Global Digital Entrepreneurship Intentions: A Bibliometric Review and Future Research Agenda

Xiaoyu Fan[a], Rui Yuan[b], Tongyu Wu[c], Wen Xu[d], Yating Yang[e], Qiong Zou[*]

School of Management, Wuhan University of Science and Technology, Wuhan 430081, China

[a]2412675267@qq.com, [b]3194842877@qq.com, [c]1176584938@qq.com,
[d]291821069@qq.com, [e]1336438502@qq.com
[*]Corresponding author's e-mail: zouqiong@wust.edu.cn

Abstract. With the rapid development of digital technology, the intention to engage in digital entrepreneurship has become a hot topic in the field of entrepreneurship research. This paper conducts a quantitative analysis of recent global research on digital entrepreneurship intentions using bibliometric methods such as co-citation analysis and bibliographic coupling analysis. It identifies key factors influencing digital entrepreneurship intentions and reveals the research foundation and trends in digital entrepreneurship intentions and proposes directions for future research.

Keywords: Digital Entrepreneurship Intentions; Bibliometric Analysis; Global Entrepreneurship; Research Review

1   Introduction

Entrepreneurship is an essential component of the economic landscape and a driving force for regional and global economic development. With the rapid advancement of digital technology, the internet and technology have transformed the way entrepreneurship is conducted, reshaping the structure of the business environment and giving rise to the emergence of "digital entrepreneurship" [1]. As a subcategory of entrepreneurship, "digital entrepreneurship" is called as the "ultimate and contemporary trend in entrepreneurial development" [2][3]. Entrepreneurial activities driven by digital technology are propelling the digital economy to become the primary force for economic development following the Industrial Revolution [4][5][6]. Due to the advantages provided by digital technology, the minimization of entrepreneurial resource commitments, and the reduction of entry and exit costs, digital entrepreneurship has become a more attractive career choice [4][7][8]. Entrepreneurial intention is defined as an individual's intention to establish a new venture at some point in the future [9]. Digital entrepreneurial intention is defined as "an individual's intention to start a new business through digital technology means" [10][11]. Research has shown that entrepreneurial intention is the crucial indicator to understand the entrepreneurial activity of individuals, making it necessary to explore the reasons why these intentions are shaped by

digital technology [12][13]. Although existing literature has provided a comprehensive account of the formation mechanisms of general entrepreneurial intentions, how these intentions are influenced in a digital environment remains an area that requires further research [14][15].

In light of this, this study systematically reviews and analyzes global research on digital entrepreneurial intentions using bibliometric methods. Through the bibliometric analysis, this research expects to answer these questions: What is the knowledge base or knowledge structure of global digital entrepreneurial intention research? Which key research frontiers are shaping the future of this research field? From this foundation, this paper will outline a future research agenda to deepen academic understanding of global digital entrepreneurial intentions.

2   Research Methodology

To ensure the quality of the literature search, the Social Sciences Citation Index (SSCI) and the Science Citation Index Expanded (SCI-expanded) in the Web of Science (WoS) Core Collection database were selected for literature review. Following Alkhalaileh's (2021) recommendations [16], the search field tag was set to "TS" (Topic), with search terms including "Digital Entrepreneurship Intention" or "Cyber Entrepreneurship Intention" or "E-Entrepreneurship Intention" or "Internet Entrepreneurship Intention". The search period spanned from January 1, 1990, to August 31, 2024. Given that peer-reviewed papers typically embody the pinnacle of scholarly work within numerous social science fields, including business and management [17], the search was limited to papers or reviews in peer-reviewed journals, with the language restricted to English. The initial search yielded 125 papers. To ensure that each paper is pertinent to the intentions of digital entrepreneurship, a rapid reading and screening of all paper titles, abstracts, keywords, and some full texts was conducted. Ultimately, the sample was narrowed down to 41 papers. These 41 articles served as the primary literature for bibliometric analysis, with the references cited by the primary literature (n = 3058) considered secondary literature. We retrieved bibliographic details from the Web of Science database and then imported them into VOSviewer version 1.6.20 for conducting a bibliometric analysis.

