Navigating the Knowledge Network of New Venture and Small Business: Bibliometric Insights and Forward-Looking Perspectives

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Abstract.
The purpose of this research was to navigate the intricate knowledge network that underpins new ventures and small businesses through bibliometric analysis. The primary data source using the Scopus database, 123 peer-reviewed documents including journal articles, conference papers, and book chapters which published in period 2003-2025 were systematically selected following the PRISMA framework to ensure transparency and eliminate bias. The research applies the Biblioshiny interface for R to conduct multidimensional analyses covering source impact, document influence, keyword trends, and conceptual structures. The findings reveal an increasingly dynamic knowledge network characterized by the dominance of themes such as entrepreneurship, innovation, small firm strategy, and internationalization. The co-occurrence network uncovers interrelated conceptual clusters, while the thematic evolution map traces a shift from foundational entrepreneurship themes to more contemporary concerns like digital transformation and ecosystem resilience. Highly cited papers were clustered in influential journals such as Small Business Economics and the International Journal of Entrepreneurial Behaviour and Research, underscoring the interdisciplinary depth of the field. The study offers both theoretical and practical implications. For academics, it identifies underexplored yet promising areas such as absorptive capacity and entrepreneurial ecosystems, while practitioners may leverage insights to strengthen knowledge-sharing strategies and innovation capacity.
***Keywords** : new ventures, small businesses, Prisma and Bibliometric.*

I. INTRODUCTION

The rapid evolution of the digital economy and the increased interconnectivity of markets have catalyzed a transformation in how new ventures and small businesses access, share, and deploy knowledge. In today's increasingly networked world, the phenomenon of knowledge networks is emerging as a central pillar to entrepreneurial success. Knowledge networks, which consist of formal and informal links among entrepreneurs, institutions, and other stakeholders, facilitate the exchange of critical information, resources, and capabilities that are vital for innovativeness and competitive advantage [1]. New ventures and small businesses, often characterized by their agility and resource constraints, rely heavily on these interwoven networks to bridge gaps in expertise, secure credibility, and enhance market responsiveness. However, the dynamics of these networks, including their formation, evolution, and impact, remain underexplored despite their apparent significance in shaping entrepreneurial outcomes.

The core research problem addressed in this article stems from the limited understanding of how knowledge networks function specifically within the context of new ventures and small businesses. While previous studies have underscored the importance of institutional support [2] and the role of knowledge management in promoting innovation [3], there is a conspicuous gap when it comes to systematically mapping and analyzing the complex web of relationships that underlie the entrepreneurial ecosystem. Existing research tends to isolate factors such as network engagement strategies [4] or the requirements for effective information systems in small ventures [3], leaving a fragmented picture of the overall knowledge network. This fragmented understanding poses a significant impediment for both scholars and practitioners who seek to harness these networks to foster sustainable growth and innovation.

The research urgency of this study was underscored by the accelerating pace of globalization and digital transformation. With the emergence of disruptive technologies and the increasing volatility of markets, it is imperative to gain a comprehensive understanding of how knowledge networks can be leveraged to mitigate risks and facilitate proactive decision-making in new ventures and small businesses. The interplay between internal capabilities and external environmental dynamics, such as absorptive capacity [5], has become crucial in securing long-term viability. Yet, current empirical investigations have not adequately integrated these multifaceted dimensions into a cohesive framework capable of guiding future research and practical applications. In short, there is an urgent need to systematically chart the contours of the entrepreneurial knowledge network to inform strategies that not only promote survival but also drive growth and innovation.

Previous research in this area has provided several important insights. [6] have documented success and failure trends in small businesses, emphasizing the significance of early-stage strategies and network-focused engagement in determining long-term outcomes. Similarly, McGrath & O'Toole (2021) have illustrated how early network engagement strategies can accelerate capability development in new ventures, highlighting the critical role of relationship building during the nascent stages of business formation. Additionally, Vargas-Zeledon (2023) has demonstrated that small businesses in lower-middle-income economies perceive knowledge management as an essential competence for organizational development. These studies collectively contribute to a growing recognition of the importance of knowledge networks; however, they typically address the issue from isolated perspectives, such as performance outcomes, technological integration, or market expansion.

This evident research gap calls for a more integrative and holistic examination of the knowledge network phenomenon. While individual elements of network formation, such as institutional influences [2], or internal mechanisms like absorptive capacity [5], have been analyzed, there remains a lack of comprehensive bibliometric studies that systematically capture the evolution, structure, and interdependencies within the network. The absence of such integrative analysis hinders our ability to understand how diverse knowledge flows converge to support entrepreneurship in both new ventures and established small businesses. Moreover, it inhibits the development of forward-looking perspectives that could inform policy, education, and practice in entrepreneurial ecosystems.

Recognizing this research gap, a growing body of literature has begun to explore entrepreneurial ecosystems from a macro perspective [7] and to utilize bibliometric approaches to systematically capture the trends in entrepreneurship research [8]. Yet, an integrative analysis that synthesizes these perspectives to provide forward-looking insights into the knowledge network of new ventures and small businesses is still sorely lacking. In light of these considerations, the purpose of this research is to navigate and chart the intricate knowledge network that underpins new venture and small business innovation using bibliometric techniques. By mapping thematic clusters, tracing evolving research streams, and uncovering latent patterns within the extant literature, this study aspires to offer not only a comprehensive scholarly overview but also pragmatic, forward-looking perspectives that can guide future research and policymaking in entrepreneurial ecosystems.

II. LITERATURE REVIEW

a. New Ventures and Small Businesses

New ventures represent the initial stages of business creation and are inextricably linked to the small business ecosystem. They typically begin as entrepreneurial startups characterized by limited resources, high uncertainty, and the need for rapid adaptation to market demands ([6], [9]. These ventures often emerge as part of local small business communities where entrepreneurial efforts are concentrated, and their success or failure directly impacts the broader economic landscape. Study by Perry et al. (2019) highlighed that approximately 50% of new business ventures fail within five years, underscoring the intrinsic challenges and volatility associated with starting a small business. In addition, ABBAS et al. (2023) emphasized the role of entrepreneurship in driving the growth and sustainability of small businesses by introducing innovative technologies, products, and services, thereby fostering economic development and job creation.

