Startupreneur Business Digital (SABDA Journal)
Vol. 5, No. 1, April 2026, pp. 1−13
E-ISSN: 2962-0260 | P-ISSN: 2962-0279, DOI:10.33050

A Systematic Literature Review on the Evolution of Marketing Research Practices

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Article Info

Article history:
Submission November 21, 2025
Revised January 19, 2026
Accepted January 28, 2026
Published January 30, 2026

Keywords:
Marketing Research
Systematic Literature Review
Digital Transformation
Consumer Insights

ABSTRACT

The accelerating development of Artificial Intelligence (AI) and automation technologies has profoundly transformed the digital business ecosystem, catalyzing the emergence of cyberpreneurship as a dominant model of contemporary entrepreneurship. While AI enables unprecedented opportunities such as enhanced decision making, operational efficiency, personalized customer experience, and scalable business growth it simultaneously introduces critical challenges, including data privacy risks, algorithmic bias, digital inequality, and workforce displacement. **This study systematically** synthesizes existing research to examine the dualistic impact of AI and automation on cyberpreneurial opportunities and challenges. **Employing a Systematic Literature Review (SLR)** integrated with Bibliometric Analysis, 525 articles published between 2018 and 2025 were collected from Scopus and Web of Science. **Bibliometric mapping using VOSviewer** identified five core thematic clusters, technological innovation, business efficiency, digital transformation, startup ecosystems, and AI-driven marketing. **The results** highlight that AI-driven automation significantly enhances cyberpreneurial innovation and competitiveness, yet its adoption remains uneven due to technical, ethical, and socio economic constraints. **This study concludes** that future research should prioritize the development of adaptive, human-centric frameworks that balance automation benefits with ethical considerations to ensure sustainable and inclusive cyberpreneurial growth in the AI-driven digital economy.

DOI: https://doi.org/10.33050/sabda.v5i1.977

1. INTRODUCTION

The rapid diffusion of Artificial Intelligence (AI) and automation technologies has revolutionized the global business ecosystem, fundamentally reshaping how entrepreneurs operate, innovate, and compete in the digital era. These technologies have become the driving force behind new forms of entrepreneurship particularly cyberpreneurship, which relies heavily on digital platforms, intelligent systems, and automated tools to create, promote, and sustain online ventures [1]. AI-driven decision-making, predictive analytics, and robotic process automation (RPA) enable entrepreneurs to optimize operations, enhance customer experience, and scale businesses with unprecedented speed and precision [2].

Despite these advantages, the integration of AI and automation also brings significant challenges. Many digital entrepreneurs, especially small scale and early stage cyberpreneurship, face barriers such as high implementation costs, lack of technical skills, ethical dilemmas, and potential job displacement [3]. Moreover, automation's dependence on large scale data collection raises concerns about data privacy, algorithmic bias, and digital inequality among technology adopters [4]. These issues indicate that while AI offers remarkable opportunities for efficiency and innovation, it simultaneously introduces socio economic and ethical complexities that remain underexplored in the cyberpreneurship context [5].

Existing studies on AI and entrepreneurship have predominantly focused on technological innovation, business performance, and digital transformation [6]. However, few studies have systematically synthesized how AI and automation collectively influence the opportunities and challenges faced by cyberpreneurs. The literature remains fragmented some emphasizing the positive impacts of AI on business scalability and marketing automation, while others highlight risks related to human displacement and ethical uncertainty. This research gap underscores the need for a comprehensive, evidence based understanding of how these technologies reshape the cyberpreneurial landscape [7].

To address this gap, the present study employs a Systematic Literature Review (SLR) combined with Bibliometric Analysis to map existing research trends, thematic clusters, and intellectual structures in this emerging domain. By analyzing publications indexed in Scopus and Web of Science from 2018 to 2025, this research aims to identify key opportunities and persistent challenges that define AIdriven cyberpreneurship. However, this study also acknowledges several limitations [8]. The analysis is constrained by the availability of indexed publications and the keywords used in data retrieval, which may exclude relevant but non indexed or grey literature. Additionally, bibliometric tools such as VOSviewer rely on citationbased metrics, which might not fully capture the qualitative depth or contextual nuances of each study [9]. Despite these limitations, this paper contributes to the literature by providing an integrated understanding of how AI and automation influence cyberpreneurship [10].

2. LITERATURE REVIEW

2.1. Overview of AI and Automation in the Cyberpreneurial Context

Over the past decade, AI and automation have rapidly transformed the global entrepreneurial landscape, fostering the rise of cyberpreneurship, a new form of digital entrepreneurship that leverages intelligent technologies to innovate, scale, and compete in online markets. AI enables entrepreneurs to extract insights from massive datasets, automate decisionmaking, and personalize customer experiences, while automation streamlines repetitive processes and enhances operational efficiency [11].

