

CHALLENGES FACED BY STARTUPS: A BIBLIOMETRIC ANALYSIS OF THE ENTREPRENEURSHIP LITERATURE

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ABSTRACT

Startups play a critical role in economic growth, innovation, and employment generation, yet young ventures face substantial challenges to survival, growth, and sustained performance. This article synthesizes the scholarly understanding of the challenges faced by startups through a bibliometric analysis of entrepreneurship research indexed in Scopus. Bibliographic data were analysed using the Bibliometrix R package and Biblioshiny, and the resulting knowledge structure was interpreted using the TCCM (Theory, Context, Characteristics, and Methodology) framework. The dataset comprised 268 English-language journal articles published during 2024–2026. The analysis identifies prominent themes related to entrepreneurship, startups, innovation, sustainability, finance, ecosystems, technology, uncertainty, and competition. The thematic analysis indicates that sustainability and sustainable development constitute prominent motor themes, while challenges, resilience, and strategy form a more specialized thematic cluster. The conceptual structure further connects uncertainty, effectuation, digital entrepreneurship, strategy, technology, investment, and performance. The TCCM synthesis shows that the literature draws on effectuation, resource-based, institutional, ecosystem, signaling, legitimacy, dynamic capabilities, knowledge-based, and social capital perspectives. Contextually, research is concentrated in several high-income economies while emerging-economy contributions are also represented. Methodologically, the literature includes case studies, thematic analyses, systematic review approaches, and bibliometric studies. Eight broad challenge domains are synthesized: resource and financial constraints; uncertainty and risk; entrepreneurial ecosystem and institutional dependencies; digital transformation and technological disruption; sustainability and grand societal challenges; exogenous shocks; competitive and growth pressures; and geographic and institutional variation. The findings provide a structured basis for future research on startup challenges across theoretical, contextual, characteristic, and methodological dimensions.

KEYWORDS: startup; start-up; new venture; new firm; challenge; barrier; constraint; problem

1. INTRODUCTION

Startups occupy an important position in the modern economy as vehicles for innovation, entrepreneurship, and employment generation (Shane & Venkataraman, 2000). At the same time, young ventures operate under resource constraints, uncertainty, institutional dependence, technological change, and competitive pressure. These conditions make startup survival and growth a multidimensional research problem rather than one that can be explained by a single factor. Existing entrepreneurship research has examined these challenges through diverse theoretical perspectives, including effectuation, resource-based, institutional, ecosystem, signaling, legitimacy, and dynamic capabilities approaches. However, the literature remains dispersed across different themes, methods, and geographical contexts. A systematic mapping of this knowledge structure is therefore useful for identifying the dominant themes, conceptual linkages, and areas requiring further investigation. Bibliometric analysis provides a quantitative means of examining large bodies of literature and identifying patterns in publication activity, keywords, conceptual structures, and intellectual influences (Donthu et al., 2021). To complement the bibliometric findings, this study applies the TCCM framework (Theory, Context, Characteristics, and Methodology) to organize and interpret the literature in a structured manner.

The purpose of this article is to map and interpret the key challenges faced by startups as represented in the entrepreneurship literature, using bibliometric analysis of data retrieved from the Scopus database and organized according to the TCCM framework. Specifically, the study addresses the following research questions:

2. Methodology

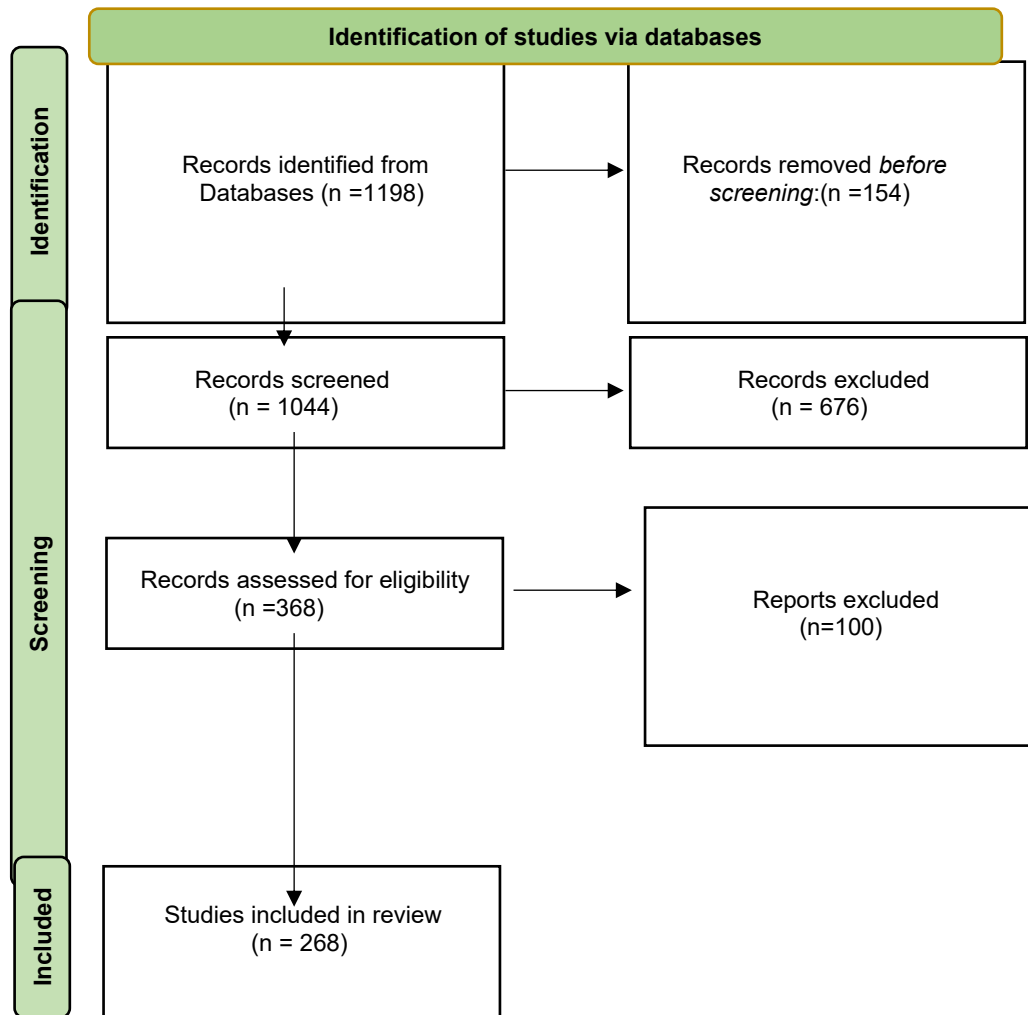
This study adopts a bibliometric research design, which applies quantitative methods to bibliographic data to identify patterns, trends, and structural relationships within a body of scientific literature, combined with the qualitative TCCM interpretive framework. The analysis follows established bibliometric guidance (Zupic & cater, 2015; Donthu et al., 2021) and uses the Bibliometrix R package and Biblioshiny for science mapping (Aria & Cuccurullo, 2017). The TCCM framework, as used in structured literature reviews such as Paul and Rosado-Serrano (2019), is applied here to synthesize the literature across Theory, Context, Characteristics, and Methodology. The bibliometric results provide the quantitative structure of the field, while TCCM is used to interpret the theoretical foundations, research settings, study characteristics, and methodological approaches.

2.1 Data Collection

Bibliographic data for this study were collected from the Scopus database. The analysis was restricted to English-language journal articles at the final publication stage and included records classified as open access in the Scopus export. The Boolean search was applied to the title, abstract, and keyword fields using terms covering startups,

start-ups, new ventures, new firms, and challenge-related concepts. The export used for the present analysis contained 268 records, covering publication years 2024-2026. Records were screened for relevance to startup-related challenges, and the final bibliographic dataset was analysed using Bibliometrix and Biblioshiny. Identification and screening were documented using a PRISMA 2020-informed workflow to improve transparency in reporting (Page et al., 2021).

Fig.1 PRISMA flow chart used in the research to select the documents



3. BIBLIOMETRIC RESULTS AND DISCUSSION

The bibliometric analysis provides a systematic overview of the research landscape on challenges faced by startups, highlighting the major themes, influential sources, authors, and geographical contributions within the field. The findings reveal the multidisciplinary nature of startup-challenge research, with prominent linkages to entrepreneurship, innovation, finance, sustainability, technology, uncertainty, competition, and entrepreneurial ecosystems. The results are further interpreted through thematic and conceptual analyses and synthesized using the TCCM framework to identify established areas and research gaps.