The relationship between new ventures and small businesses extends beyond mere inception; it encompasses the support mechanisms, growth strategies, and survival challenges that new ventures face. For example, Mwangi et al. (2025) examined the survival challenges encountered by incubated technology-based new ventures, indicating that critical issues such as access to finance, economies of scale, and resource limitations are particularly pronounced in these early stages. These factors are vital for the immediate survival of a new venture and set the stage for its evolution into a stable small business. The literature also suggests that new ventures serve as catalysts for innovation within small business ecosystems, often inheriting best practices and entrepreneurial cultural elements from established firms [11]. This process of entrepreneurial heritage facilitates the transfer of tacit knowledge and strategic orientation, helping nascent firms navigate challenges common in the small business milieu.

Comprehensive frameworks provided in educational and strategic management literature further elucidate how new ventures can successfully transition to mature small businesses. Nair et al. (2022) gave details a wide range of activities essential for the establishment and growth of new ventures, including feasibility analysis and business model design. This comprehensive approach is critical in small business contexts where resource constraints and competitive pressures demand robust strategies from the outset. The systematic alignment of entrepreneurial orientation with market dynamics, as noted by [9], reinforces that new ventures operate as foundational elements in the broader small business landscape, driving innovation and competitive differentiation despite the high risk of early failure [6].

b. Small Businesses and Progressive Development

Small businesses represent a critical segment of many economies, undergoing progressive development through a combination of strategic planning, innovation, financial management, and digital transformation. Comprehensive analyses demonstrate that a well-designed strategy incorporating internal and external analyses, such as SWOT and PESTEL, is essential for laying a strong foundation for these enterprises [13]. This initial strategic framework not only assesses the current capabilities and challenges of small businesses but also sets clear goals and missions that guide their sustainable growth [13], [14]. Progressive development is thus seen as a multidimensional endeavor that leverages the unique characteristics of small businesses while addressing their inherent resource constraints [15].

One important component of progressive development in small businesses is the adoption and integration of growth strategies that involve both domestic and international market dimensions. International growth strategies have emerged as a critical pathway for small enterprises seeking to enhance competitiveness and expand market reach [16]. At the same time, market-driven strategies that prioritize competitive intensity, technological dynamics, and a strong market orientation further propel business expansion, especially in regions where competition is intense and customer expectations constantly shift [17]. Additionally, entrepreneurial competencies such as innovation, leadership, risk-taking, and effective networking are consistently identified as pivotal factors in accelerating the growth of small and micro enterprises [15].

Financial mechanisms and digital transformation are also central to the progressive development of small businesses. Effective financial strategies, tailored to the enterprise life cycle, help overcome initial cash flow constraints and support scaling-up processes, as detailed in studies focusing on SME financing strategies [18]. Concurrently, the integration of innovative financing models, such as matching grants, contributes to mitigating barriers to growth, particularly in environments where traditional credit systems may be deficient [19], [20]. Moreover, digital transformation, including the adoption of digital marketing techniques, online advertising, and the digitization of business processes, has progressively become a cornerstone of competitive strategies for small businesses [21], [22]. The application of these digital tools not only enhances market visibility but also fosters operational efficiency and customer engagement.

Furthermore, product strategy plays a significant role in the overall growth process of small businesses. Studies have shown that well-formulated product strategies focusing on quality improvement, differentiation, and value addition can substantially drive business growth by meeting evolving consumer demands [23]. When combined with robust innovation strategies, these product initiatives enable small businesses to remain agile and responsive in a dynamic market context, thereby sustaining long-term competitiveness and productivity [15]. The integration of these varied elements, ranging from strategic planning to digital and financial innovation and illustrated a holistic process of progressive development that is essential for transforming small businesses into resilient and competitive market players [16], [24]. By leveraging targeted growth strategies, utilizing appropriate financing tools, and adopting digital and product innovations, small enterprises can significantly enhance their competitive position and contribute robustly to economic growth [15], [16], [18], [23]

III. METHODS

a. Research Approach

The study employs a bibliometric analysis methodology to systematically investigate the knowledge network that underpins new ventures and small businesses. Bibliometric analysis is a quantitative method used to analyze large volumes of scholarly literature, which facilitates the understanding of research patterns, trends, and structural characteristics within a field [25]. This approach enables researchers to perform objective, reproducible analyses of literature dynamics and provides an evidence-based foundation for mapping academic and scientific discourse.

b. Data Source

In this study, the Scopus database is selected as the primary data source. Scopus is recognized as one of the premier bibliographic databases due to its comprehensive coverage, including peer-reviewed journals, conferences, and book series across multiple disciplines [26]. Its extensive metadata, standardized indexing, and high-quality curation make it particularly suitable for bibliometric analysis.

This ensures that the dataset is both robust and reliable, allowing for an in-depth examination of publication trends and citation metrics. Moreover, Scopus provides consistent data on author affiliations, funding sources, and citation counts, all of which are critical for assessing the influence and impact of research contributions within the knowledge network of new ventures and small businesses [27].

c. Data Selection

To ensure that the data selection is rigorous and replicable, the study adopts the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) approach. The PRISMA methodology is widely acknowledged for its systematic framework in sample selection and transparent reporting [28]. In the context of bibliometric studies, PRISMA facilitates a structured screening process that involves the identification, screening, eligibility, and inclusion phases. Data selection using PRISMA process presented in Figure 1.