3   Results

3.1   Publication Trends

Prior to 2020, literature on digital entrepreneurship intentions was extremely scarce. From 2020 to 2024, the number of publications on digital entrepreneurship intentions began to grow slowly, with a potential peak in 2024 (see Figure 1). This increase may be related to the acceleration of global digital transformation, the promotion of entrepreneurship education, and the increased focus on innovation and entrepreneurial policies. Future research is likely to continue focusing on this area, especially in the context of technological advancements and educational innovation.
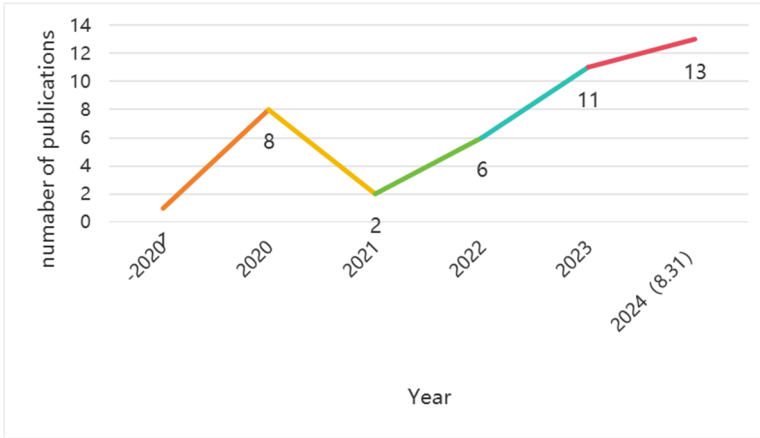
Fig. 1. Number of Publications Per Year

3.2   Co-Citation Analysis

To ensure that the secondary literature has sufficient influence, a minimum citation threshold of six times was set. There are 45 secondary documents that meet this threshold, and the 24 most frequently co-cited documents were selected for the co-citation analysis and visualized within the network diagram (see Figure 2).

Cluster 1 (Red): The theoretical foundation of digital entrepreneurship intention research. This cluster has the highest number of secondary documents, totaling 18, mainly including psychological theory research that explores the underlying factors of entrepreneurial intentions. The literature focuses on how individuals form entrepreneurial intentions and which psychological factors (such as attitudes, subjective norms, perceived behavioral control) influence this process [18]. Ajzen's TPB and Shapero and Sokol's EEM are the common theoretical foundations of the documents in this cluster.

Cluster 2 (Green): The impact of digital technology and education on entrepreneurial intentions and behaviors. This cluster consists of 14 secondary documents. Digital technology is seen as a transformative factor in the entrepreneurial process, changing the formation of entrepreneurial opportunities, the unfolding of the entrepreneurial process, and the realization of entrepreneurial outcomes, and also facilitating the distribution of entrepreneurial agents [4]. Digital technology may play a role in entrepreneurial education programs, especially in providing inspiration and resource acquisition [19]. This cluster reveals how digital technology and educational programs collectively influence individuals' entrepreneurial intentions and behaviors, providing a multidimensional perspective for research in the field of digital entrepreneurship and valuable insights for policymakers and educators.

Cluster 3 (Blue): Multidimensional influencing factors of digital entrepreneurship intentions. This cluster's 11 documents consider a variety of factors, including personality traits, motivation, positive thinking, academic background, etc., to comprehensively understand the development process of digital entrepreneurial intentions. Within the digital economy realm, exploring research topics like digital business models, the

processes of digital entrepreneurship, platform strategies, digital ecosystems, education for entrepreneurship, and social entrepreneurship in the digital age can offer a more comprehensive backdrop for grasping digital entrepreneurial intentions.