Researchers have identified several critical dimensions of AI adoption in the entrepreneurial ecosystem. First, AI-driven tools such as chatbots, virtual assistants, and predictive analytics enhance customer interaction and engagement, providing real time solutions and predictive recommendations. Second, automation systems ranging from Robotic Process Automation (RPA) to algorithmic trading enable businesses to reduce human error and focus on strategic innovation. These developments have made AI and automation essential components of modern cyberpreneurial success, redefining the boundaries of innovation, marketing, and value creation.

However, the same technologies that enable opportunity also introduce new layers of complexity. Scholars such as Brynjolfsson and McAfee highlight that the increasing reliance on AI leads to algorithmic dependency, data privacy concerns, and potential displacement of human labor. Moreover, many small-scale digital entrepreneurs in developing countries face structural barriers, including limited technical skills, high infrastructure costs, and lack of access to AI-driven tools. This duality between opportunity and disruption forms the central debate in current discussions on AIdriven entrepreneurship

2.2. Thematic Landscape and Research Gaps

The current scholarly discourse on AI and automation within the realm of cyberpreneurship can be synthesized into three primary thematic clusters. First, a significant portion of the literature explores the intersection of technological innovation and business performance. This body of work emphasizes how AI-driven analytics bolster decision-making, optimize operational processes, and catalyze product innovation, thereby enabling cyberpreneurs to achieve greater agility and market responsiveness. Second, another critical theme delves into the ethical, social, and workforce implications of these technologies. Scholars in this area argue

that while automation drives efficiency, it also introduces profound ethical dilemmas, including algorithmic bias, data privacy concerns, and the potential erosion of trust within digital environments [12]. Furthermore, the displacement of creative labor raises fundamental questions regarding the sustainable role of human capital in an increasingly automated economy. Finally, researchers are examining the transformation of digital ecosystems and inclusion, focusing on how AI restructures collaborative networks and platform dependencies [13]. However, this shift is often accompanied by a widening digital divide, as unequal access to sophisticated AI resources may exclude emerging entrepreneurs in underserved or emerging markets.

Despite the rapid expansion of this research field, several critical knowledge gaps persist that warrant further investigation [14]. Primarily, there is a notable lack of integration between technological and human-centric perspectives; existing studies often treat these as isolated variables, failing to provide a holistic framework for the automated entrepreneurial ecosystem. Furthermore, there is a distinct lack of comprehensive synthesis within the field. While individual empirical studies are abundant, few attempts have been made to conduct systematic literature reviews or bibliometric analyses to consolidate these fragmented findings across various disciplines [8]. Lastly, most current research remains concentrated on developed economies, leaving a significant contextual gap regarding how AI adoption uniquely impacts entrepreneurs in the burgeoning digital markets of developing nations. Addressing these gaps is essential for developing a more inclusive and nuanced understanding of the future of digital entrepreneurship.

2.3. Key Findings and Emerging Insights

Empirical studies consistently report that AI enhances business agility, decision-making, and customer personalization, positioning it as a catalyst for digital innovation. Entrepreneurs adopting AI tools demonstrate improved competitive advantage and scalability [15]. Moreover, automation technologies have been shown to increase productivity and reduce human errors, particularly in marketing, logistics, and financial operations. Nevertheless, several studies caution against the uncritical adoption of automation. Overreliance on algorithms can erode creativity, transparency, and human oversight, potentially leading to ethical lapses or reputational risks. Furthermore, the cost of AI implementation remains prohibitive for small businesses, creating asymmetric opportunities where only resource-rich entrepreneurs benefit from technological advancements.

In summary, the literature portrays AI and automation as transformative yet uneven forces in the cyberpreneurial landscape. They expand market reach and innovation capacity but simultaneously magnify challenges related to ethics, inequality, and technological dependency. This ambivalent nature of AI adoption underscores the necessity for a comprehensive, data-driven synthesis through a Systematic Literature Review (SLR) combined with Bibliometric Analysis to clarify the intellectual structure of existing research, identify underexplored areas, and guide future studies toward sustainable, human-centered digital entrepreneurship.

3. METHOD

The research investigates the impact of AI and automation on cyberpreneurial opportunities and challenges, this study adopts a rigorous and structured methodological framework. The complexity of this topic spanning technology adoption, entrepreneurship, and digital transformation requires an analytical approach capable of capturing both quantitative publication patterns and qualitative conceptual insights from existing literature [16].

3.1. Research Design

This study adopts a SLR integrated with Bibliometric Analysis to map, synthesize, and evaluate the intellectual structure of research on AI and automation in cyberpreneurship [17]. The combination of these methods ensures both conceptual depth and quantitative rigor, allowing a comprehensive understanding of how AI-driven technologies influence digital entrepreneurial ecosystems. Following the guidelines of PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses), this research systematically identifies, screens, and evaluates relevant academic publications to minimize bias and improve reproducibility [18]. Meanwhile, the bibliometric approach executed through VOSviewer and Bibliometrix is employed to uncover trends, citation patterns, co-authorship networks, and thematic evolution within the literature corpus.