This approach helps in minimizing bias by clearly defining the inclusion and exclusion criteria and delineating the steps taken to refine the dataset. By utilizing PRISMA, the study guarantees that only the most relevant and high-quality publications are considered, thereby enhancing the validity of the subsequent bibliometric analysis [28].

d. Data Analysis

For data analysis, the study leverages the Biblioshiny package in R, a web-based graphical interface for the Bibliometrix R package, which has been widely used in bibliometric studies due to its flexibility and robust analytical capabilities [26]. The analysis using Biblioshiny is structured into several distinct components:

a) Source analysis : Most Relevant Sources, Source Impact, and Bradfords Law
b) Document Analysis : Top Global Cited Paper, Word Cloud and Trend Topics
c) Conceptual Structure : Co-Occurance Network, Thematic Map, and Thematic Evolution

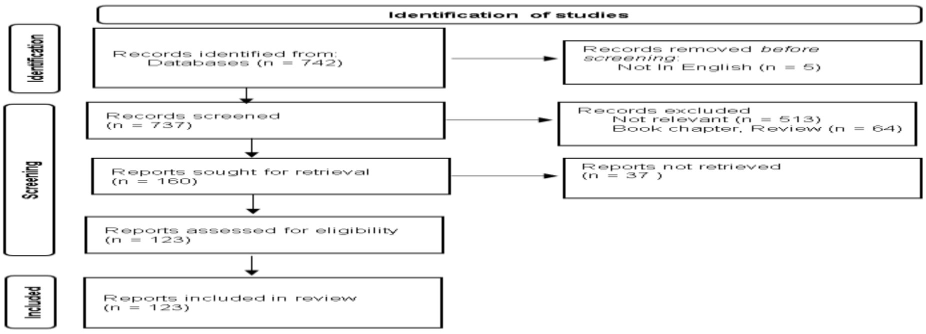

Fig. 1. PRISMA – Data Selection Process

Source : Prepared by Author, 2026

IV. RESULT AND DISCUSSION

a. Data Overview

The main information about data used in this research provide in Table 1 and presents an essential overview of the bibliometric dataset utilized in this study, offering a foundational understanding of the scope, structure, and characteristics of the knowledge network surrounding new venture and small business research.

Table 1. Data Overview

Description	Results	Description	Results
MAIN INFORMATION ABOUT DATA		AUTHORS	
Timespan	2003:2025	Authors	307
Sources (Journals, Books, etc)	90	Authors of single-authored docs	30
Documents	123	AUTHORS COLLABORATION	
Annual Growth Rate %	6.5	Single-authored docs	31
Document Average Age	6.42	Co-Authors per Doc	2.52
Average citations per doc	18.16	International co-authorships %	23.58
References	0	DOCUMENT TYPES	
DOCUMENT CONTENTS		article	119
Keywords Plus (ID)	146	book chapter	2
Author's Keywords (DE)	507	conference paper	2

The descriptive insights drawn from Table 1 highlighted the dynamic and collaborative nature of the knowledge ecosystem around new ventures and small businesses. The indicators affirm a growing academic community, actively contributing to a field that is both theoretically rich and practically significant. These patterns form a compelling backdrop for the more advanced bibliometric analyses that follow, ultimately guiding researchers toward a deeper and more interconnected understanding of the field's intellectual structure and future trajectories.

Spanning a time frame from 2003 to 2025, the dataset comprises 123 documents disseminated through 90 distinct sources, including peer-reviewed journals, books, and conference proceedings. This temporal range illustrates the gradual maturation of scholarly attention to this field, marking over two decades of intellectual development and increasing relevance of the domain.

The total number of authors contributing to this body of literature is 307, with 30 of them having produced single-authored documents. While a total of 31 single-authored documents exist, the majority of publications are evidently collaborative in nature, as supported by the average of 2.52 co-authors per document. This suggests a research environment that encourages interdisciplinary or inter-institutional collaboration, which is a vital aspect in expanding the reach and depth of knowledge within the evolving landscape of entrepreneurship studies. The international co-authorship rate of 23.58% further underscores the global interconnectedness of scholars in this domain, reflecting not only the universal appeal of new venture and small business research but also the role of cross-border academic exchanges in enriching conceptual frameworks and methodologies.

From a temporal standpoint, the annual growth rate of 6.5% in publications indicates a consistent and robust expansion of scholarly interest in the field. With a document average age of 6.42 years, the dataset captures both established contributions and emerging research streams, offering a balanced view of foundational theories and contemporary discourse. The average citation count per document, standing at 18.16, is indicative of the field's impact and suggests that many of these works serve as meaningful reference points for subsequent studies.

In terms of document types, the dataset is dominated by journal articles (119 out of 123), complemented by two book chapters and two conference papers. This distribution reflects a scholarly preference for peer-reviewed outlets, which generally offer rigorous standards of evaluation and greater visibility. Content-wise, the documents are enriched by 507 Author's Keywords and 146 Keywords Plus, pointing to a high degree of thematic diversity and the emergence of multifaceted research agendas within the domain.

b. Source Analysis

The Source analysis as initial phase of the analysis seeks to identify the most relevant sources of literature within the domain. It includes examining the journals, conferences, and publication venues that have contributed significantly to the field. Metrics such as the number of publications, citation counts, and the application of Bradford's Law are utilized to evaluate source impact and determine how the distribution of literature conforms to established bibliometric patterns [26], [29]. Bradford's Law, in particular, assists in highlighting the core journals that serve as the primary repositories of knowledge in the field, thus providing insights into publication trends and research focal points.

a) Most Relevant Sources

Figure 2 provides a visual depiction of the most relevant sources in the knowledge domain of new ventures and small businesses, emphasizing the publication venues that have contributed most prolifically to the literature. This figure underscores the central role of select journals in fostering academic discourse within the field. From a bibliometric standpoint, the concentration of articles in a limited number of sources reflects the emergence of core publication hubs, which not only disseminate empirical findings but also shape theoretical and methodological developments in the domain. The prominence of journals such as Small Business Economics, Sustainability (Switzerland), and the International Journal of Entrepreneurial Behaviour and Research highlights an interdisciplinary convergence between economics, management, and sustainability dimensions in entrepreneurship research.