Cluster 4 (Yellow): Theoretical integration and methodological improvements in the field of entrepreneurial intention research. The two documents in this cluster indicate that as research on entrepreneurial intentions progresses, researchers have begun to focus on theoretical integration and introduce new concepts to analyze entrepreneurial intentions, also placing greater emphasis on the control of methodological biases.
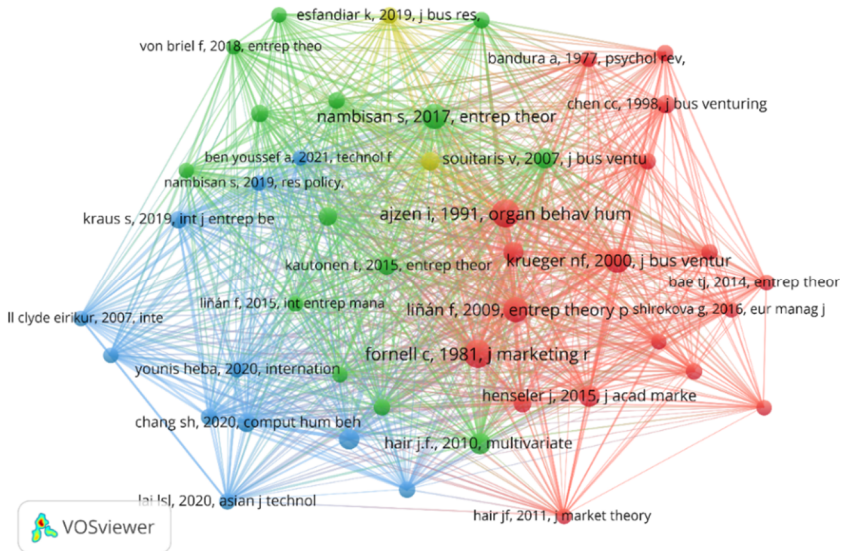

Fig. 2. Secondary Literature Co-Citation Network Graph

3.3   Bibliographic Coupling Analysis

Bibliographic coupling analysis assesses the degree to which main documents have common cited sources within their secondary literature, which helps to identify the research frontiers of a particular topic [20][21]. The result of the bibliographic coupling analysis for this paper is shown in Figure 3.

Cluster 1 (Red): Influence Factors of Digital Entrepreneurship Intentions under Theoretical Integration. This cluster focuses on combining traditional entrepreneurship intention theories—such as the Theory of Planned Behavior and Control Point Theory, Social Cognitive Theory, etc.—to deeply analyze the various mediating and moderating effects of digital entrepreneurship intention antecedents from perspectives including personal characteristics like personality and motivation, academic characteristics, and entrepreneurial environment such as entrepreneurial education and policies.

Cluster 2 (Green): Digital Technology, Entrepreneurial Education, and Digital Entrepreneurship Intentions. This cluster emphasizes the significant role of digital technology applications in entrepreneurial education in stimulating and shaping students'

entrepreneurial intentions. Whether at the higher education or secondary education level, digital tools and platforms can serve as effective educational tools to help students develop necessary skills and confidence, thereby promoting their entrepreneurial behavior. Moreover, these studies also indicate that through specific educational programs and interventions, the entrepreneurial intentions of specific groups (such as female students) can be targeted for improvement, which has potential value for achieving broader socio-economic goals. The research in this cluster provides valuable insights for educators and policymakers.

Cluster 3 (Blue): Capital and Digital Entrepreneurship Intentions. By integrating different theoretical perspectives, such as the Theory of Planned Behavior, Social Cognitive Theory, Capital Theory, etc., the research provides a comprehensive framework for understanding how different forms of capital, such as human capital and social capital, jointly influence the formation of digital entrepreneurship intentions. This cluster also points out that the role of these capital factors may differ in specific cultural and regional contexts (such as Saudi Arabia), and these factors need to be considered when conducting entrepreneurial education and policy formulation.