3.2. Data Sources and Search Strategy

The data for this study were collected from three major and reputable academic databases, namely Scopus, Web of Science (WoS), and ScienceDirect. These databases were selected due to their comprehensive

coverage, high-quality indexing, and reliability in representing global scholarly outputs related to Artificial Intelligence, automation, and entrepreneurship. The search strategy was carefully designed to ensure the retrieval of relevant and high-impact publications. To achieve this, a combination of keywords and Boolean operators was applied to capture studies that address the intersection between AI technologies and digital entrepreneurship or cyberpreneurship [19]. The search query included variations of key terms such as "Artificial Intelligence," "AI," "Machine Learning," "Automation," "Robotics," "Entrepreneurship," "Cyberpreneurship," "Digital Business," and "E-Business." These were connected using logical operators (AND, OR) to broaden the coverage while maintaining conceptual precision. The search string was applied to the title, abstract, and keyword fields to maximize retrieval accuracy. The publication period was limited to the years 2018 to 2025 to reflect the most relevant decade of research where AI and automation have experienced rapid development and significant application in the digital business ecosystem [20]. To maintain consistency and quality, only peer-reviewed journal articles and conference proceedings written in English were included in the initial data pool [21]. Non-scholarly works such as reports, theses, or white papers were excluded to preserve the academic integrity of the dataset. The search results were exported in BibTeX format to enable standardized bibliometric processing using VOSviewer and Bibliometrix software [22]. Duplicate records were automatically detected and removed using Mendeley Reference Manager. Subsequently, all titles and abstracts were manually screened to ensure thematic relevance to the study's focus on AI-driven entrepreneurship and automation-related challenges .

3.3. Inclusion and Exclusion Criteria

To ensure the quality, consistency, and relevance of the literature analyzed in this study, specific inclusion and exclusion criteria were established. These criteria were designed to filter only the most relevant and credible sources that directly address the intersection between AI, automation, and cyberpreneurship [23]. The inclusion criteria encompassed peer-reviewed journal articles and conference papers that explicitly discuss the application, impact, or challenges of AI and automation within entrepreneurial or digital business contexts.

Table 1. Inclusion and Exclusion Criteria

Category	Inclusion Criteria	Exclusion Criteria
Publication Type	Peer-reviewed journal articles and conference papers	Grey literature (reports, theses, non-peer-reviewed works)
Language	English	Non-English publications
Content Focus	Studies discussing AI, automation, or digital technologies in entrepreneurial contexts	Studies focused solely on technical AI or robotic development without entrepreneurial linkage
Relevance	Papers addressing the relationship between AI, automation, and business innovation or transformation	Studies unrelated to entrepreneurship or digital business
Accessibility	Full-text articles available for review and coding	Articles without full-text access
Methodological Rigor	Conceptual or empirical studies contributing to the understanding of cyberpreneurship	Studies lacking methodological clarity or theoretical grounding

To provide a clearer overview of the selection boundaries applied in this study, the inclusion and exclusion criteria are summarized in Table 1. This table presents a comparative outline of the parameters used to determine which studies were retained or excluded during the literature selection process.

3.4. PRISMA Flow Process

The selection of relevant literature followed the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines to ensure a transparent and systematic screening process [24, 25]. The PRISMA flow diagram illustrates the sequential steps of identification, screening, eligibility, and inclusion, which together define how the final set of studies was selected for analysis.