The recurrence of these journals in the dataset illustrates both consistency in scholarly communication and the formation of intellectual communities that gravitate around specific publication platforms. This is especially significant in understanding how knowledge about small business dynamics is curated and amplified. Importantly, the figure visually consolidates the venues where academic influence is most concentrated, offering a navigational guide for both early-career researchers and seasoned scholars seeking to engage with the field's core dialogue. In this context, Figure 1 serves not merely as a statistical summary but as a strategic lens into the structural configuration of academic production, affirming the value of journal-centric mapping in bibliometric studies

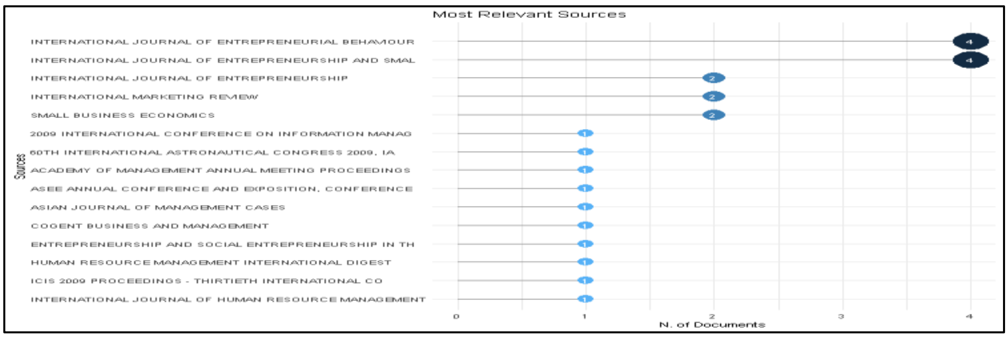

Fig. 2. Most Relevant Source

b) Source Impact

Table 2 deepens the analysis by evaluating the impact of individual sources through established bibliometric indicators, namely the h-index, g-index, m-index, total citations (TC), number of publications (NP), and year of first publication (PY_start). These metrics collectively offer a multidimensional portrait of source quality and sustainability of influence. Notably, the International Journal of Entrepreneurial Behaviour and Research exhibits a strong historical presence, beginning in 2010, and sustains its relevance with an h-index and g-index of 4, supported by 149 total citations. Meanwhile, Small Business Economics stands out with a higher m-index of 0.67, indicating a rapid accumulation of scholarly impact since its relatively recent engagement in 2020.

Sustainability (Switzerland) also emerges as a high-impact venue, reflecting the growing intersection between entrepreneurship and sustainable development, a trend increasingly reflected in the shift toward responsible and socially aware business models among new ventures. On the other hand, journals such as Vikalpa and the South African Journal of Economic and Management Sciences reveal regionally grounded contributions that enrich the global discourse with diverse contextual insights.

The inclusion of varied journals, from mainstream to specialized, suggests a decentralized but interconnected knowledge structure. The presence of newer sources such as the Review of Managerial Science (2024) with a high m-index of 1.00 suggests emergent publication venues that are rapidly gaining traction. Collectively, this table demonstrates that while a few sources serve as longstanding pillars of the field, new and diverse journals are continually reshaping its contours, thus ensuring intellectual renewal and multidimensional expansion of the discourse on small business and entrepreneurial studies.

Tabel 2. Source Impact

Sources	h_index	g_index	m_index	TC	NP	PY_start
International Journal Of Entrepreneurial Behaviour And Research	4	4	0.25	149	4	2010
Small Business Economics	4	5	0.67	38	5	2020
Sustainability (Switzerland)	4	5	0.50	130	5	2018
Journal Of Small Business Management	3	3	0.17	97	3	2008
Mediterranean Journal Of Social Sciences	3	3	0.25	51	3	2014
South African Journal Of Economic And Management Sciences	3	3	0.14	54	3	2004
Vikalpa	3	3	0.13	30	3	2003
Asian Academy Of Management Journal	2	2	0.33	7	2	2020
Entrepreneurship Research Journal	2	2	0.17	118	2	2014
European Journal Of Management And Business Economics	2	2	0.33	20	2	2020
International Journal Of Entrepreneurial Behaviour & Research	2	2	0.09	147	2	2004
Journal Of Business Research	2	2	0.17	142	2	2014
Journal Of Technology Transfer	2	2	0.29	35	2	2019
Review Of Managerial Science	2	2	1.00	8	2	2024
Strategic Change	2	2	0.22	44	2	2017

c) Bradfords Law

Figure 3 applies Bradford's Law to identify the core journals that act as primary repositories of knowledge within the small business and new venture literature. Bradford's Law posits that the distribution of articles across journals is not uniform; instead, a small set of core journals accounts for a disproportionately large share of publications, while numerous peripheral journals contribute fewer articles. This figure validates that bibliometric principle by revealing a tiered distribution where a limited number of sources, previously identified in Figure 1 and Table 2 host the majority of influential publications.

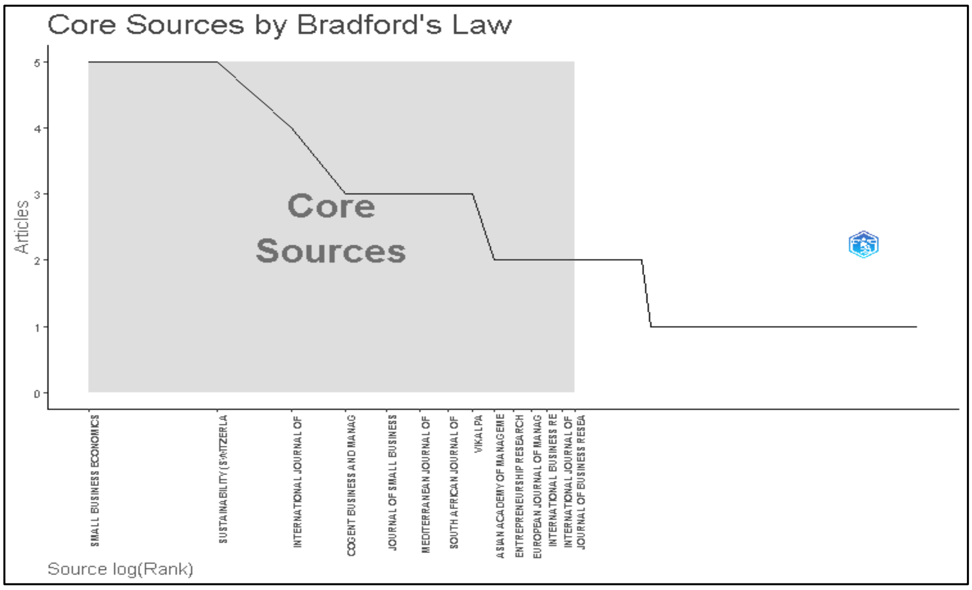

Fig. 3. Bradford's Law

The core zone in the Bradford distribution highlights the essential journals for researchers navigating this field, signaling where the most concentrated intellectual activity occurs. As one moves to the successive zones, the dispersion of relevant literature increases, indicating the necessity for broader exploration when seeking novel or niche perspectives. This layered model of knowledge dissemination underscores the strategic importance of targeting core journals for publication, citation tracking, and literature review purposes.