Cluster 4 (Yellow): Social Media Use, Educational Support, and Digital Entrepreneurship Intentions. This cluster focuses on how the use of social media and perceived social support affect individuals' digital entrepreneurship intentions through the framework of the Theory of Planned Behavior. These findings provide a multidimensional perspective for understanding and promoting digital entrepreneurship intentions and offer valuable insights for entrepreneurial education and policy formulation.
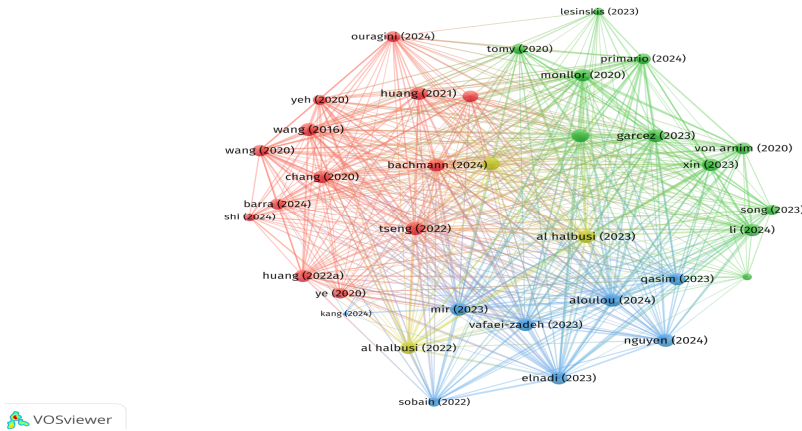

Fig. 3. Bibliographic Coupling Network Graph of Publications

4   Future Research Agenda

4.1   Sample Diversity

Current research samples are often concentrated on young, well-educated student populations, which may limit the generalizability of the findings. Future research should

expand the sample range to include individuals of different ages, cultures, and educational backgrounds, including non-entrepreneurial students and established entrepreneurs. This will help reveal differences in digital entrepreneurship intentions among different groups and their causes.

4.2   Longitudinal Studies and Multilevel Analysis

Given that existing studies are mostly cross-sectional, it is difficult to determine causal relationships. Future research should adopt longitudinal research methods, such as longitudinal surveys, case studies, and experience sampling methods, to collect high-quality data, reduce social desirability bias, and enhance the robustness of research findings.

Existing studies often focus on the impact of individual characteristics and entrepreneurial education on digital entrepreneurship intentions, neglecting entrepreneurial environmental factors. Future research should employ multilevel analysis to explore how environmental, institutional, and cultural factors interact with individual characteristics to shape digital entrepreneurship intentions.

4.3   In-depth Discussion of Mediating and Moderating Variables

Although existing studies have explored mediating and moderating variables, they mainly focus on individual characteristics and entrepreneurial education. Future research should investigate more potential mediating variables (such as entrepreneurial self-efficacy, opportunity recognition ability) and moderating variables (such as social support, risk preference) that may affect digital entrepreneurship intentions, and conduct longitudinal studies to verify the stability and universality of the research results.

4.4   The Association between Entrepreneurial Intentions and Actual Behavior

Although entrepreneurial intentions are the best predictor of actual entrepreneurial behavior, existing studies focus on the early stages of the Theory of Planned Behavior, neglecting the relationship between digital entrepreneurship intentions and actual entrepreneurial behavior. Future research can adopt longitudinal designs to explore the causal relationship between digital entrepreneurship intentions and actual entrepreneurial behavior, analyze how digital entrepreneurship intentions are transformed into actual entrepreneurial behavior in different cultural, educational, and occupational backgrounds, and assess the sustained impact of long-term participation in digital entrepreneurship education on individuals' entrepreneurial capabilities and intentions.

5   Conclusion

This study reveals the theoretical foundations of digital entrepreneurship intentions, individual-level traits, motivations, capital factors, and the impact mechanisms of entrepreneurial education through multiple dimensions such as co-citation analysis, bibliographic coupling analysis, and collaboration analysis between countries or regions.

Overall, research on digital entrepreneurship intentions is still in its developmental stage, and the available reference literature is limited. However, this paper provides a fresh perspective for bibliometric analysis and future research agenda of global digital entrepreneurship intentions.