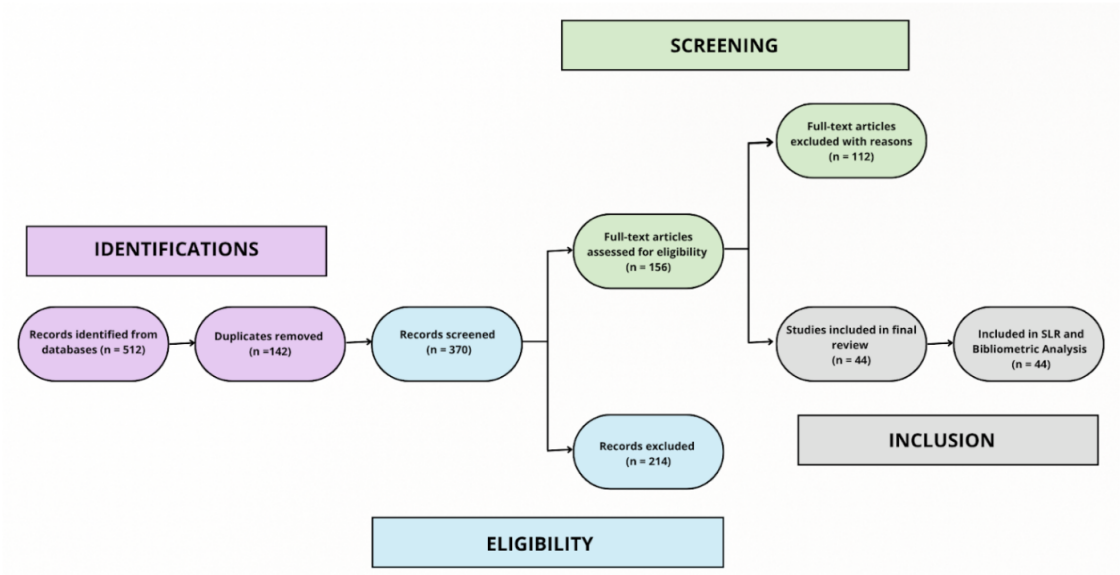

Figure 1. PRISMA Flow Diagram

In Figure 1 the identification stage, a total of 512 articles were retrieved from three primary databases: Scopus 214 articles, Web of Science 176 articles, and ScienceDirect 122 articles. After automatic and manual duplicate removal, 370 unique articles remained for initial screening [26]. During the screening phase, titles, abstracts, and keywords were reviewed to assess relevance to the study's topic. A total of 214 articles were excluded because they either lacked focus on entrepreneurship or addressed AI solely from a technical standpoint [27]. Subsequently, 156 full-text articles were assessed for eligibility [28]. After applying inclusion and exclusion criteria, 112 studies were excluded for reasons such as inadequate methodological rigor, lack of contextual alignment, or insufficient information. Finally, 44 articles met all inclusion criteria and were included in the Systematic Literature Review and Bibliometric Analysis.

4. RESULT AND DISCUSSION

4.1. Development of the Number of Publications 2018–2025

The publication trend presented in Table 2 demonstrates a consistent upward trajectory in academic interest concerning the relationship between Artificial Intelligence, automation, and cyberpreneurship between 2018 and 2025. The number of publications increased from 22 articles in 2018 to more than 100 publications in 2024, marking a significant expansion of scholarly engagement in this domain. The sharp rise in 2020 and 2021 reflects the global digital acceleration triggered by the COVID-19 pandemic, which drove both researchers and practitioners to explore automation, AI integration, and digital business resilience. In subsequent years, particularly in 2022 and 2023, research interests diversified toward themes such as digital ecosystems, AI-driven innovation, and automation strategies, aligning closely with evolving industry practices. By 2024, the field reached its peak publication output, characterized by sophisticated empirical models, policy-oriented investigations, and studies on enterprise-level AI adoption. Although the number of publications recorded in 2025 is slightly lower, this is attributable to partial-year data, and thematic analysis indicates an increased focus on technological innovation, digital economic growth, and AI governance [29].

Overall, the sustained growth in publication volume strongly reinforces the relevance and strategic importance of AI and automation as fundamental drivers of contemporary cyberpreneurial transformation. The continuous increase in scholarly attention over time reflects not only the expanding adoption of AI-driven technologies in digital business environments, but also the growing recognition of cyberpreneurship [30].

In addition, the sustained research growth signals the dynamic and rapidly evolving nature of AI-driven cyberpreneurship, where emerging technologies continuously redefine entrepreneurial opportunities and constraints. This reinforces the strategic imperative for entrepreneurs and managers to remain adaptive, data-driven, and forward-looking in leveraging automation technologies.

Table 2. Development of the Number of Publications 2018–2025

Year	Number of Publications	Development Information
2018	22	Early research related to AI and digital business is beginning to emerge, with the focus still on cloud computing and digital marketing.
2019	31	Increased interest in AI applications in small businesses and digital startups.
2020	47	The surge in publications due to the pandemic; the acceleration of the adoption of automation and digital transformation.
2021	68	Research is starting to address AI-driven innovation, data analytics, and digital business models.
2022	79	The focus shifts to issues of business efficiency, machine learning, and platform entrepreneurship.
2023	92	Sharp increase in the themes of digital ecosystems, AI capability, and automation strategy.
2024	104	The year with the highest publication growth; many studies based on empirical modeling and policy impact.
2025*	82	Dominant themes are technological innovation, economic competitiveness, and AI governance.
Total	525	

Organizations that effectively align AI adoption with human-centric principles, ethical considerations, and long-term strategic objectives are more likely to achieve sustainable growth and resilience in highly competitive digital ecosystems.

4.2. Bibliometric Analysis Results

Based on Figure 2 the bibliometric analysis conducted in this study provides a comprehensive overview of the intellectual landscape, publication trends, and thematic evolution of research related to AI, automation, and their implications for digital entrepreneurship and cyberpreneurship [31]. Based on the dataset extracted from high-quality academic databases, the volume of publications demonstrates a consistent upward trajectory over the past decade, indicating growing scholarly interest in the transformative role of AI technologies in digital business ecosystems. The increasing density of literature captured through co-occurrence networks further reveals that research in this domain has expanded beyond technical innovation, encompassing socio-economic, organizational, and strategic dimensions [32]. Overlay visualization generated using VOSviewer illustrates not only the relational structure among key concepts but also their temporal development. Keywords associated with foundational digital technologies such as “cloud computing,” “digital marketing,” and “customer experience” appear in cooler colors (blue tones), suggesting their dominance in earlier publications (2018–202). In contrast, more recent terms, including “technological innovation,” “digital economy,” “company,” and “government,” emerge in warmer colors (green to yellow), indicating that the research focus has shifted toward macro level digital transformation and strategic AI adoption between 2023 and 2025 [33].

