential authors, foundational papers, and emerging themes within the field. The analysis included calculating the h-index and citation counts to gauge the impact and relevance of the research. Additionally, we performed a content analysis on the most cited articles to further understand the prevalent theoretical frameworks and methodologies.

**4. RESULT AND DISCUSSION**

**4.1 Results**

**a. Bibliometric Overview**

Table 1. Bibliometric Overview

Metrics Data	Information
Publication years	1972-2024
Citation years	52
Papers	457
Citations	15474
Cites/year	297.58

Metrics Data	Information
Cites/paper	33.86
Cites/author	6357.64
Papers/author	211.31
Authors/paper	2.81
h-index	55
g-index	117
hI,norm	37
hI,annual	0.71
hA, index	19
Paper with ACC > =	1,2,5,10,20:275,205,102,43,17

Source: Output Publish or Perish, 2024

Table 1 presents a comprehensive bibliometric overview of the research field related to entrepreneurial risk-taking from 1972 to 2024. Over these 52 years, a total of 457 papers have been published, accumulating 15,474 citations, which translates to an average of 297.58 citations per year and 33.86 citations per paper. The data suggests a moderately collaborative field, with an average of 2.81 authors per paper and 211.31 papers per author, indicating that a significant number of papers are authored collaboratively. The h-index, a metric indicating that 55 of these papers have each been cited at least 55 times, suggests a strong impact within the academic community. Similarly, the g-index is even higher at 117, suggesting that the top-cited papers have received a

substantial number of citations. The normalized h-index (hI,norm) stands at 37, adjusting the h-index by the number of authors, and the annualized h-index (hI,annual) is 0.71, reflecting the average increase in the normalized h-index per year since the first publication. The hA index, another variant of the h-index adjusted for multi-authorship, is relatively lower at 19, highlighting the contribution of individual authors. Additionally, out of all published papers, 275 have been cited at least once, 205 at least twice, 102 five times, 43 ten times, and 17 have reached the threshold of 20 citations, illustrating varying levels of influence and recognition across the body of work. This overview underscores the field's development and its scholarly impact over five decades.

Table 2. Most Cited Article

Citations	Author and Year	Title
1911	[20]	The mediating role of self-efficacy in the development of entrepreneurial intentions
1275	[21]	Contextual influences on the corporate entrepreneurship-performance relationship: A longitudinal analysis
672	[22]	Psychological characteristics associated with performance in entrepreneurial firms and smaller businesses
614	[6]	Using cognitive theory to explain entrepreneurial risk-taking: Challenging conventional wisdom
475	[23]	A proclivity for entrepreneurship: A comparison of entrepreneurs, small business owners, and corporate managers
412	[24]	Cultural influences on entrepreneurial orientation: The impact of national culture on risk taking and proactiveness in SMEs
409	[25]	Individual entrepreneurial orientation: Development of a measurement instrument

Citations	Author and Year	Title
351	[26]	Entrepreneurial orientation and the business performance of SMEs: A quantitative study from the Netherlands
302	[27]	Entrepreneurial orientation in long-lived family firms
235	[28]	Entrepreneurial orientation and international scope: The differential roles of innovativeness, proactiveness, and risk-taking

