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Trends in the Use of AI in the Digital Entrepreneur Ecosystem: A Bibliometric Review 2015–2025

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Abstract

This report offers a bibliometric analysis of research concerning artificial intelligence (AI) in the digital entrepreneurial ecosystem from 2015 to 2025, based on 1,042 publications indexed in Scopus. We employ VOSviewer and Bibliometrix R to undertake a performance analysis and scientific mapping encompassing publication trajectories, prominent sources, co-aut horship and international collaboration networks, theme clusters, and the temporal progression of keywords. Results indicate consistent growth rooted on fundamental themes—innovation, digital entrepreneurship, decision-making assistance, and venture performance—coupled with emerging domains such as the metaverse, blockchain-based business models, generative AI, and AI-enhanced education and skills development. India, the United States, and the United Kingdom are prominent donors and centers of collaboration, fostering increasingly globalized research communities and substantial cross-regional connections. The assessment conceptualizes AI as both a general-purpose technology and a strategic resource that transforms opportunity identification, resource management, and ecosystem governance. We employ a methodological triangulation of co -word and co-citation networks, topic progression, and strategic diagrams to elucidate knowledge structures, maturity levels, and research niches. The synthesis underscores implications for policy (data infrastructure, responsible AI standards, and SME empowerment), higher education (curricula integrating AI literacy with entrepreneurial skills), and innovation management (human-AI decision frameworks, experimentation, and assessment of AI value generation). Limitations pertain to the Scopus-exclusive corpus and certain biases in language and document type; nonetheless, cross-technique triangulation aids in alleviating validity concerns. We conclude with a prospective agenda emphasizing inclusivity and ethics, thorough outcome assessment beyond transient trends, and contextually relevant research in developing economies, converting tech nology potential into fair, scalable, and sustainable effects.

Keywords*: Artificial Intelligence, Digital Entrepreneurship, Innovation Ecosystem, Bibliometric Analysis, Generative AI, Collaboration Network, Sustainable Digital Transformation*

1. Introduction

In the past decade, artificial intelligence (AI) has evolved from a promising toolset to a foundational technology that influences how entrepreneurs identify opportunities, structure companies, and expand digitally. The emergence of platform economies, data-intensive markets, and cloud-native toolchains has diminished entry barriers while concurrently elevating expectations for capabilities—especially in data, automation, and experimentation. Systematic mappings indicate that "digital entrepreneurship" has evolved into a cohesive study domain, with AI often serving as a mechanism that transforms value creation, consumer interaction, and resource orchestration inside venture contexts [1], [2].

The proliferation of generative AI (GenAI) has expedited this transition. From 2023 to 2025, enterprises indicated a transition from pilot programs to the integration of GenAI into workflows for content development, product discovery, and the enhancement of knowledge work. Extensive surveys and industry evaluations highlight a significant increase in adoption intentions and expenditures, despite companies grappling with governance, talent acquisition, and return on investment assessment. In entrepreneurial ecosystems—startups, accelerators, and digital marketplaces—GenAI expands opportunity domains (e.g., quick prototyping, automated outreach, growth experiments) and reduces time-to-learn cycles. Policy evaluations predict productivity impacts and dynamics of new venture formation, while emphasizing that capability development and synergy with human skills are critical [2], [3].

The academic foundation of AI and entrepreneurship has swiftly varied. Bibliometric and hybrid reviews from 2024 delineate a domain encompassing algorithmic discovery, data-driven opportunity identification, human–AI

collaboration, entrepreneurial cognition, and novel business model archetypes facilitated by AI as a "general-purpose" and progressively "creative" technology [2], [4]. The maps disclose thematic clusters (e.g., AI for innovation management, AI-enabled marketing/sales, platform entrepreneurship, and ethics/governance), while also highlighting fragmentation in techniques, units of analysis, and theoretical foundations [5]. There are ongoing demands for integrative viewpoints that connect micro-foundations (such as founder competencies and team learning) with meso-level ecosystem characteristics (like incubator assistance and platform capabilities) and macro-level institutional dynamics [6], [7].