Acknowledgements

References

1. Hejazinia R. The Impact of IT-based Entrepreneurship Education on Entrepreneurial Intention[J]. International Journal of Management, Accounting & Economics, 2015, 2(3):243-253.
2. Esmaeeli H. The study of effecting factors on digital entrepreneurship (a case study) [J]. Interdisciplinary Journal of Contemporary Research in Business, 2011, 2(12): 163-172.
3. Hafezieh N, Akhavan P, Eshraghian F. Exploration of process and competitive factors of entrepreneurship in digital space: A multiple case study in Iran[J]. Education, Business and Society: Contemporary Middle Eastern Issues, 2011, 4(4): 267-279.
4. Nambisan S. Digital entrepreneurship: Toward a digital technology perspective of entrepreneurship[J]. Entrepreneurship theory and practice, 2017, 41(6): 1029-1055.
5. Kraus S, Palmer C, Kailer N, et al. Digital entrepreneurship: A research agenda on new business models for the twenty-first century[J]. International Journal of Entrepreneurial Behavior & Research, 2019, 25(2): 353-375.
6. Tandon A, Gupta A, Goel P, et al. Impact of digitisation on entrepreneurial ecosystems: an Indian perspective[J]. International Journal of Business and Globalisation, 2020, 25(2): 154-169.
7. Youssef A B, Boubaker S, Dedaj B, et al. Digitalization of the economy and entrepreneurship intention[J]. Technological Forecasting and Social Change, 2021, 164: 1-14.
8. Cavallo A, Ghezzi A, Dell'Era C, et al. Fostering digital entrepreneurship from startup to scaleup: The role of venture capital funds and angel groups[J]. Technological Forecasting and Social Change, 2019, 145: 24-35.
9. Thompson E R. Individual entrepreneurial intent: Construct clarification and development of an internationally reliable metric[J]. Entrepreneurship theory and practice, 2009, 33(3): 669-694.
10. Chang S H, Shu Y, Wang C L, et al. Cyber-entrepreneurship as an innovative orientation: Does positive thinking moderate the relationship between cyber-entrepreneurial self-efficacy and cyber-entrepreneurial intentions in Non-IT students? [J]. Computers in Human Behavior, 2020, 107: 105975.
11. Huang L, Huang Y, Huang R, et al. Factors influencing returning migrants' entrepreneurship intentions for rural E-commerce: an empirical investigation in China[J]. Sustainability, 2022, 14(6): 3682.
12. Shane S. The Promise of Entrepreneurship as a Field of Research[J]. Academy of Management Review, 2000, 25: 217-226.

13. Fitzsimmons J R, Douglas E J. Interaction between feasibility and desirability in the formation of entrepreneurial intentions[J]. Journal of business venturing, 2011, 26(4): 431-440.
14. Liñán F, Fayolle A. A systematic literature review on entrepreneurial intentions: citation, thematic analyses, and research agenda[J]. International entrepreneurship and management journal, 2015, 11: 907-933.
15. Mir A A, Hassan S, Khan S J. Understanding digital entrepreneurial intentions: A capital theory perspective[J]. International Journal of Emerging Markets, 2023, 18(12): 6165-6191.
16. Alkhalaileh M Y. Systematic review: Digital entrepreneurship intention[J]. Network Intelligence Studies, 2021, 9(17): 25-34.
17. Jiang Y, Jiang Z, Chen Z. Women entrepreneurship in China: A bibliometric literature review and future research agenda[J]. Journal of Business Research, 2024, 179: 114688.
18. Ajzen I. The Theory of planned behavior[J]. Organizational Behavior and Human Decision Processes, 1991, 50:179-211.
19. Wang Y S, Lin S, Yeh C H, et al. What drives students' cyber entrepreneurial intention: The moderating role of disciplinary difference[J]. Thinking Skills and Creativity, 2016, 22: 22-35.
20. Donthu N, Kumar S, Mukherjee D, et al. How to conduct a bibliometric analysis: An overview and guidelines[J]. Journal of business research, 2021, 133: 285-296.
21. Vogel B, Reichard R J, Batistič S, et al. A bibliometric review of the leadership development field: How we got here, where we are, and where we are headed[J]. The Leadership Quarterly, 2021, 32(5): 101381.