Table 1. Combinations of keywords

DATABASE	KEYWORDS
Scopus	TITLE-ABS-KEY("startup" OR "start-up" OR "new venture*" OR "new firm*") AND TITLE-ABS-KEY("challenge*" OR "barrier*" OR "constraint*" OR "obstacle*" OR "difficulty*" OR "problem*")

Table 2. Main bibliometric characteristics

MAIN INFORMATION	INCLUSIONS
Timespan	2024 to 2026
Analysis Software	Bibliometrix (R package) / Biblioshiny

Document type	Article
Language	English
Publication stage	Final
Source type	Journal
Access type	Open access

3.1 Tree map analysis

The Tree Map illustrates the relative frequency of the major keywords appearing in the literature on startups. The most prominent keyword is “entrepreneurship”, with 36 occurrences (10%), followed by “startups” with 32 occurrences (9%), “innovation” with 24 occurrences (6%), and “startup” with 23 occurrences (6%). Other frequently occurring terms include “sustainability” (11), “entrepreneur” (10), “venture capital” (10), “ecosystems” (9), “new ventures” (9), and “circular economy” (9). The presence of terms such as artificial intelligence, sustainable development, investments, open innovation, competition, emerging markets, digital innovation, technology, uncertainty and growth indicates that startup research extends across entrepreneurial, technological, financial, market and sustainability dimensions.