The dissemination patterns and restrictions vary significantly across different stages of ventures and sizes of firms. Evidence indicates that small and medium-sized firms (SMEs) regard AI as strategically significant but encounter capability deficiencies, particularly in skills and training—deficiencies that may hinder adoption and intensify inequity in ecosystem involvement [8]. Entrepreneurial organizations see significant advantages, such as accelerated content and code development and scalable consumer experimentation, alongside inconsistent results when integration, data preparedness, and problem-solution alignment are deficient. The "capability paradox" indicates that outcomes depend more on organizational learning, socio-technical alignment, and ecosystem support than on the mere availability of generic AI [9], [10].

In light of this context, a targeted bibliometric review covering the years 2015 to 2025 is pertinent for two reasons. The period encompasses pre-GenAI, the emergence of foundation models, and initial mainstream adoption, facilitating a longitudinal analysis of topic evolution, knowledge frameworks, and pivotal moments. Secondly, several extensive reviews have recently emerged—covering digital entrepreneurship in general, the connections between AI and innovation, and the relationship between AI and entrepreneurship specifically—yet none offer a unified bibliometric map spanning the past decade that focuses on AI within the digital entrepreneur ecosystem (including entrepreneurs, platforms, investors, accelerators, and policy intermediaries). A bibliometric synthesis can reveal intellectual frameworks, focal points, collaboration networks, and methodological trends while integrating narrative insights from related policy and industry sources [3].

Notwithstanding swift expansion, the knowledge base regarding AI within the digital entrepreneurial ecosystem remains disjointed: concepts are defined inconsistently (e.g., “AI adoption,” “GenAI capability,” “AI-enabled opportunity recognition”), theoretical frameworks exhibit considerable variation (spanning resource-based and dynamic capabilities to institutional and cognitive perspectives), and empirical methodologies vary from single-case studies to cross-sectional surveys employing diverse metrics. Recent analyses indicate significant thematic growth but restricted convergence on mechanisms and contextual factors, particularly across venture phases and geographical locations [5]. Furthermore, practitioner and policy narratives frequently convey scale objectives that exceed implementation preparedness, resulting in ambiguous signals regarding performance consequences and ecological spillovers. A comprehensive bibliometric evaluation spanning a decade is necessary to elucidate intellectual frameworks, map theme progression, and pinpoint underexplored intersections [3], [11].This study performs a bibliometric analysis of artificial intelligence within the digital entrepreneurship ecosystem from 2015 to 2025 to (i) delineate the intellectual and social frameworks (authors, institutions, countries) and collaboration networks influencing the domain; (ii) identify thematic clusters and their temporal progression, emphasizing inflection points related to generative AI; (iii) investigate methodological trends and theoretical foundations to evaluate cumulative knowledge development; and (iv) reveal research deficiencies and propose an integrative agenda that connects micro-level foundations (skills, cognition) to meso-level ecosystem supports (accelerators, platforms, investors) and macro-level policies/standards. The review seeks to integrate performance analysis with science-mapping approaches to offer a navigational framework for researchers and practical guidance for ecosystem stakeholders engaged in value generation, capability enhancement, and the ethical scaling of AI [6], [12].

2. Research Methods

2.1 Research Design

This research employs a quantitative bibliometric methodology to thoroughly delineate and evaluate the scientific terrain concerning artificial intelligence (AI) in the digital entrepreneur ecosystem from 2015 to 2025. Bibliometric analysis facilitates the detection of publication trends, prominent authors, institutional collaborations, and thematic evolution across time [13]. The method merges performance analysis, which evaluates productivity indicators like annual publication counts, citation metrics, and country-level outputs, with science mapping, which illustrates intellectual frameworks and conceptual connections via co-citation, co-authorship, and keyword co-occurrence networks [14]. This dual approach guarantees a comprehensive perspective of the topic, encompassing both quantitative growth trends and qualitative knowledge frameworks that support study on AI-driven

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entrepreneurship. The bibliometric approach follows known methodologies in earlier evaluations within innovation and management disciplines [1], [5].