Source: Output Publish or Perish, 2024

**b. Keyword Co-Occurrence Network**

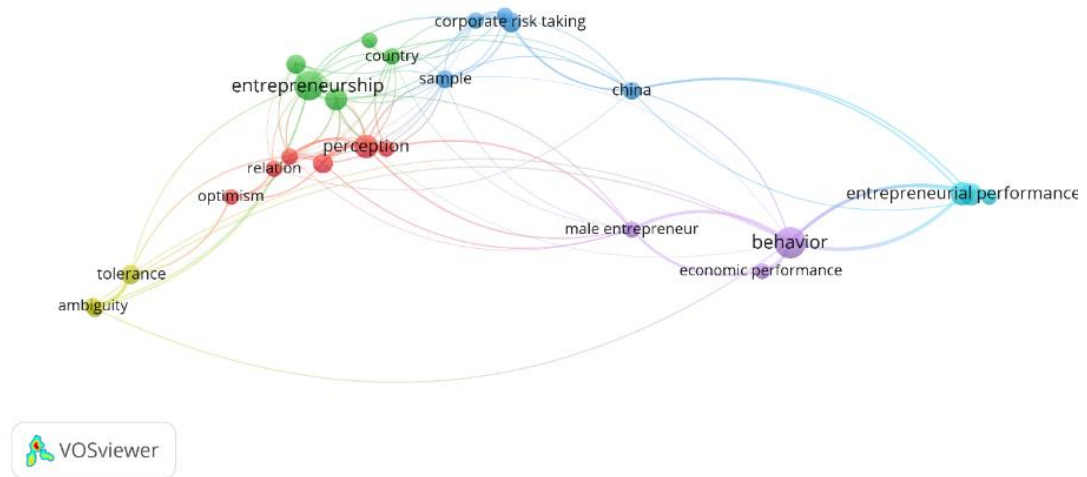


Figure 1. Network Visualization

Source: Data Analysis, 2024

In the visualization, the size of each node (keyword) denotes the frequency of the keyword’s occurrence within the dataset, and the thickness of the lines (edges) between the nodes reflects the strength of the co-occurrence relationships. The clusters of keywords, denoted by different colors, highlight thematic concentrations or subfields within the broader topic of entrepreneurial risk-taking. The central cluster in green, featuring keywords like "entrepreneurship," "corporate risk taking," and "perception," suggests a core focus on how entrepreneurial activities are influenced by perceptions of risk and the corporate environment. This indicates that a significant portion of research in this field examines how individuals’ perceptions of risk affect entrepreneurial behavior and decisions, possibly influenced by

cultural and environmental factors as hinted by the adjacent keywords "country" and "sample." The cluster in blue connects "entrepreneurial performance" with "economic performance," "behavior," and "China," pointing towards studies that specifically analyze the economic outcomes of entrepreneurial risk-taking. This might indicate a geographic focus on China, suggesting that recent research has been paying attention to the economic impacts of entrepreneurial behaviors in emerging markets. The link to "male entrepreneur" suggests a demographic focus, possibly examining gender differences in risk-taking behaviors and outcomes within the entrepreneurial sphere. Overall, the network visualization encapsulates the multifaceted nature of research on entrepreneurial risk-taking, emphasizing the interaction

between individual perceptions, environmental factors, and economic outcomes. This provides a visual summary of key research areas and

their interconnections, which could guide future research directions by highlighting well-studied areas and potential gaps in the literature.

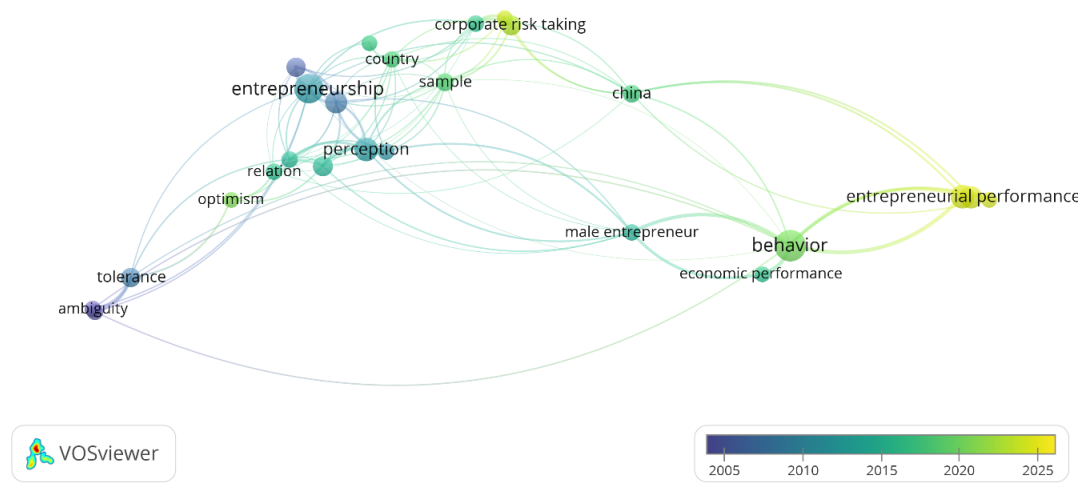


Figure 2. Overlay Visualization  
Source: Data Analysis, 2024

The visualization provided represents a dynamic bibliometric analysis using VOSviewer that maps the evolution of research themes in entrepreneurial risk-taking over time, as indicated by the timeline at the bottom ranging from 2005 to 2025. Each node in this network corresponds to a keyword used in the research literature, and the color gradient from blue to yellow signifies the progression of focus or emergence of topics over time, with blue indicating earlier years and yellow representing more recent years.