Bradford's Law, as visualized here, offers practical implications for both researchers and academic institutions. For scholars, it serves as a tool to prioritize reading and publishing strategies. For librarians and database curators, it informs journal selection policies and database structuring. Most importantly, the figure reaffirms the structural coherence of the field by validating the presence of a knowledge core, around which scholarly conversations coalesce. As the domain of new venture and small business research continues to expand, understanding and leveraging such bibliometric regularities becomes crucial for effective knowledge navigation and contribution.

c. Document Analysis

The document analysis stage involves the detailed examination of individual publications. Key metrics such as the top global cited papers are identified, which shed light on the seminal works that have substantially influenced the research domain. In addition to citation analysis, a word cloud is generated to visualize key terms and frequent keywords that appear across the literature. Trend topics analysis is also conducted to trace the evolution of research themes over time, thereby revealing the dynamic nature of subject matter and emerging areas of interest. This multi-layered approach to document analysis provides an integrated perspective on both the influence of individual contributions and the broader linguistic and thematic trends within the research community [29], [30].

a) Top Global Cited Paper

Table 3 provides a valuable lens into the intellectual foundation of new venture and small business research by identifying the most globally cited articles in the field. These highly cited papers not only represent seminal contributions but also illustrate thematic anchors that have significantly influenced subsequent research trajectories. The most cited work by Brinckmann et al. (2010) in *Journal of Business Venturing* leads with 471 citations, underscoring its pivotal role in advancing strategic planning research in the context of entrepreneurial ventures. With a citation average of 29.44 per year and a normalized citation rate of 1.98, this article exemplifies enduring scholarly relevance.

Tabel 3. Top Global Cited Paper

Paper	DOI	Total Citations	TC per Year	Normalized TC
Brinckmann J, 2010, J Bus Venturing	10.1016/j.jbusvent.2008.10.007	471	29.44	1.98
Kuivalainen O, 2012, Int Mark Rev	10.1108/02651331211260331	143	10.21	3.61
Sui S, 2012, Int Mark Rev	10.1108/02651331211260368	40	2.86	1.01
Kraus S, 2007, Int J Manage Enterp Dev	10.1504/IJMED.2007.011452	36	1.89	1.00
Shelton Lm, 2018, Small Bus Econ	10.1007/s11187-017-9881-7	34	4.25	2.50
Solomon Gt, 2013, Technovation	10.1016/j.technovation.2013.06.002	31	2.38	1.39
Salvador E, 2013, Int J Entrep Behav Res	10.1108/IJEBR-10-2012-0108	26	2.00	1.17
Murmann Jp, 2015, Res Policy	10.1016/j.respol.2015.03.002	25	2.27	1.00
Roundy Pt, 2019, Manage Res Rev	10.1108/MRR-01-2018-0019	22	3.14	1.57
Bjørgum, 2013, Int J Entrepreneurship Small Bus	10.1504/IJESB.2013.056281	22	1.69	0.99
Gill A, 2018, J Int Bus Entrepreneurship Dev	10.1504/JIBED.2018.10012197	21	2.63	1.54
Jones R, 2011, Int J Entrep Behav Res	10.1108/13552551111174710	17	1.13	1.00
Mian Sa, 2014, Int J Entrepreneurship Small Bus	10.1504/IJESB.2014.065682	14	1.17	1.87
Daniel E, 2016, Int J Entrep Behav Res	10.1108/IJEBR-01-2015-0015	14	1.40	1.00

Other key contributions include [32] and Sui et al. (2012), both published in the International Marketing Review, highlighting the field's sustained interest in the internationalization of small ventures and market orientation. Notably, the papers vary not only in total citations but also in their normalized citation scores, which account for publication year, revealing that more recent papers such as Shelton & Minniti (2018) and Roundy (2019) are rapidly gaining traction, suggesting their potential to shape future discourses.

This findings also reflects a diversity of publication outlets—from highly ranked journals like Research Policy and Technovation to niche entrepreneurship-focused publications such as International Journal of Entrepreneurship and Small Business. The presence of these journals illustrates the interdisciplinary nature of the field, bridging entrepreneurship, strategic management, innovation, and international marketing.

Top Global Cited Paper findings serves as a roadmap for scholars navigating the evolving terrain of new venture research. It highlights foundational works while also signaling emergent paradigms that resonate with contemporary academic and practical interests. This balance between historical significance and future potential forms the backbone of the knowledge network that continues to evolve around new ventures and small businesses.

b) Word Cloud

Figure 4 presents a visual synthesis of the most frequently occurring terms within the literature on new ventures and small businesses. As a bibliometric visualization, the word cloud offers an intuitive understanding of dominant conceptual themes and linguistic trends that permeate the scholarly discourse.

Central terms such as “entrepreneurship,” “small business,” “new venture,” “innovation,” and “international” are prominently featured, reflecting core research domains that define the knowledge ecosystem of this field.

Fig. 4. Word CLoud

The prominence of the word “entrepreneurship” underscores its foundational role as a unifying construct, linking various sub-topics such as venture creation, strategic behavior, and business performance. Meanwhile, the repetition of terms like “innovation” and “international” signals a growing interest in understanding how new ventures scale beyond domestic boundaries and leverage novel solutions to gain competitive advantage. These insights are particularly relevant in today’s globalized and technology-driven economy, where small firms must constantly adapt to rapidly shifting market landscapes.