2.2 Data Collection and Processing

The Scopus database was used to get the data. It has a lot of multidisciplinary coverage and credible metadata that may be used for bibliometric analysis in management and entrepreneurship studies. The search string used controlled terms and Boolean operators to find articles that linked AI and digital entrepreneurship. Some examples of these terms are "artificial intelligence," "machine learning," "deep learning," "digital entrepreneurship," "entrepreneurial ecosystem," and "innovation startup." We used the last query— ("artificial intelligence" OR "machine learning" OR "generative AI") AND ("digital entrepreneurship" OR "entrepreneurial ecosystem" OR "startup ecosystem")—on titles, abstracts, and keywords. The timeframe was limited to 2015–2025 to document the development preceding and following the advent of generative AI. Only articles, conference papers, and reviews published in English were included; editorials, book chapters, and non-peer-reviewed materials were not. After manually going through the documents to get rid of duplicates and things that weren't useful, 1,042 documents were kept for analysis. The metadata, which included authors, affiliations, keywords, citations, and references, was exported as a .csv file for later analysis.

2.3 Data Analysis Techniques

The bibliometric study utilized VOSviewer (version 1.6.20) and the Bibliometrix R-package (version 4.2), which facilitate the display and computation of network interactions among publications, authors, and keywords [14], [15]. Descriptive statistics revealed trends in publishing, citation performance, and regional distribution. We used co-authorship and institutional networks to find patterns of collaboration, and we used co-citation and keyword co-occurrence analyses to find thematic clusters and intellectual structures. A temporal overlay visualization was conducted to delineate the thematic progression of study subjects throughout time, emphasizing the advent of generative AI and its incorporation into entrepreneurial studies. Lastly, normalization methods were used to make sure that citation windows could be compared, and qualitative analysis was used to add to the quantitative results to get conceptual insights. The integration of software tools and methodological triangulation increased the robustness and replicability of findings [13], [16].

3. Results and Discussions

3.1 Network Visualization

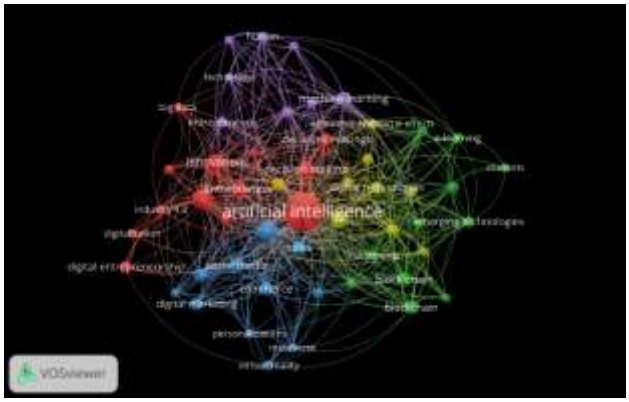

Figure 1. Network Visualization
Source: Data Analysis Result, 2025

The map indicates that "artificial intelligence" (AI) holds the most central and prominent place in the network, denoted by the largest red node. This signifies its crucial function as the primary research emphasis connecting many thematic domains within entrepreneurship, innovation, and technology management. The concentrated cluster around AI indicates a significant co-occurrence with terms like innovation, decision-making, entrepreneurs, and digital technologies, suggesting that AI functions as both a catalyst for innovation and a decision-support tool in digital business environments. The network's high density and connection signify a developed research domain in which AI is being incorporated into various entrepreneurial operations, ranging from opportunity identification to market expansion.

Five primary color-coded clusters can be distinguished, each representing a major thematic stream.

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a. The **red cluster** focuses on *innovation, digital entrepreneurship, industry 4.0,* and *digitalization,* emphasizing how AI underpins technological transformation and entrepreneurial agility.

b. The **blue cluster** revolves around *social media, e-commerce, digital marketing,* and *personalization,* showing the connection between AI and customer engagement, marketing analytics, and online commerce strategies.

c. The **green cluster** highlights *emerging technologies, blockchain, e-learning,* and *students,* pointing to the educational and technological diffusion of AI-driven innovation.

d. The **yellow cluster** links *machine learning, decision making,* and *economic and social effects,* reflecting the analytical and socio-economic perspectives on AI's impact.

e. The **purple cluster**, though smaller, connects *human* and *technology*, representing human-centered AI research, ethical design, and human–AI interaction studies.