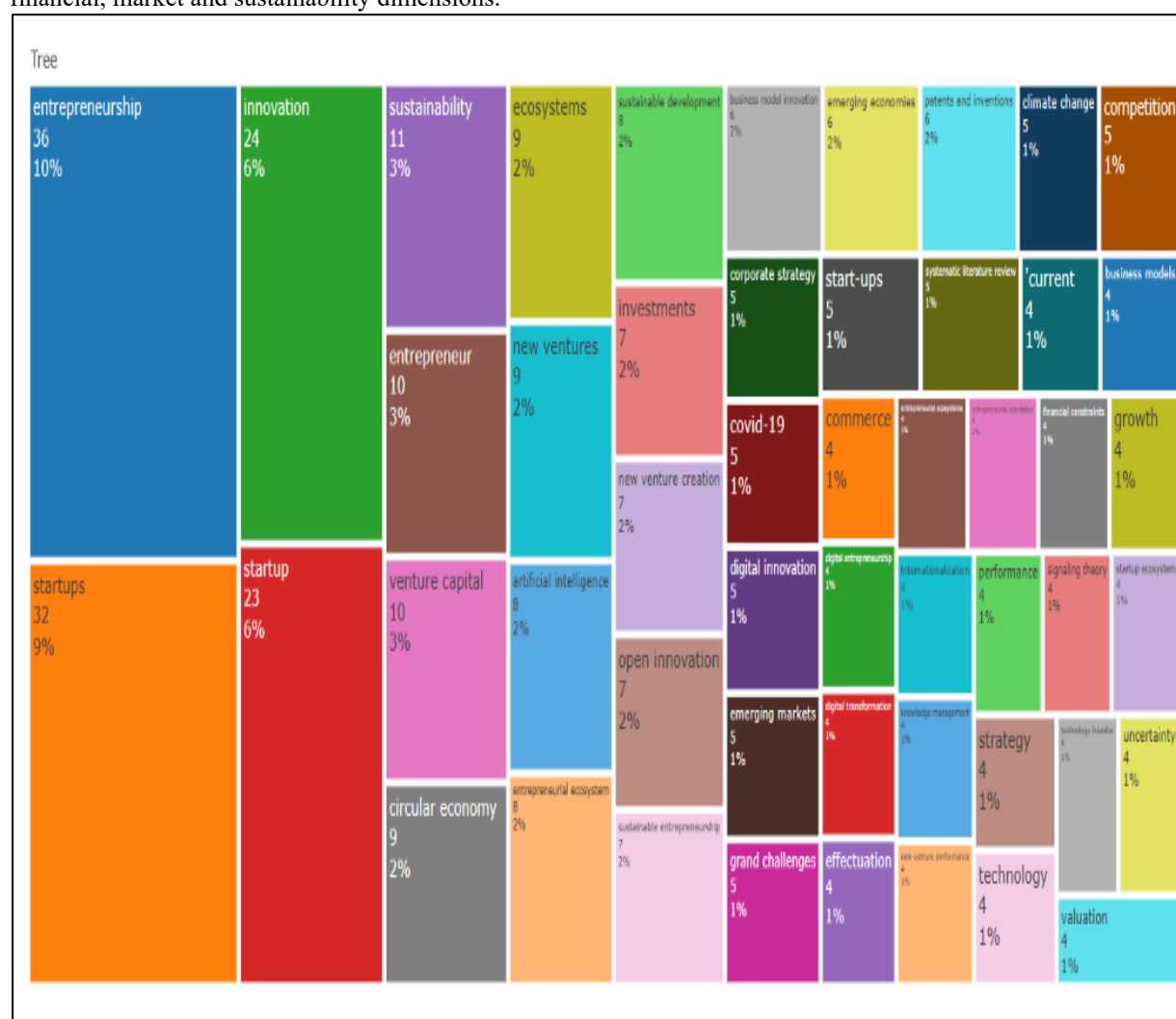


Fig 2. Keyword Frequency Distribution of Startup

The Tree Map demonstrates that startup research extends beyond venture creation to issues associated with innovation, finance, sustainability, ecosystems, competition, technology, and uncertainty. The relatively lower frequency of explicit challenge-related terms compared with broader entrepreneurship and startup terms indicates that challenges are embedded across multiple research streams rather than being confined to a single keyword cluster.

3.2 Thematic Map

The thematic map classifies research themes according to their centrality (relevance) and density (degree of development). The upper-right quadrant represents motor themes, which are both highly relevant to the field and internally well developed. In the present dataset, sustainable development, small and medium-sized enterprises and circular economy form an important motor-theme cluster. The lower-right quadrant contains basic themes, including entrepreneurship, innovation, gender, entrepreneur sustainability and uncertainty, indicating that these topics are strongly connected to the broader research field but vary in their level of internal development. The upper-left quadrant contains niche themes, including challenges, resilience and strategy, as well as startups and

finance and credit provision/microfinance. These themes are relatively specialized and internally developed but have comparatively lower centrality.

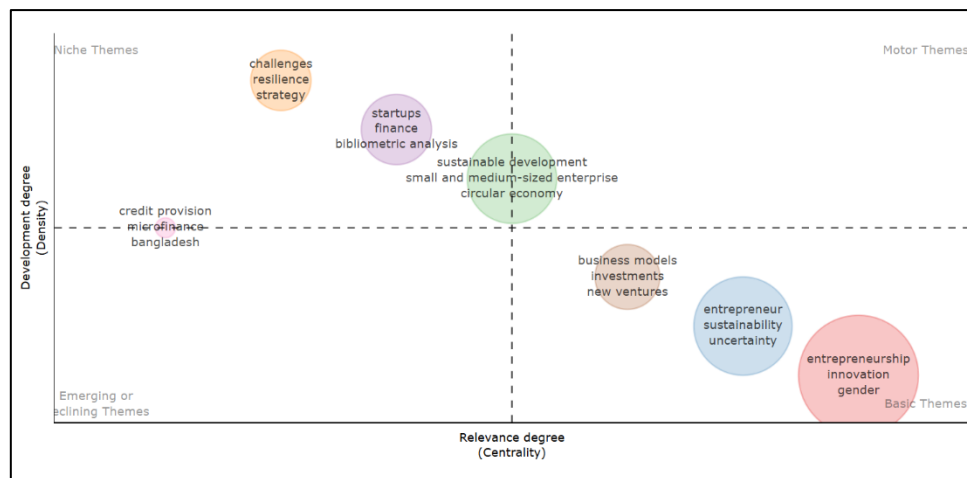


Fig 3. Thematic Structure of Startup

The position of “challenges–resilience–strategy” in the niche-theme quadrant is relevant to the present research. Within the analysed dataset, it represents a specialized cluster with lower centrality than broader themes such as sustainable development and entrepreneurship. This positioning suggests an opportunity to connect explicit startup-challenge research more closely with the wider conceptual structure of entrepreneurship research.

3.3 Conceptual Map

The factorial analysis represents the conceptual structure of the literature through the spatial positioning of keywords across two dimensions. Dimension 1 explains 26.12% of the variance, while Dimension 2 explains 15.96%, together accounting for 42.08% of the conceptual variation represented in the map. The map places business models, circular economy, and business model innovation toward one side, while sustainability, sustainable development, emerging markets, and internationalization occupy another region. Start-ups, digital entrepreneurship, strategy, grand challenges, technology, and knowledge management form another cluster, while uncertainty, effectuation, entrepreneur, and performance form a further conceptual grouping.