In this network, central themes such as "entrepreneurship," "perception," and "corporate risk-taking" appear to be foundational topics that have been consistently present throughout the observed period. The links between these nodes and others like "optimism," "relation," and "tolerance" suggest that research has explored various psychological and behavioral aspects of how entrepreneurs perceive and

manage risk. The node "perception" serves as a hub, connecting with multiple concepts, highlighting its centrality in discussions on how risk is interpreted by entrepreneurs in different contexts.

The cluster involving "entrepreneurial performance," "economic performance," "behavior," and "China" shows a more pronounced shift towards yellow, indicating an increased focus in recent years on the practical outcomes of entrepreneurial risk-taking, particularly within the Chinese context. This might reflect a growing interest in understanding the economic impacts of entrepreneurial decisions in emerging markets and how cultural and economic factors influence risk-related behaviors. The connection to "male entrepreneur" also points towards an interest in demographic-specific studies, possibly exploring gender differences in entrepreneurial risk-taking behaviors and their outcomes.

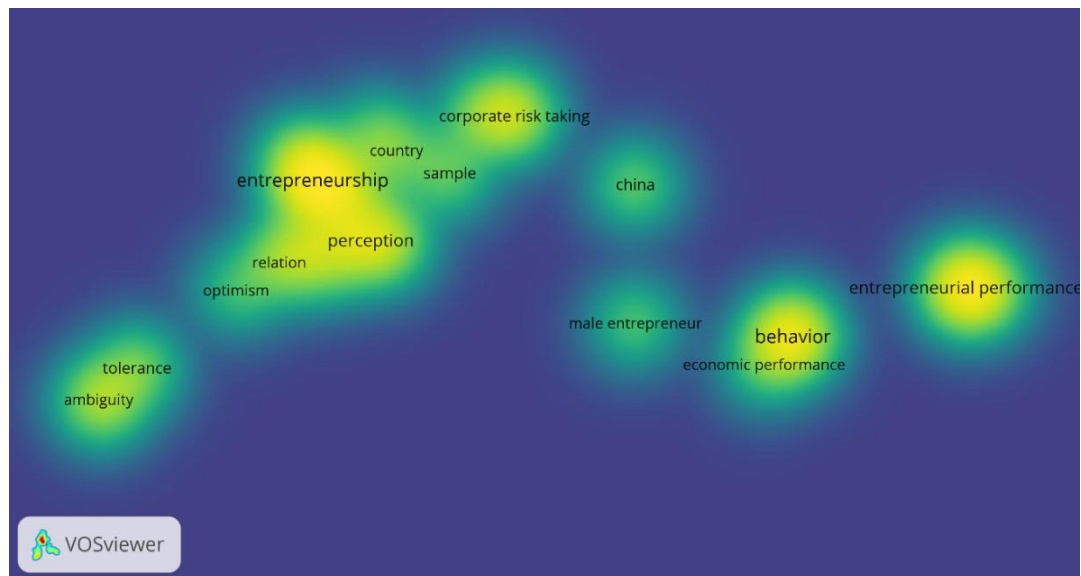


Figure 3. Density Visualization

Source: Data Analysis, 2024

This visualization from VOSviewer depicts a density map of keywords associated with research on entrepreneurial risk-taking, illustrating the concentration and distribution of topics across the field. The areas with brighter colors, such as yellow and green, represent higher concentrations of research activity and focus, indicating that these are core areas within the field. Key areas of concentrated research include "perception," "entrepreneurship," and "corporate risk-taking," suggesting these topics are central and heavily researched within the domain of entrepreneurial risk-taking.

On the periphery, topics like "tolerance," "ambiguity," and

"relation" are highlighted with cooler colors, signifying less research concentration but potential areas for further exploration. The presence of "China" and "economic performance" near the heavily concentrated area of "behavior" and "male entrepreneur" suggests an emerging focus on the demographic and geographical specifics of entrepreneurial behavior and performance. This distribution of topics provides a visual guide to the areas that have attracted significant scholarly attention and those that might still hold untapped potential for new research and insights in the context of entrepreneurial risk-taking behaviors.