The network structure indicates a progression from technology-centric themes to human-system integration in the last ten years. Prior research (2015–2019) highlighted big data, digitization, and Industry 4.0, concentrating on the technological foundation of AI. Recent studies (2020–2025) have focused on machine learning, customization, the metaverse, and blockchain, indicating a shift towards the integration of digital ecosystems and immersive entrepreneurial platforms. The advent of nodes like virtual reality and the metaverse signifies that AI-driven entrepreneurship is transcending automation, venturing into experiential and decentralized innovation, in alignment with contemporary global trends in digital business transformation (Roberts & Pesch, 2024; Uriarte, 2025).

The dense interconnections among clusters indicate a significant level of interdisciplinary collaboration among technical, managerial, and social study fields. The connection between artificial intelligence and digital entrepreneurship through innovation and decision-making represents the incorporation of AI as a means to enhance entrepreneurial efficiency and as a catalyst for novel business models. Likewise, the interrelations of social media, commerce, and sales illustrate how AI facilitates data-driven marketing and platform-centric entrepreneurship. This interconnection corresponds with the notion of a digital entrepreneur ecosystem, wherein AI functions as the cognitive infrastructure that integrates knowledge generation, resource orchestration, and market testing [1], [5]

The network demonstrates robust connectivity among technology and innovation keywords, while also highlighting emergent but underdeveloped nodes such as human, ethics, and learning. Their marginal positions indicate that the human-centered and ethical aspects of AI in entrepreneurship are yet largely unexamined. Future study must address this gap by examining how entrepreneurs reconcile automation with human innovation, along with the governance and societal ramifications of AI integration in digital ecosystems. Enhancing emphasis on AI capability development, sustainability, and inclusive digital innovation may bolster the theoretical and practical significance of the area, in accordance with appeals from current AI entrepreneurship literature [9], [17]

3.2 Overlay Visualization

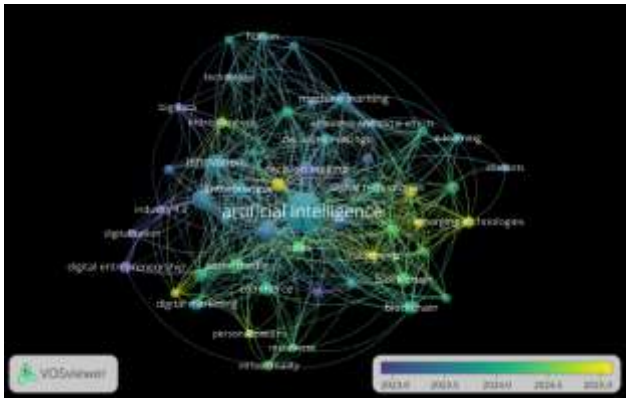

Figure 2. Overlay Visualization
Source: Data Analysis Result, 2025

The overlay visualization from VOSviewer depicts the temporal progression of research keywords associated with artificial intelligence (AI) inside the digital entrepreneur ecosystem from 2023 to 2025. The color gradient, transitioning from blue (earlier years) to yellow (more recent years), illustrates the evolving focus of study throughout time. Preceding research, depicted in blue, focused on fundamental technological components such

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digitalization, industry 4.0, big data, and entrepreneurship, illustrating an initial period in which AI was predominantly analyzed as a facilitator of efficiency and automation inside digital business frameworks. This era set the technological framework for subsequent inquiries into data-driven entrepreneurship and digital transformation.