Fig 4. Factorial Analysis of Startup

The factorial structure demonstrates that startup research is conceptually connected to several dimensions that can generate or intensify startup challenges. The positioning of grand challenges, technology, strategy, uncertainty, competition, investments, and performance indicates that startup challenges are linked to both internal entrepreneurial decision-making and wider environmental conditions.

3.4 Bradford's Law

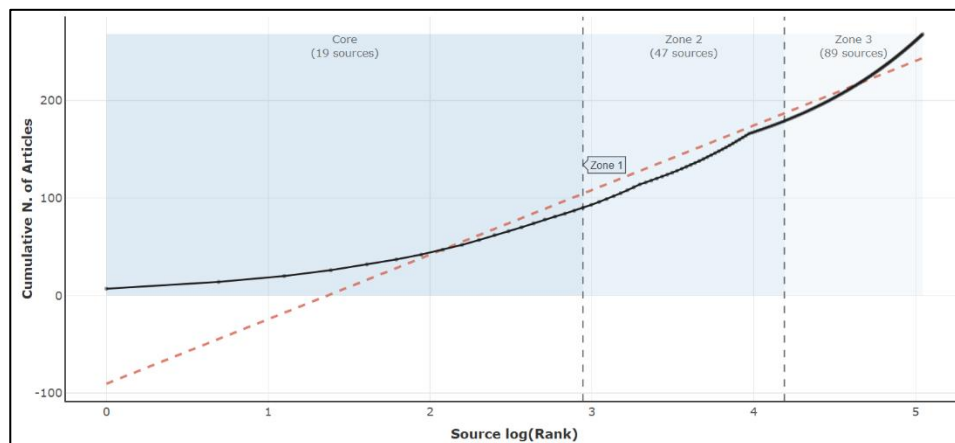


Fig 5. Distribution of Publications across Journals According to Bradford's Law

Bradford's Law analysis identifies the concentration of publications across journals and divides sources into zones according to their contribution to the literature. The figure shows 19 core sources in Zone 1, followed by 47 sources in Zone 2 and 89 sources in Zone 3. The cumulative number of articles therefore remains distributed across a broad journal base, indicating that the literature is not concentrated in a small number of outlets. The result is important for the present study because it demonstrates that research related to startups and their challenges is distributed across a relatively wide range of journals rather than being confined to a single disciplinary outlet. This interdisciplinary dispersion is understandable because startup challenges involve entrepreneurship, management, finance, innovation, technology, public policy and sustainability. The identification of a core group of 19 sources provides a useful basis for researchers seeking the principal publication outlets in the field, while the presence of many additional sources highlights the multidisciplinary nature of startup-challenge research.

3.5 Three-Field Plot

The Three-Field Plot establishes the relationship among cited references (CR), authors (AU), and merged keywords (KW_Merged). The diagram demonstrates how influential authors and foundational publications are connected with the major concepts appearing in the literature. Several established works and authors, including Kraus, Sarasvathy, Schumpeter, Eisenhardt, Barney, North and related entrepreneurship scholars, are linked to contemporary keywords. On the keyword side, entrepreneurship is highly prominent, while other important terms include entrepreneur, sustainable development, innovation, decision-making, business development, small and medium-sized enterprises, education, sustainability, startups, challenges, uncertainty, circular economy and digital technologies. The numerous links between authors and keywords demonstrate the intellectual connections underlying the research field.