c. Co-Authorship Network

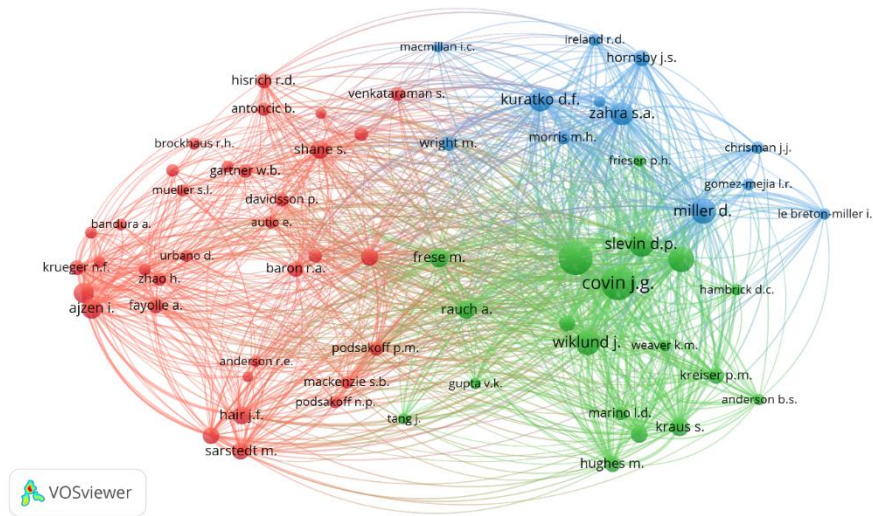


Figure 4. Author Visualization  
Source: Data Analysis, 2024

The visualization provided represents a co-authorship network analysis generated by VOSviewer, highlighting the connections and collaborations among researchers in the field of entrepreneurial studies. Each node (circle) represents an individual author, with the size of the node indicating the number of publications or citations associated with that author, suggesting their influence or activity level within the field. The colors denote different clusters or groups of authors who

frequently collaborate or whose work is closely related. The lines between the nodes represent co-authorship links, with thicker lines indicating more frequent collaborations between the respective authors. Central figures in the network, such as Covin J.G., Frese M., and Rauch A., appear to be key influencers with extensive collaborative ties, suggesting that they are pivotal in the development and dissemination of research in this domain.

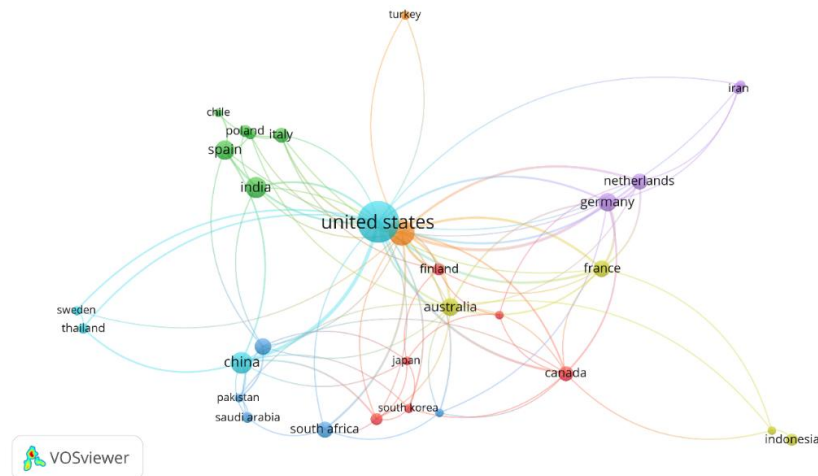


Figure 5. Country Visualization  
Source: Data Analysis, 2024



The visualization illustrates a network of global collaborations between countries in the field of entrepreneurial risk-taking, with each node representing a different country and the lines indicating the collaboration links between them. The size of each node reflects the volume of research output or the intensity of collaborations originating from that country. The United States is shown as a central hub with the largest node, suggesting it has the highest number of collaborations internationally. Connections spanning across different continents indicate the global nature of research partnerships. Countries like China, Germany, and Canada also appear as significant nodes, highlighting their active roles in international research collaborations. The diverse color coding possibly represents different regions or clusters of collaboration patterns, suggesting regional alliances or specific areas of research focus.

#### 4.2 Discussion

##### a. Global Collaboration Networks in Research

The bibliometric analysis illustrated by the VOSviewer visualizations underscores the critical role of global collaboration in driving research and innovation across various fields, especially entrepreneurial risk-taking. The extensive network of collaborations, particularly prominent between the United States and other countries such as China, Germany, and Canada, highlights the United States' central role in the global research landscape. Such collaborations are instrumental in enhancing the quality of research through the sharing of diverse perspectives and expertise.