What makes this visualization especially powerful is its ability to reveal the conceptual density and thematic clustering in an accessible format. For example, the simultaneous appearance of terms like “strategy,” “development,” and “performance” suggests an ongoing dialogue about how new ventures structure their decision-making processes to achieve growth and sustainability. Additionally, words such as “policy,” “university,” and “learning” hint at the institutional and educational contexts influencing entrepreneurial ecosystems.

This findings thus plays a critical role in mapping the semantic terrain of the field. It complements quantitative citation data by offering qualitative cues about prevailing narratives and emerging discourse. For researchers, this word cloud can guide the identification of research gaps, theoretical linkages, and cross-disciplinary opportunities. It also serves as a heuristic device, encapsulating the field’s identity while illuminating the directions in which it is heading.

c) Trend Topics

Table 4 offers an insightful longitudinal perspective on thematic evolution within the new venture and small business literature. By tracing the temporal trajectory of keyword frequencies and their distribution across quartiles (Q1–Q3), this table provides empirical evidence of shifting research priorities over time. Thos findings serves as a strategic compass for future research. By identifying both enduring themes and emerging trends, it enables scholars to align their investigations with areas of growing momentum while also recognizing which avenues may require rejuvenation or re-theorization. The dynamic landscape reinforces the importance of continual bibliometric assessment in navigating the evolving knowledge network of new ventures and small businesses.

Table 4. Trend Topics

item	freq	year_q1	year_med	year_q3
international new ventures	4	2012	2012	2014
international business	3	2012	2012	2018
small to medium-sized enterprises	3	2010	2012	2012
new venture creation	3	2010	2013	2016
small firm/new venture strategy	3	2012	2013	2014
small business	12	2012	2016	2020
entrepreneurship	6	2012	2016	2022
new ventures	7	2012	2017	2018
new venture	6	2011	2017	2021
innovation	3	2016	2020	2021

The most frequently recurring topic small business" with 12 occurrences and a Q3 year of 2020, indicates sustained scholarly engagement and relevance, particularly in light of the global interest in SMEs as engines of economic resilience and employment. Closely aligned are “entrepreneurship” and “new ventures,” both of which demonstrate a continued presence into the 2020s, suggesting that foundational concepts in the field remain vibrant and central to contemporary debates.

Interestingly, more specific themes like “international new ventures” and “small firm/new venture strategy” peaked earlier, predominantly between 2012 and 2014. This pattern implies that while these topics were once at the forefront of academic interest, their momentum may be stabilizing or transitioning toward newer sub-themes, such as digital transformation, sustainability, or platform-based business models. Likewise, “innovation” emerges as a relatively recent yet increasingly relevant theme, with a Q1 of 2016 and Q3 of 2021, highlighting a growing convergence between entrepreneurial behavior and technological advancement.

The inclusion of median and quartile years provides a nuanced timeline, showing not just when topics appeared, but how long they have remained relevant. For example, “new venture creation” spans from 2010 to 2016, illustrating a long-standing interest in the early stages of entrepreneurship. The temporal dispersion of topics also suggests a diversification in research foci, moving from general constructs to more context-specific inquiries.

d. Conceptual Stucture

To uncover the underlying intellectual framework of the research domain, the study further employs conceptual structure analysis. This component encapsulates several advanced analytical techniques. First, a co-occurrence network is constructed to map the relationships among frequently occurring keywords and concepts derived from the literature. This network analysis helps in identifying clusters of related topics and illustrates the interdependencies between different research areas. Second, a thematic mapping is performed, which classifies research themes into distinct clusters based on their co-occurrence patterns. Finally, thematic evolution analysis is carried out to track how these themes have shifted and developed over time, providing forward-looking insights into the future trajectory of research. The conceptual structure analysis thus facilitates a nuanced understanding of the knowledge interconnections that drive innovation and strategic decision-making in new ventures and small businesses [36].

a) Co-Occurance Network

Figure 5 presents the Co-Occurrence Network of keywords, offering a graphical representation of the conceptual interconnections that form the backbone of scholarly inquiry in the domain of new ventures and small businesses. This visualization maps the relationships between frequently co-occurring terms, revealing clusters of thematic proximity and signaling the emergence of conceptual communities within the literature. Each node represents a keyword, while the links between them signify the strength and frequency of their co-occurrence in academic texts.

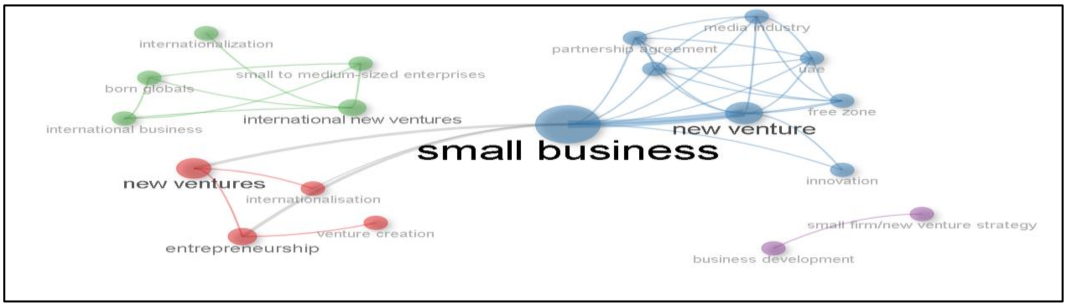

Fig. 5. Co-Occurance Network

From this network, it becomes evident that certain keywords such as “entrepreneurship,” “innovation,” “small business,” and “strategy” serve as central hubs, acting as intellectual anchors that bridge different streams of research. Their central positioning and the dense interlinkages highlight their role in unifying diverse subfields, suggesting that these concepts are foundational to understanding the mechanisms through which new ventures operate, evolve, and sustain themselves in dynamic markets.

Furthermore, the clustering of related keywords into thematic groups demonstrates the existence of well-defined research streams. For example, one cluster might be centered around internationalization and performance, another around entrepreneurial intention and education, while yet another focuses on innovation and technology adoption. These thematic groupings suggest that the field is not monolithic, but rather multifaceted, with various entry points for inquiry and engagement.