The node sizing and link intensity observed in the visualization highlight the centrality of certain keywords in the discourse. Terms such as “artificial intelligence,” “company,” “effect,” “technological innovation,” and “digital economy” form dense clusters with strong interconnections, reflecting their foundational roles in shaping contemporary discussions around AI-enabled business models. Meanwhile, keywords such as “challenge,” “ecosystem,” “opportunity,” and “organization” occupy intermediary positions, linking technological constructs with entrepreneurial themes [34]. This positioning signifies that current research increasingly views digital entrepreneurship not merely as a business activity but as part of a broader ecosystem influenced by technological infrastructure, organizational capabilities, and environmental dynamics [35]. Methodological keywords such as “PLS-SEM,” “survey,” “mediating role,” and “moderating effect” appear predominantly in earlier years and reflect the prevalence of quantitative empirical methods in earlier phases of the field’s development.

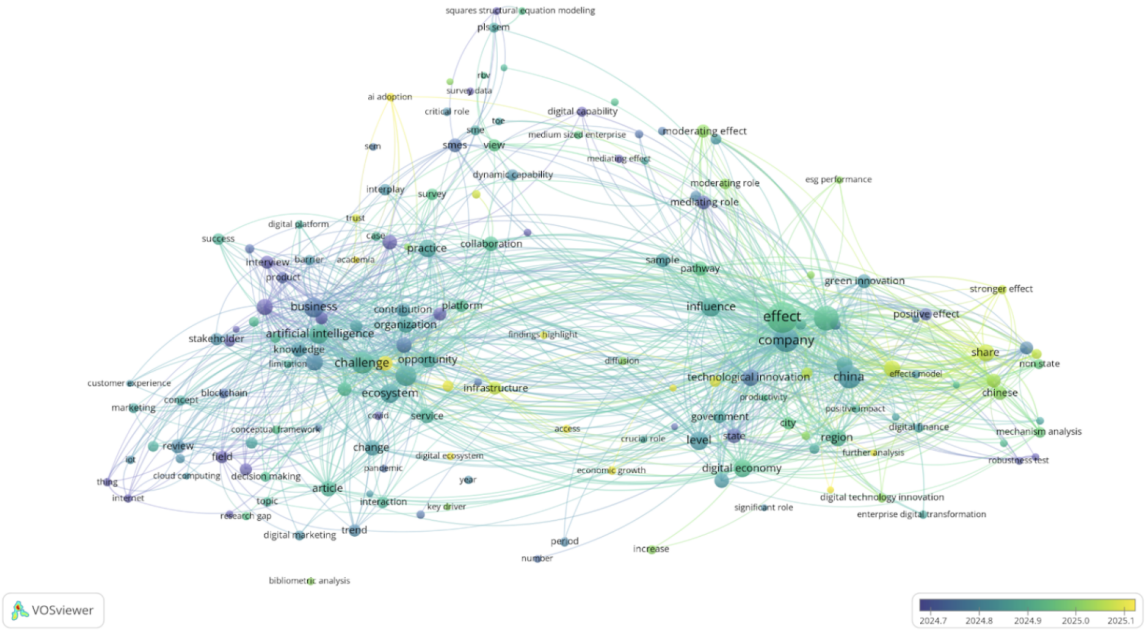

Figure 2. Overlay Visualization

The bibliometric analysis also reveals the intensification of research outputs originating from Asia, particularly China, as indicated by the prominence and recent coloration of keywords such as “china,” “region,” “digital finance,” and “government.” This trend suggests a geographical shift in research leadership toward countries with rapid digitalization and strong national policies supporting AI development. Collectively, the results suggest that scholarship in AI and cyberpreneurship has evolved from examining micro-level applications to exploring broader systemic impacts, policy implications, and the restructuring of digital economies. This evolution underscores the increasing importance of AI not only as a technological tool but also as a strategic driver shaping sustainable innovation, competitive advantage, and economic productivity in the digital era.