During the transitional mid-range (green tones, about 2023–2024), research broadened to encompass machine learning, digital technologies, economic and social impacts, and decision-making processes. This signifies an expansion of the discipline, wherein researchers commenced exploring the role of AI in enhancing strategic and cognitive processes in entrepreneurship, including data-driven decision-making, innovation management, and business model transformation. The incorporation of social media and digital marketing within the same timeframe signifies a growing convergence between AI technologies and market-oriented entrepreneurial endeavors. The transition highlights a progression from solely technological innovation to AI-driven value generation, coinciding with the emergence of generative AI applications and ecosystem-focused tactics (Roberts & Pesch, 2024; Liu et al., 2024). By 2024–2025, indicated by yellow nodes, the emphasis shifts to emerging technologies, blockchain, e-learning, students, and the metaverse, signifying a progressive research direction focused on immersive and decentralized entrepreneurial ecosystems. The recent subjects include human–AI collaboration, digital education for entrepreneurial competencies, and the amalgamation of AI with extended reality environments—demonstrating a confluence of creativity, inclusion, and the advancement of digital capabilities. The popularity of developing technologies and investments indicates an increasing interest in the commercialization, finance, and sustainability of AI-driven enterprises. The overlay graphic illustrates a developing domain that has transitioned from technological underpinnings to human-centric, ecosystemic, and experiential aspects of AI entrepreneurship (Haefner et al., 2021; Uriarte, 2025; Rastogi & Pandita, 2025).

3.3 Citation Analysis

The examination of citation effect offers essential understanding of the foundational elements and significant contributions influencing the domain of artificial intelligence (AI) in the digital entrepreneurship landscape. Citation frequency acts as an indicator of academic acknowledgment and conceptual impact, emphasizing works that have profoundly influenced theoretical advancement, methodological frameworks, and management consequences. Table 1 illustrates that the most referenced papers from 2015 to 2025 represent a varied yet interrelated research domain that integrates technology, innovation, and entrepreneurship. These studies collectively illustrate the progression of the field from basic discourse on the societal consequences of AI to empirical investigations of AI adoption, digital transformation, and the emergence of entrepreneurial opportunities.

Table 1. Top Cited Research

Citations	Authors and year	Title
1285	[18]	The forthcoming Artificial Intelligence (AI) revolution: Its impact on society and firms
699	[19]	The emergence of deepfake technology: A review
167	[20]	Digital transformation and entrepreneurship process in SMEs of India: a moderating role of adoption of AI-CRM capability and strategic planning
123	[21]	Innovation Analytics and Digital Innovation Experimentation: The Rise of Research-driven Online Review Platforms
115	[22]	Digitalization of work and entry into entrepreneurship
108	[23]	Theorizing artificial intelligence acceptance and digital entrepreneurship model
92	[4]	Data science for entrepreneurship research: studying demand dynamics for entrepreneurial skills in the Netherlands
88	[24]	Future of Business Culture: An Artificial Intelligence-Driven Digital Framework for Organization Decision-Making Process
87	[25]	Creating new tech entrepreneurs with digital platforms: Meta-organizations for shared value in data-driven retail ecosystems

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48	[26]	An Empirical Evaluation of a Generative Artificial Intelligence Technology Adoption Model from Entrepreneurs' Perspectives

Source: Scopus,2025

Out of available data, [18]offers the most significant contribution, having amassed 1,285 cites, which underlines its core importance in developing models for both macroeconomic and sociological impacts of the AI revolution. This work provided us with the conceptual foundations for seeing AI not as a technological device but more as a system catalyst that is retransforming organizations as well as industries. [19] emphasizes deepfake technologies, which bring to light AI ethics, innovation, and digital risk convergence issues that are increasingly affecting entrepreneurial confidence as well as brand management in the digital era. Most recent research, for instance, [20] as wellas [23], relate to empirical as well as model-driven studies, i.e., highlighting AI capabilities adoption, strategic planning, as well as technological acceptance among small as well as medium companies (SMEs). Such research portrays AI as both a driving force as well as a moderating force for digital transformation processes as well as resource-based as well as dynamic capabilities models that prevail in modern entrepreneurial literature. Moreover, [21] note a transformation of analytic techniques for digital entrepreneurship with innovation analytics and experimentations that are data-informed, whereas [27] further extend this discussion with platform-based entrepreneurship, demonstrating how AI-facilitated meta-organizations produce shared value across digital ecosystems. Introduced contemporary literature, for instance, that of [26] , reflects a new direction for research—investigating the use of generative AI by entrepreneurs—demonstrating increased attention across creativity, automation, as well as cognitive enhancement, as principal competitive strengths. Writ large, these vastly referenced pieces together chronicle a decade's journey from theoretical discourse to practical models, which emphasize AI as the cognitive foundation for the contemporary commercial world.