The network also reveals peripheral terms that, while less frequent, may represent emerging or niche topics. These peripheral nodes are crucial for identifying under-explored areas that offer potential for theoretical development or empirical testing. Overall, Figure 4 serves as a conceptual roadmap that not only depicts the existing structure of knowledge but also offers insights into how different concepts interrelate, informing future research pathways in this evolving domain.

b) Thematic Map

Figure 6, the Thematic Map, provides a strategic two-dimensional classification of key themes in the literature based on their density (indicating the level of development) and centrality (indicating relevance to the field). This map is divided into four quadrants, each offering a distinct interpretation of the maturity and importance of a theme within the broader knowledge structure.

The upper-right quadrant, often referred to as the "motor themes" quadrant, includes topics that are both well-developed and highly relevant. These themes form the intellectual core of the field and often influence the direction of future research. Their strategic positioning suggests that they are essential for understanding the mechanisms and frameworks underlying new ventures and small business success. In this context, terms such as "entrepreneurship" or "business model" might occupy this quadrant, reflecting their consistent centrality in academic discussions.

In contrast, the lower-right quadrant contains "basic themes" that are relevant yet underdeveloped. These topics hold conceptual promise and demand further theoretical refinement and empirical exploration. They represent fertile ground for scholars seeking to contribute foundational insights to the field.

Themes in the upper-left quadrant, considered "niche themes," are highly developed but have low centrality, suggesting that while they are internally cohesive, they may be somewhat isolated from the mainstream discourse. These might include technical or context-specific topics such as certain types of innovation systems or local policy interventions.

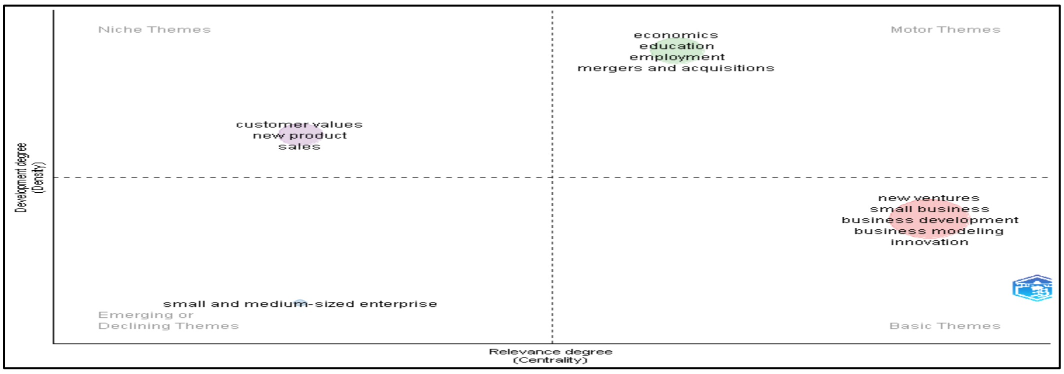

Fig. 6. Thematic Map

Lastly, the lower-left quadrant includes "emerging or declining themes." Their position indicates limited development and weak relevance—either because they are nascent and yet to be fully integrated into the field or because their relevance has waned. The identification of such themes is critical for strategic decision-making by researchers aiming to explore novel frontiers or pivot away from diminishing areas.

This findings offered a nuanced strategic perspective on where the field stands and how it may evolve. It aids in positioning scholarly contributions within a broader research agenda and guides future inquiries toward impactful and theoretically enriching directions.

c) Thematic Evolution

Figure 7 illustrates the Thematic Evolution of research in new ventures and small businesses, capturing how the intellectual focus of the field has transformed over time. This longitudinal mapping is particularly valuable for understanding the dynamic nature of scholarly interest, revealing how certain themes have emerged, persisted, or evolved in response to changing economic, technological, and societal contexts.

The visual flow of themes across time intervals shows a clear trajectory in which earlier research, often grounded in foundational constructs such as “entrepreneurship,” “small firms,” and “venture creation”, has gradually expanded to incorporate more complex and interdisciplinary concepts. For instance, themes like “internationalization” and “innovation” that appeared in earlier stages have evolved, branching into more specific subtopics such as “digital entrepreneurship,” “strategic agility,” or “ecosystem development” in more recent years.

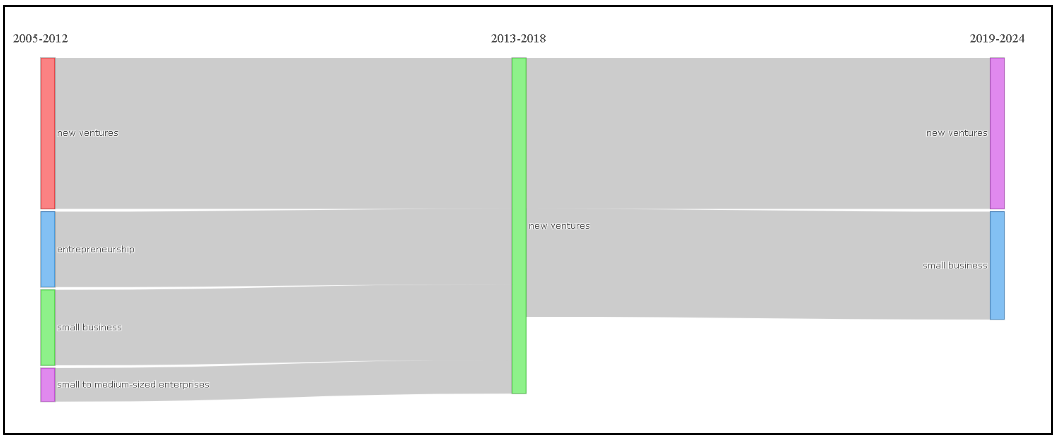

Fig. 7. Thematic Evolution

This evolution reflects a growing sophistication in the field’s theoretical and methodological approaches. As entrepreneurship becomes increasingly intertwined with global trends such as digital transformation and sustainability, the literature mirrors this shift by incorporating novel frameworks and research angles. The figure likely shows the emergence of themes associated with technology use, entrepreneurial ecosystems, and resilience, indicating a paradigm shift from static analyses toward dynamic, systems-oriented perspectives.