##### b. Influence of Geographic and Cultural Contexts

The analysis further reveals that research is not uniformly

distributed globally but concentrated in certain geographic locales. Countries like the United States, China, Germany, and Canada not only serve as hubs of research activity but also facilitate extensive cross-border collaborations that enrich research outcomes. These nations' robust academic infrastructures and funding mechanisms likely contribute to their central roles in the global research network. Moreover, the presence of countries like India, South Korea, and Australia in these networks indicates a broad, intercontinental reach that encompasses varying economic backgrounds and cultural contexts, suggesting that global research collaborations transcend geopolitical boundaries.

##### c. Dynamics of Research Collaboration

The dynamics within these collaboration networks reveal a complex interplay of factors influencing research partnerships. Developed countries, with their advanced research infrastructures and higher funding capacities, often form the nexus of research networks. This central positioning in the network enables them to influence research agendas and priorities on a global scale. However, the increasing involvement of emerging economies such as China and India signifies a shift towards a more multipolar research world where innovation can originate from multiple centers of excellence globally.

##### d. Challenges and Opportunities in Global Research Collaborations

Despite the apparent benefits, global research collaborations face several challenges. Differences in regulatory environments, intellectual property laws, and academic standards can complicate collaborative efforts. Moreover, logistical challenges, such as time zone differences and language

barriers, also pose significant hurdles. However, these collaborations also offer unique opportunities for addressing complex global challenges that require diverse expertise and resources, demonstrating the importance of strengthening international ties within the academic community.

#### 4.3 Implications for Policy and Practice

The insights derived from the bibliometric analysis have significant implications for policy-makers and academic leaders. Enhancing support for international collaborations through policies that facilitate the exchange of researchers and simplify the sharing of resources and data can further strengthen global research networks. Additionally, fostering environments that encourage multidisciplinary and culturally diverse research teams can enhance innovation and lead to more comprehensive research outcomes.

#### 4.4 Enhancing the Impact of Research through Diversity

The diversity within global research networks can significantly enhance the impact of research. Incorporating diverse methodologies, perspectives, and cultural insights can lead to more innovative solutions to global challenges. For instance, understanding local market conditions and consumer behavior through

collaborative research can lead to more effective marketing strategies and business models that are globally scalable.

#### 4.5 Future Research Directions

Based on the analysis, future research should focus on quantitatively assessing the impact of these collaborations on research productivity and innovation. Studies could explore the correlation between the strength of international ties and the quality of research output. Additionally, longitudinal studies could assess how evolving geopolitical and economic scenarios influence the dynamics of global research collaborations.

## 5. CONCLUSION

The bibliometric analysis of global research collaborations highlights the interconnected nature of modern scientific inquiry and the central role played by major research-active countries. By fostering an environment that supports diverse and inclusive research collaborations, the global academic community can enhance the quality and impact of research, addressing complex global challenges more effectively. As the landscape of global research continues to evolve, it is imperative that policy-makers and academic institutions adapt to these changes by fostering policies that support robust, dynamic, and inclusive research networks.

## REFERENCES

- [1] W. H. Stewart Jr and P. L. Roth, "Risk propensity differences between entrepreneurs and managers: A meta-analytic review," *J. Appl. Psychol.*, vol. 86, no. 1, p. 145, 2001.
- [2] T. Kollmann and C. Stöckmann, "Filling the entrepreneurial orientation–performance gap: The mediating effects of exploratory and exploitative innovations," *Entrep. Theory Pract.*, vol. 38, no. 5, pp. 1001–1026, 2014.
- [3] M. Aria and C. Cuccurullo, "bibliometrix: An R-tool for comprehensive science mapping analysis," *J. Informetr.*, vol. 11, no. 4, pp. 959–975, 2017.
- [4] G. T. Lumpkin and G. G. Dess, "Clarifying the entrepreneurial orientation construct and linking it to performance," *Acad. Manag. Rev.*, vol. 21, no. 1, pp. 135–172, 1996.
- [5] F. H. Knight, "Risk, uncertainty and profit," *Hart, Schaffner Marx*, 1921.
- [6] L. E. Palich and D. R. Bagby, "Using cognitive theory to explain entrepreneurial risk-taking: Challenging conventional wisdom," *J. Bus. Ventur.*, vol. 10, no. 6, pp. 425–438, 1995.
- [7] R. H. Brockhaus Sr, "Risk taking propensity of entrepreneurs," *Acad. Manag. J.*, vol. 23, no. 3, pp. 509–520, 1980.
- [8] R. E. Kihlstrom and J.-J. Laffont, "A general equilibrium entrepreneurial theory of firm formation based on risk aversion," *J. Polit. Econ.*, vol. 87, no. 4, pp. 719–748, 1979.
- [9] D. Forlani and J. W. Mullins, "Perceived risks and choices in entrepreneurs' new venture decisions," *J. Bus. Ventur.*, vol. 15, no. 4, pp. 305–322, 2000.