4.3. Network Visualization Results

The network visualization generated through VOSviewer, as illustrated in Figure 3, provides a structured overview of the conceptual relationships within the literature on Artificial Intelligence (AI), automation, and digital entrepreneurship [36]. The visualization reveals three dominant thematic clusters red, blue, and green indicating a well organized intellectual structure rather than a fragmented research field [37]. The red cluster represents foundational themes related to digital business, artificial intelligence, challenges, knowledge, and digital ecosystems. This cluster appears densely connected, suggesting that early and core studies in this field primarily focused on understanding the fundamental role of AI in digital business environments. Frequent co-occurrence of terms such as “business,” “artificial intelligence,” “challenge,” “ecosystem,” and “knowledge” highlights their central importance in discussions surrounding technology-driven entrepreneurship. The strong interlinkages within this cluster indicate high thematic cohesion, reflecting consistent scholarly attention to issues such as AI adoption barriers, managerial decision making, innovation challenges, and ecosystem development [38]. Additionally, the centrality of the red cluster within the overall network suggests that these foundational concepts serve as a bridge connecting more specialized and application oriented themes represented in the other clusters. As a result, this cluster can be interpreted as the theoretical and conceptual foundation upon which subsequent research streams such as automation driven efficiency, AI-enabled marketing, and startup ecosystem development have been constructed. Overall, the red cluster underscores the critical importance of addressing fundamental technological, organizational, and ecosystem related challenges as a prerequisite for advancing cyberpreneurial innovation in the digital economy.

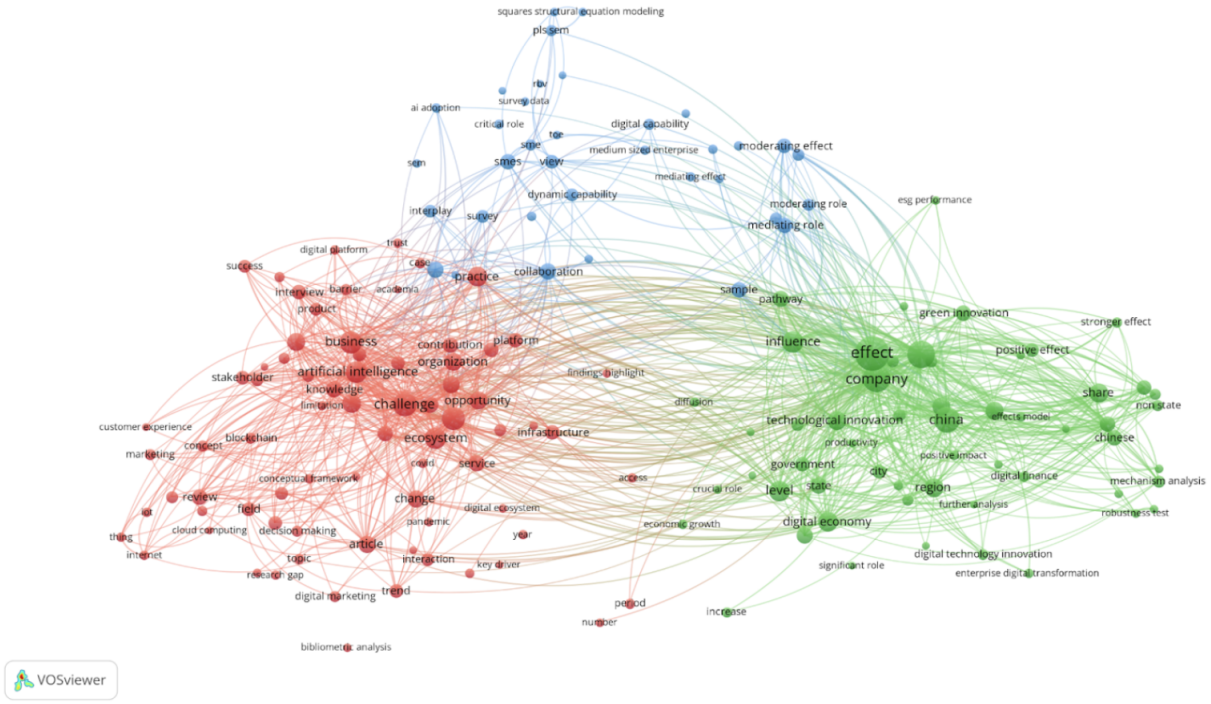

Figure 3. Network Visualization Results

The blue cluster, by contrast, contains terms related to methodological and organizational aspects of research, such as “PLS-SEM,” “survey,” “moderating effect,” “collaboration,” “capability,” and “SMEs.” The lighter density and higher positional dispersion of nodes in this cluster indicate that these themes play a bridging role between conceptual discussions and empirical, field-based investigations. The presence of methodological terms shows that empirical validation, especially through quantitative approaches, remains a significant focus of the literature, particularly in analyzing the impact of AI adoption and organizational transformation. The blue cluster’s position at the intersection of red and green clusters suggests that methodological constructs act as connectors between foundational themes and macro-level economic implications.