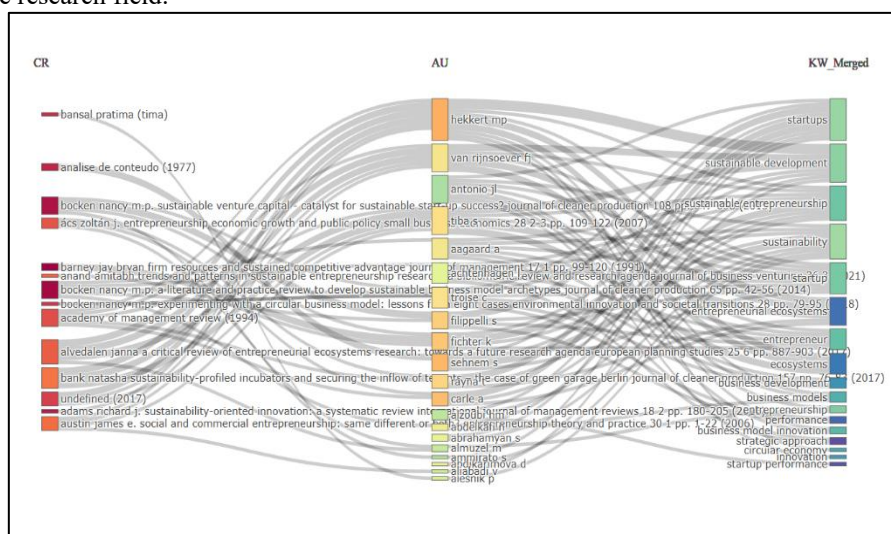


Fig 6. Relationships among Cited References, Authors, and Keywords

The Three-Field Plot is particularly useful for justifying the theoretical foundation of the present study. The connection of established entrepreneurship theories and influential scholars with contemporary keywords such as startups, challenges, uncertainty, sustainability, innovation and digital technologies demonstrates that current startup research builds upon established theoretical foundations while addressing newer entrepreneurial contexts. The appearance of “challenges” and “uncertainty” among the contemporary keywords is especially relevant to this study. It indicates that constraints faced by entrepreneurs are connected with broader issues of decision-making, resource availability, innovation and venture sustainability.

3.6 Corresponding Author's Countries

The Corresponding Author's Countries analysis shows the geographical distribution of research contributions. The United States has the largest number of corresponding-author contributions in the displayed dataset, followed by Italy, Germany, the United Kingdom and China. India also represents a notable contributor, followed by countries such as the Netherlands, Australia, Indonesia, Finland, Sweden, Brazil, France, South Africa, Spain, Korea, Norway, Portugal, Switzerland and Thailand. The figure distinguishes between single-country publications (SCP) and multiple-country publications (MCP), indicating that both domestic and international collaborations contribute to the literature.

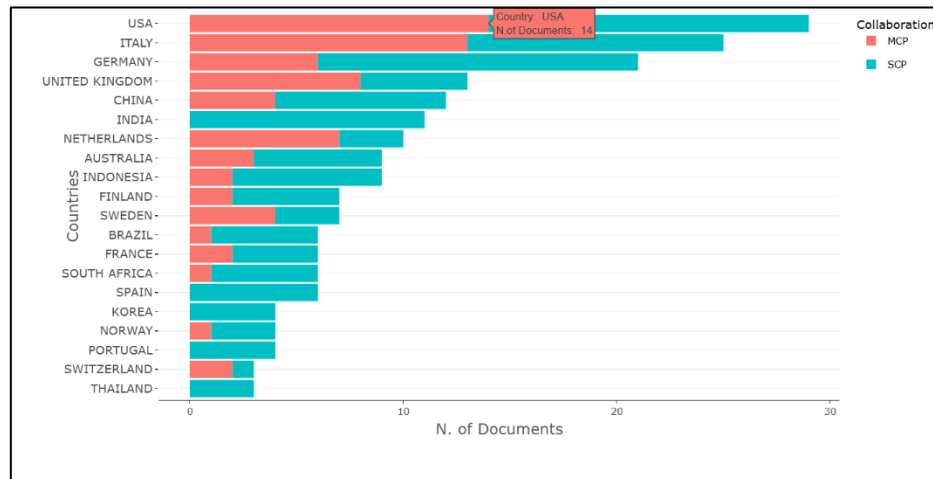


Fig 7. Geographical Distribution of Research Contributions

by Corresponding Author's Country

The geographical distribution demonstrates that startup research is international and multidisciplinary, with contributions originating from both developed and emerging economies. The representation of India and other Asian countries is particularly relevant when considering startup challenges in different institutional and economic environments. Startup constraints can vary according to access to finance, government support, regulatory conditions, technological infrastructure, market characteristics and entrepreneurial ecosystems. Therefore, the geographical diversity shown in the figure justifies the contextual component of the TCCM framework, as examining different countries and institutional settings can reveal how the nature of startup challenges varies across contexts. It also highlights the importance of identifying underrepresented geographical settings and developing context-specific research in future studies.

4. TCCM Framework Analysis

Building on the bibliometric patterns described above, selected articles that were substantively relevant to the startup challenge domain were interpreted using the TCCM framework. The coding considered four dimensions: the theories used to explain startup challenges; the geographical, institutional, and ecosystem contexts in which the studies were conducted; the characteristics and units of analysis examined; and the methodological approaches employed. This interpretive step complements the bibliometric maps by linking observed keyword structures with the conceptual and methodological foundations reported in the literature.