- [10] H. E. Aldrich and C. M. Fiol, "Fools rush in? The institutional context of industry creation," *Acad. Manag. Rev.*, vol. 19, no. 4, pp. 645–670, 1994.
- [11] R. G. McGrath, "Falling forward: Real options reasoning and entrepreneurial failure," *Acad. Manag. Rev.*, vol. 24, no. 1, pp. 13–30, 1999.
- [12] D. C. McClelland, "The achieving society," *Van No Strand*, 1961.
- [13] H. A. Simon, "A behavioral model of rational choice," *Q. J. Econ.*, pp. 99–118, 1955.
- [14] D. Kahneman and A. Tversky, "Prospect theory: An analysis of decision under risk," in *Handbook of the fundamentals of financial decision making: Part I*, World Scientific, 2013, pp. 99–127.
- [15] K. M. Hmieleski and R. A. Baron, "When does entrepreneurial self-efficacy enhance versus reduce firm performance?," *Strateg. Entrep. J.*, vol. 2, no. 1, pp. 57–72, 2008.
- [16] L. L. Lopes, "Between hope and fear: The psychology of risk," in *Advances in experimental social psychology*, Elsevier, 1987, pp. 255–295.
- [17] C. Camerer and D. Lovo, "Overconfidence and excess entry: An experimental approach," *Am. Econ. Rev.*, vol. 89, no. 1, pp. 306–318, 1999.
- [18] G. Hofstede, "Culture and organizations," *Int. Stud. Manag. Organ.*, vol. 10, no. 4, pp. 15–41, 1980.
- [19] R. Chaganti and F. Damanpour, "Institutional ownership, capital structure, and firm performance," *Strateg. Manag. J.*, vol. 12, no. 7, pp. 479–491, 1991.
- [20] H. Zhao, S. E. Seibert, and G. E. Hills, "The mediating role of self-efficacy in the development of entrepreneurial intentions," *J. Appl. Psychol.*, vol. 90, no. 6, p. 1265, 2005.
- [21] S. A. Zahra and J. G. Covin, "Contextual influences on the corporate entrepreneurship-performance relationship: A longitudinal analysis," *J. Bus. Ventur.*, vol. 10, no. 1, pp. 43–58, 1995.
- [22] T. M. Begley and D. P. Boyd, "Psychological characteristics associated with performance in entrepreneurial firms and smaller businesses," *J. Bus. Ventur.*, vol. 2, no. 1, pp. 79–93, 1987.
- [23] W. H. Stewart Jr, W. E. Watson, J. C. Carland, and J. W. Carland, "A proclivity for entrepreneurship: A comparison of entrepreneurs, small business owners, and corporate managers," *J. Bus. Ventur.*, vol. 14, no. 2, pp. 189–214, 1999.
- [24] P. M. Kreiser, L. D. Marino, P. Dickson, and K. M. Weaver, "Cultural influences on entrepreneurial orientation: The impact of national culture on risk taking and proactiveness in SMEs," *Entrep. theory Pract.*, vol. 34, no. 5, pp. 959–984, 2010.
- [25] D. L. Bolton and M. D. Lane, "Individual entrepreneurial orientation: Development of a measurement instrument," *Educ. Train.*, vol. 54, no. 2–3, pp. 219–233, 2012.
- [26] S. Kraus, J. P. C. Rigtering, M. Hughes, and V. Hosman, "Entrepreneurial orientation and the business performance of SMEs: a quantitative study from the Netherlands," *Rev. Manag. Sci.*, vol. 6, pp. 161–182, 2012.
- [27] T. Zellweger and P. Sieger, "Entrepreneurial orientation in long-lived family firms," *Small Bus. Econ.*, vol. 38, pp. 67–84, 2012.
- [28] L. Dai, V. Maksimov, B. A. Gilbert, and S. A. Fernhaber, "Entrepreneurial orientation and international scope: The differential roles of innovativeness, proactiveness, and risk-taking," *J. Bus. Ventur.*, vol. 29, no. 4, pp. 511–524, 2014.