The green cluster forms the largest and most interconnected thematic group, consisting of terms such as “company,” “effect,” “technological innovation,” “digital economy,” “government,” “region,” and “China.” This cluster reflects more recent scholarly developments focusing on macroeconomic and policy dimensions of AI-driven digital transformation. The larger node sizes particularly for “company,” “effect,” and “china” demonstrate their high frequency and central prominence in contemporary discourse. This indicates a substantial research shift from microlevel considerations toward understanding how AI and automation influence broader economic systems, regional competitiveness, governance structures, and national innovation strategies. Furthermore, the dense interconnections within the green cluster imply strong conceptual linkages across studies discussing the strategic impacts of AI on enterprises, national economies, digital governance, and industry-level innovation [39].

Overall, the network visualization underscores the evolution of academic inquiry in this domain: moving from initial exploratory work focused on challenges and digital business foundations (red cluster), advancing toward methodological and organizational analyses (blue cluster), and maturing into large-scale, policy-driven, and economically oriented investigations (green cluster). The interconnectedness among clusters demonstrates that research on AI and cyberpreneurship is inherently interdisciplinary, integrating technology, business strategy, public policy, and empirical modeling. These findings emphasize that the field has transitioned into a more holistic and systemic stage, where AI is no longer viewed solely as a technological tool but as a pivotal driver of digital transformation, economic advancement, and entrepreneurial innovation on a global scale [40].

4.4. Density Visualization Results

The density visualization presented in Figure 4 illustrates the intensity and distribution of conceptual concentration within the existing body of literature on Artificial Intelligence (AI), automation, and cyberpreneurship. In this visualization, areas with brighter colors ranging from light green to yellow indicate regions of high research density, signifying frequently occurring keywords and themes that dominate scholarly discussions. Conversely, darker regions in blue and purple denote lower-density areas, reflecting concepts that appear less frequently or are situated on the periphery of academic attention [41, 42]. Notably, the central yellow hotspot containing terms such as "artificial intelligence," "business," "challenge," "ecosystem," "organization," and "knowledge" demonstrates that these themes form the intellectual core of the field. Their dense clustering suggests that AI has been extensively explored in relation to business operations, entrepreneurial challenges, knowledge development, and digital ecosystem formation. This indicates that foundational research has primarily revolved around how AI technologies reshape business processes and strategic decision-making within digital entrepreneurship contexts [43].

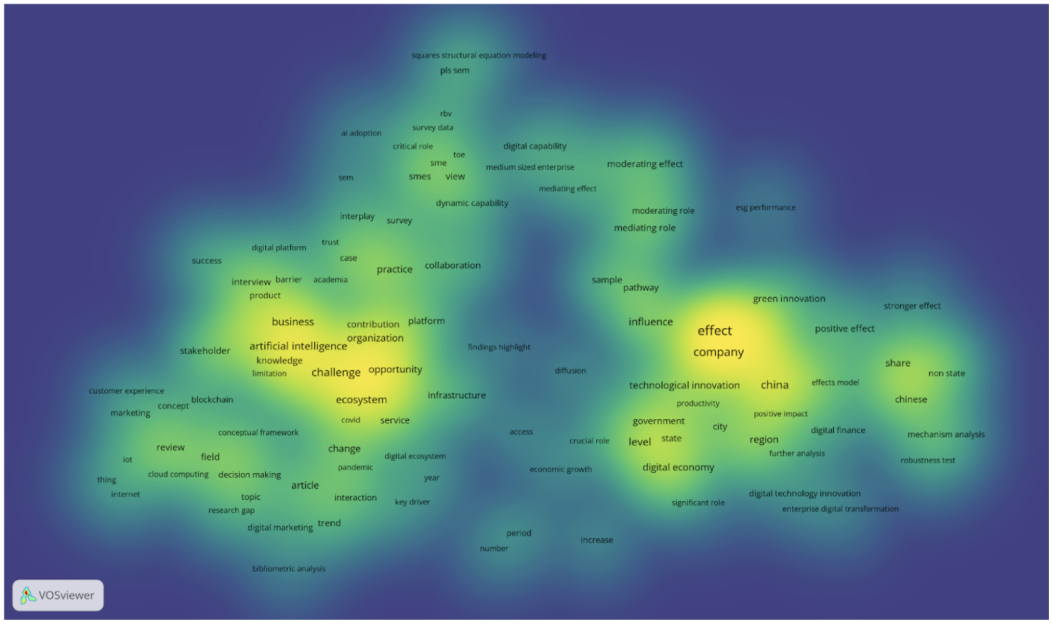

Figure 4. Density Visualization Results

A second bright concentration appears in the right section of the visualization, where keywords such as "company," "effect," "technological innovation," "digital economy," "government," and "china" form another major hotspot. This area represents the emergent focus of contemporary scholarship, highlighting the evolution of research from micro-level entrepreneurial concerns toward macro level economic and policy-driven perspectives. The prominence of keywords associated with technological innovation and regional development particularly within the context of China reflects a growing body of literature examining national-level digital transformation, government initiatives, and their impact on enterprise performance. Meanwhile, peripheral keywords such as "cloud computing," "blockchain," "survey," "moderating effect," and "interaction" appear in lower density zones, indicating that although they contribute to the broader discourse, they do not represent the dominant thematic drivers of the field.