Moreover, the continuity of certain themes across time bands illustrates their enduring importance. For example, the consistent presence of “entrepreneurship” across multiple periods highlights its role as a stable thematic anchor that continuously adapts to new contexts. Conversely, the disappearance of certain terms may suggest saturation or diminishing scholarly interest.

V. CONCLUSION

New ventures constitute the embryonic phase of business creation that is deeply embedded within the framework of small businesses. They spur economic development through innovation and job creation but also face significant challenges that necessitate strategic planning, resource optimization, and external support. The effective management of these challenges through mechanisms such as business incubation, solid business planning, and leveraging entrepreneurial heritage is crucial for transforming new ventures into sustainable small businesses capable of contributing to long-term economic growth.

This study offers a comprehensive bibliometric roadmap of the scholarly landscape surrounding new ventures and small business research, highlighting the evolution, thematic structure, and emerging directions of the field. By systematically analyzing 123 documents indexed in the Scopus database using Biblioshiny-R and adhering to the PRISMA selection method, this research unravels the intricate knowledge network that has shaped entrepreneurial discourse over the past two decades. The results underscore the growing intellectual maturity and multidimensionality of the field, driven by increasing scholarly attention to interconnected themes such as entrepreneurship, innovation, internationalization, strategic behavior, and knowledge management.

The document analysis reveals the pivotal influence of foundational studies, with Brinckmann et al. (2010) and Kuivalainen et al. (2012) serving as high-impact references that continue to shape academic inquiry. The word cloud and trend topic analysis affirm that entrepreneurship, small business, and innovation remain the most enduring and frequently examined constructs, while newer themes such as digital entrepreneurship, sustainable development, and entrepreneurial ecosystems, have gained traction in recent years. Thematic trend analysis shows a gradual shift from generalized discussions of venture creation toward more context-specific issues like technological adoption, absorptive capacity, and global scaling strategies.

The conceptual structure analysis, including co-occurrence networks, thematic mapping, and thematic evolution highlights both mature and emerging thematic clusters. It reveals that while central themes such as business models, strategy, and performance are well-integrated into the knowledge core, peripheral and niche topics like policy intervention, university engagement, and digital capabilities are gradually asserting relevance. The thematic evolution map, in particular, captures the intellectual progression of the field, from early-stage explorations of venture creation to more nuanced investigations of resilience, agility, and network-based competitiveness in the digital economy.

This study not only consolidates the current state of knowledge but also illuminates promising pathways for future research and practical application. By bridging conceptual gaps and identifying high-potential areas of inquiry, it serves as both a reflective and forward-looking contribution to the evolving discourse on new ventures and small businesses.

VI. IMPLICATIONS

The findings of this study provide meaningful theoretical contributions by offering a structured understanding of how the academic discourse on new ventures and small businesses has unfolded and interconnected over time. Through co-occurrence and thematic mapping, the study delineates key constructs that form the intellectual scaffolding of the field, such as strategic planning, absorptive capacity, and institutional support. These constructs are not only foundational but have also evolved, indicating a growing theoretical complexity and interdisciplinary convergence. The research advances the field by identifying conceptual gaps, particularly around the integration of digital transformation, knowledge-intensive entrepreneurship, and resilience as areas requiring deeper theorization. Additionally, by applying a bibliometric lens to evaluate the trajectory and clustering of themes, this work contributes to meta-theoretical reflection, allowing scholars to assess the maturity, relevance, and interconnectedness of existing theories. It also supports the development of integrative frameworks that account for both micro-level entrepreneurial behaviors and macro-level ecosystem dynamics. This holistic synthesis repositions the study of new ventures and small businesses as a multidimensional and context-sensitive field that demands robust and evolving theoretical models. It lays a foundation for scholars to bridge fragmented perspectives and build cohesive narratives that better reflect the realities of contemporary entrepreneurial activity.

Beyond its academic value, the insights offered in this research carry significant implications for practitioners operating in the entrepreneurial and small business ecosystem. By identifying the dominant and emerging themes within the literature, this study enables business owners, incubators, policymakers, and ecosystem enablers to align their strategies with empirically grounded knowledge. The prominence of themes such as innovation, strategic networks, and knowledge sharing underscores the importance of building relational capital and embracing agile, informed decision-making in new ventures. For small businesses aiming to scale or internationalize, understanding the role of absorptive capacity and institutional support as revealed in the knowledge structure can inform better investment in learning systems and partnerships. Additionally, the shift toward themes of sustainability and digital transformation provides a roadmap for organizations to future-proof their operations and adapt to technological disruption. This study also offers a benchmark for educators and trainers in entrepreneurship to realign curricula and development programs with the most influential concepts in the field. By grounding business strategies in data-driven insights, this research supports the cultivation of more resilient, innovative, and competitive small enterprises capable of navigating volatile markets and leveraging global knowledge flows for long-term success.

VII. FUTURE RESEARCH DIRECTIONS

Building on the bibliometric foundation laid in this study, future research is encouraged to delve deeper into the micro-dynamics and contextual factors influencing knowledge flows within entrepreneurial ecosystems. While this study effectively maps the intellectual structure of the field, qualitative and mixed-method approaches could enrich the understanding of how these knowledge networks operate in practice, particularly within different cultural, technological, or regional settings. Longitudinal studies could explore how new venture strategies evolve in response to environmental turbulence, such as economic crises or digital disruptions. Additionally, further examination of underexplored themes identified in this study such as the role of social capital, digital ecosystems, and gendered experiences in entrepreneurship would add valuable nuance to existing frameworks. Future researchers should also consider integrating machine learning and natural language processing techniques to analyze larger corpora and uncover deeper semantic patterns within the literature. Moreover, cross-disciplinary research that connects entrepreneurship studies with domains such as information systems, sustainability science, or behavioral economics holds significant potential for expanding the field's theoretical and practical scope. Overall, advancing this line of inquiry requires not only methodological innovation but also a commitment to inclusivity, reflexivity, and responsiveness to real-world entrepreneurial challenges. As knowledge networks continue to shape entrepreneurial success, so too must research evolve to capture the complexity and dynamism of this ever-expanding domain.

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