3.4 Density Visualization

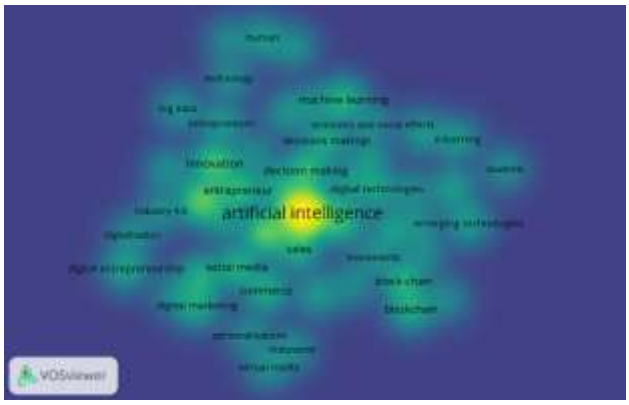

Figure 3. Density Visualization
Source: Data Analysis Result, 2025

The density map created with VOSviewer identifies the areas that have been most comprehensively analyzed in the literature related to artificial intelligence (AI) in relation to the digital entrepreneurial ecosystem. The areas highlighted in bright yellow indicate areas of increased research density and co-occurrence frequency, indicating areas that have received maximum attention from researchers. At the heart of this landscape, "artificial intelligence" stands out as the key theme, with major clusters of "innovation," "decision making," "digital technologies," and "entrepreneurship" around it. This prioritization shows that AI is analyzed more as a transformative agent that catalyzes innovation as well as aids entrepreneurial decision-making with the help of digital tools, analytic approaches, and automation. "Social media," "digital marketing," and "commerce" form integral elements of this high-densification zone, indicating the deep intersection between AI application areas and areas such as customer interaction, business analytics, and online entrepreneurship—more so under the paradigms of Industry 4.0 as well as digital transformation [1], [5].

The peripheral areas of the map, which are represented in cooler blues, cover emerging or lesser intensively studied areas such as "metaverse," "virtual reality," "blockchain," "students," and "e-learning." They suggest developing areas where research on entrepreneurship with artificial intelligence is just starting to intersect with learning paradigms, immersive technologies, and decentral economies. A relatively low coverage of "human," "technology," and "economic and social impacts" reflects a nascent yet emerging discourse on the ethical, cognitive, and social consequences associated with AI-driven business practices. This density visual indicates that central attention continues to remain focused on AI-driven innovation and business operations, but the area is

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slowly including more dissimilar sets of interdisciplinary, experiential, and human-centric sets of digital entrepreneurships [3], [9], [17].