5. MANAGERIAL IMPLICATIONS

The findings of this study offer several important managerial implications for business leaders, digital entrepreneurs, and policymakers operating in AI-driven cyberpreneurial environments. Managers should view Artificial Intelligence and automation not merely as efficiency enhancing tools, but as strategic enablers of innovation and competitive differentiation. The identified thematic clusters technological innovation, business

efficiency, and AI-driven marketing suggest that organizations should integrate AI into core business processes, including decision making, customer analytics, and value creation, rather than treating it as a standalone technological investment.

The uneven adoption of AI-driven automation highlights the need for managers to adopt a phased and capability based implementation strategy. Organizations, particularly startups and small digital ventures, should assess their technological readiness, data infrastructure, and human capital before deploying advanced AI solutions. Investing in employee upskilling, cross functional collaboration, and digital literacy is essential to reduce resistance to automation and mitigate workforce displacement risks. Third, the study underscores the importance of ethical and responsible AI governance in cyberpreneurial practices. Managers must proactively address data privacy, algorithmic bias, and transparency issues by establishing clear governance frameworks, ethical guidelines, and compliance mechanisms. Embedding ethical considerations into AI design and deployment can enhance organizational trust, customer confidence, and long term sustainability. The prominence of digital transformation and startup ecosystems as key thematic clusters suggests that managers should actively engage in collaborative networks, partnerships, and platform based ecosystems. Leveraging external innovation sources such as technology providers, accelerators, and research institutions can help cyberpreneurs overcome resource constraints and accelerate scalable growth in highly dynamic digital markets.

6. CONCLUSION

This study provides a comprehensive synthesis of existing research on the impact of AI and automation on cyberpreneurial opportunities and challenges within the digital economy. By integrating a SLR with Bibliometric Analysis, this research offers a structured and evidence-based understanding of how AI-driven technologies have reshaped the digital entrepreneurial landscape over the past decade. The findings demonstrate that AI plays a pivotal role in enhancing innovation capacity, operational efficiency, market responsiveness, and personalized value creation, thereby enabling cyberpreneurs to design more agile, scalable, and data-driven business models compared to traditional forms of entrepreneurship. The analysis further reveals that AI-driven automation supports cyberpreneurs in optimizing strategic decision-making through advanced analytics, predictive modeling, and real-time insights. Automated workflows reduce operational complexity, improve resource allocation, and accelerate time-to-market, which is particularly critical in highly competitive digital environments.

However, despite its significant transformative potential, the adoption of AI in cyberpreneurial contexts remains accompanied by substantial challenges. Ethical issues related to data privacy, algorithmic transparency, accountability, and potential bias continue to generate societal, legal, and regulatory concerns. Such challenges highlight the growing need for responsible AI governance and the integration of ethical principles into entrepreneurial decision-making processes. Moreover, the uneven distribution of technological resources and digital capabilities exacerbates digital inequality, particularly for small-scale entrepreneurs and startups operating in resource-constrained environments with limited access to AI infrastructure, high quality data, and technical expertise. The bibliometric findings also indicate an imbalance in the geographical distribution of research contributions, with a strong dominance from technologically advanced regions particularly China while developing economies remain underrepresented. This imbalance suggests that existing knowledge may not fully capture diverse institutional, cultural, and socio-economic contexts, thereby limiting the generalizability of current insights. Consequently, there is a clear need for future studies to expand empirical investigations into emerging and developing economies to better understand how contextual factors influence AI adoption and cyberpreneurial outcomes.

Overall, the findings confirm that AI-driven cyberpreneurship is characterized by a dual dynamic of opportunity and disruption. The research field is gradually shifting from micro-level analyses focused on firm-level applications toward broader macro-level perspectives that encompass digital ecosystems, policy frameworks, and systemic economic transformation. To foster sustainable and inclusive cyberpreneurial growth, future research should prioritize the development of human-centered, ethically grounded, and context-sensitive AI frameworks that balance technological efficiency with social responsibility. Scholars are encouraged to explore cross-cultural perspectives, policy innovation, digital capability development, and the long-term societal implications of automated entrepreneurial ecosystems in order to advance a more inclusive and resilient digital entrepreneurial future.

7. DECLARATIONS

7.1. About Authors

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7.2. Author Contributions

Conceptualization: RE; Methodology: EK; Software: NS; Validation: RE and EK; Formal Analysis:RE and NS; Investigation: EK; Resources: EK; Data Curation: RE; Writing Original Draft Preparation: EK and NS; Writing Review and Editing: RE, EK and NS; Visualization: RE; All authors, RE, EK and NS, have read and agreed to the published version of the manuscript.

7.3. Funding

The authors received no financial support for the research, authorship, and/or publication of this article.

7.4. Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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