3.5 Co-Authorship Network

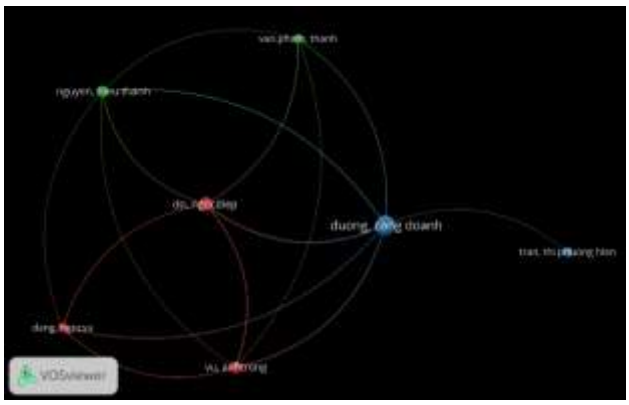

Figure 4. Author Visualization
Source: Data Analysis Result, 2025

The co-authorship network graphic depicts the collaboration framework among prominent writers in artificial intelligence (AI) and digital entrepreneurship research. The network has three principal clusters, each represented in different color shades, which indicates different yet interconnected research synergies. Within the blue cluster, the most central and influential author, Duong Cong Doanh, acts as the primary and most central link to Tran Thi Phuong Hien, Nguyen Hieu Thanh, and Van Pham Thanh. Such centrality identifies Duong as the most important constituent in fostering collaborative efforts and the exchange of information between institutions regarding research on AI integrated business transformation, digital technology adoption, and innovation strategies. The red cluster, which includes Do Ngoc Diep, Vu Anh Trong, and Dang Ngoc Su, serves a cohesive subgroup for applied research, probably focusing on the deployment of artificial intelligence and entrepreneurship in specific geographic or industry contexts. The green cluster, and its leads Nguyen Hieu Thanh and Van Pham Thanh, denotes still another collaborative network that is probably working on the enhancement of theoretical or policy-related dimensions of AI-driven enterprise. The map illustrates a fairly integrated academic network, wherein a select number of important players promote collaboration among otherwise confined groups, indicating both a concentration of influence and potential for expanded international co-authorship in forthcoming research.

Figure 5. Affiliation Visualization
Source: Data Analysis Result, 2025

The institutional collaboration network for AI and digital entrepreneurship researches The institutional collaboration map on the AI and digital entrepreneurship, displayed by VOSviewer, is a dense but focused pattern of alliance among involved institutions and organizations. The core of this connected graph is formed by the University of Madras (India), Universiti Kebangsaan Malaysia, University of Northampton (United Kingdom), Amity Global Institute (Singapore) and Abu Dhabi Police (UAE) conveyed by the map. The fair spread of linkages demonstrates a balanced level of cross-border cooperation, particularly between Asian, Middle Eastern and European academia institutions, suggesting the global view and interdisciplinary manner about AI driven entrepreneurship research. The University of Madras operates as a regional hub, collaborating with the West and Southeast Asia, and involvement by Abu Dhabi Police illustrates the growing interest by government and applied

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research institutes in tapping AI for organizational innovation and digital governance. This visualization illustrates the trend of a multilateral and cross-border research regime [26], which is creating knowledge across countries about AI and digital entrepreneurial activities by working together for international cooperation and building policy-academia integration.

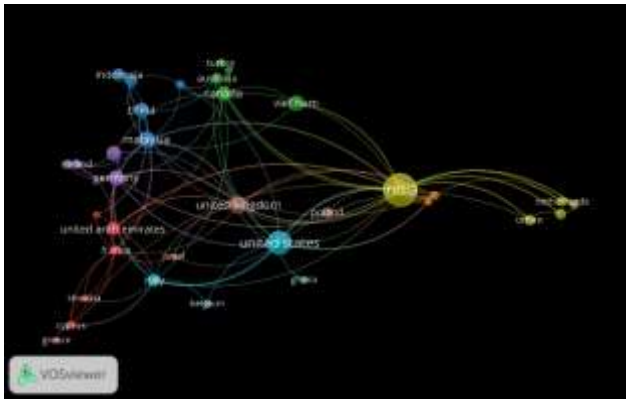

Figure 6. Country Visualization
Source: Data Analysis Result, 2025

The country collaboration network visualization provides a global layout of research relationships on artificial intelligence (AI) and digital entrepreneurship. India is shown to be the central and largest node of a yellow sphere with strong productivity and wide international collaboration (as indicated by its size and thickness). India's ties with countries like the US, UK, the Netherlands, Oman and Vietnam exhibit its strategic centrality as a bridge between western and eastern research landscapes. This trend demonstrates the quick growth of India in digital transformation, AI innovation as well as entrepreneurial learning, all complementing its strategic target to lead a digital economy at the world stage. In stark contrast large clusters have regional centres, such as the US and the UK, China and Malaysia which exhibit large interconnections as well. Countries belonging to the Western world, here represented by United States (USA), United Kingdom (UK), Germany (DEU), France (FRA) and Italy (ITA) maintain close co-authorship ties with emerging Asian economies, depicting a cross-continental knowledge sharing. The involvement of Middle Eastern nations, like the United Arab Emirates and Oman, indicates an increasing integration of AI and digital entrepreneurship into the policy and institutional structures of Gulf economies. The visualization illustrates a progressively globalized research landscape, with India serving as the major hub of collaboration, bolstered by a network of established and rising partners collaborating to enhance innovation in AI-driven entrepreneurial ecosystems.

Discussions

Practical Implications

This bibliometric review reports on a number of practical outcomes of the study which are of relevance to entrepreneurs, legislators, educators, and innovation managers. We note that the role of AI in entrepreneurship has gone beyond its use in automation and analysis which is what we see in most instances today. Instead, AI in this context is a multi-aspect play which includes creativity, personalization, and digital experimentation. Also included are the results which present that entrepreneurs and small business owners may put to use these results to develop AI based strategies for product innovation, consumer engagement, and operational efficiency which in turn they may achieve via the use of generative AI, predictive analytics, and recommendation systems.

The large role of countries such as India, the US, and the UK in our partnership network which in turn is a sign that transnational relationships are which are promoting knowledge flow and which are also which see to it that start up growth is quick. Policy makers should put in place digital infrastructure, cross border research funding, and intellectual property rules which in turn will do well to put forward AI into the entrepreneurship across regions. We see a lot of use of terms like e learning, students and new tech which means that we as educators and accelerators must put into our digital education programs AI literacy, ethical awareness and design thinking for business. Also key to the conversion of research into workable business models is the academic industry collaboration which in turn is what will see research results put to use in the business world in a inclusive, sustainable way and in alignment with social goals (Paul et al., 2023; Rastogi Pandita, 2025).

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Theoretical Contributions

Over ten years (2015 to 2025), this research clarifies how we understand new businesses powered by artificial intelligence. It maps the field's development, key themes, alongside who is working together. Ultimately, it highlights three core ideas AI now meets business in exciting ways. Research shows AI isn't just a tool; it's a smart advantage reshaping how ventures spot chances, make choices, then build new things. This thinking builds upon existing ideas about what makes companies succeed – their skills to adapt alongside valuable resources. We're moving away from focusing solely on tech toward prioritizing people. Notice how search terms have changed - less about "digitalization" and more about individuals, learners, even online courses? It suggests we're beginning to see AI as something that works with us, becoming woven into daily life. This supports the idea that systems work best when combining what humans think with what machines do – a blend where both thrive.

Thinking about AI as something that helps different parts work together, this study looks at how AI development connects to new businesses. It ties together what individuals bring to the table - like talent and fresh ideas - with how they connect through online services and groups, alongside broader rules and support from governments. By looking at everything this way, we can better understand how to guide these connected systems toward progress and manage change when AI is involved (Roberts & Pesch, 2024).

Limitations and Future Research Directions

Looking at what's already been written shows us quite a bit, however there are boundaries to keep in mind. We only searched one source – Scopus – which, while large, means studies from places like Web of Science or IEEE Xplore might have been missed. For a fuller picture later on, researchers should check several sources at once, even looking outside their usual fields. Focusing heavily on counts - like tracking citations - highlights what's popular but doesn't necessarily mean we truly get the work. It overlooks subtle ideas or unique details within individual studies. Combining those statistics alongside careful reading, though, unlocks a richer understanding. Looking ahead to 2025, studies suggest artificial intelligence, large language programs, alongside virtual copies can quickly reshape many fields. Keeping a close watch on new findings will reveal how these technologies blend as they develop. AI innovation largely happens in just a few places, creating an uneven worldwide landscape. To truly move forward, studies need to look at growing nations, local collaborations, alongside different cultural backgrounds – building both better understanding also useful approaches suited to where fresh thinking actually takes root.

4. Conclusion

This bibliometric review at studies between 2015–2025, this report breaks down how thinking about AI within new businesses has shifted. Initially, discussions revolved around tech – things like automating tasks, going digital, and what was termed "Industry 4.0." Now, however, the focus is more on people, working together, being inventive, also considering long-term viability. While key ideas like innovation, choices, plus digital tools remain important, emerging areas - blockchain, virtual worlds, online learning - point toward fresh directions for AI entrepreneurs. This partnership spotlights how India is becoming a world leader, strengthening ties with countries like America, Britain, alongside the Netherlands - showing AI development happens everywhere. The work deepens our grasp of the subject by mapping out ideas, noting changing trends, then offering a layered system connecting AI skills to business environments. Consequently, companies, governments, and schools gain insight into using AI for positive change that benefits everyone.

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