Table 3. Summary of the TCCM framework

Dimension	Key Pattern Identified
Theory	Explanations of startup challenges draw on effectuation, resource-based, institutional, ecosystem, signaling, legitimacy, dynamic capabilities, knowledge-based, and social capital theories.
Context	Output is concentrated in several high-income economies, with growing representation from emerging economies; national and ecosystem-level framing is common, and digital contexts are prominent.
Characteristics	Early-stage and small- to medium-sized ventures dominate; units of analysis span individuals, founding teams, ventures, and ecosystems.
Methodology	The literature includes case study and thematic approaches, systematic review practices, and bibliometric methods, with scope for more longitudinal and comparative designs.

4.1 Theory

The theoretical foundations underlying startup challenges research draw on a relatively small but influential set of frameworks. Effectuation theory (Sarasvathy, 2001) explains entrepreneurial decision-making under uncertainty and aligns closely with the uncertainty and effectuation keyword cluster identified in the factorial map. The resource-based view (Barney, 1991) and resource construction or bricolage perspectives (Baker & Nelson, 2005) inform the literature on financial and resource constraints, while the knowledge-based view of the firm (Grant, 1996) extends this logic to explain how ventures compensate for limited tangible resources through the accumulation and deployment of specialized knowledge.

Institutional theory (North, 1990), including its organizational variant of institutional isomorphism (DiMaggio & Powell, 1983), and entrepreneurial ecosystem theory (Spigel, 2017; Stam & van de Ven, 2021) underpin research on the ecosystem and institutional dependencies challenge domain, explaining why ventures in similar regulatory and normative environments tend to adopt similar organizational forms and strategies. Complementing this, dynamic capabilities theory (Teece, Pisano, & Shuen, 1997) is increasingly applied to explain how startups sense, seize, and reconfigure resources in response to shocks such as the COVID-19 pandemic, linking directly to the resilience-oriented niche theme identified in the thematic map.

A further theoretical strand addresses how young, resource-constrained ventures establish credibility with external stakeholders. Signaling theory (Spence, 1973), visible as a distinct node in the factorial word map, explains how founding team credentials, patents, and early investor backing function as costly signals of underlying quality, while legitimacy theory (Suchman, 1995) extends this logic to the broader question of how new ventures gain social and regulatory acceptance. Finally, social capital theory (Nahapiet & Ghoshal, 1998) is commonly used to explain how entrepreneurs leverage relational and network resources within their ecosystems, and the original theory of entrepreneurship as economic disruption (Schumpeter, 1934) together with the entrepreneurial opportunity framework (Shane & Venkataraman, 2000) continue to serve as foundational reference points across nearly all challenge domains identified in this review.

4.2 Context

The contextual scope of the literature spans more than twenty countries, with corresponding author output concentrated in the United States, Italy, Germany, the United Kingdom, China, and India, and meaningful representation from emerging economies including Indonesia, Brazil, South Africa, and Thailand. Studies conducted in high-income economies more frequently examine venture capital financing, digital transformation, and sustainability related challenges, while studies situated in emerging economies more frequently address credit access, microfinance, and institutional voids, consistent with the positioning of the credit provision and microfinance theme in the emerging or declining quadrant of the thematic map.

A growing share of the literature also adopts a national or regional systems perspective, drawing on ecosystem strategy frameworks (Isenberg, 2010) and cross-country indices of entrepreneurial conditions (Acs, Autio, & Szerb, 2014) to compare how policy, culture, and infrastructure shape startup outcomes across contexts. In parallel, an emerging contextual stream examines digitally enabled and platform-based entrepreneurship, in which geographic boundaries matter less than access to digital infrastructure and online markets (Autio, Nambisan, Thomas, & Wright, 2018), a shift that is reflected in the rising frequency of digital entrepreneurship and digital transformation keywords in the tree map. Temporally, the dataset spans 2023 to 2026, a period marked by continued recovery from the COVID-19 pandemic and accelerating adoption of digital and artificial intelligence technologies, in the growing prominence of resilience and digital transformation as contextual framings within individual studies.

4.3 Characteristics

In terms of study characteristics, the literature predominantly examines early stage and small- to medium-sized ventures rather than later stage or publicly listed firms, consistent with the prominence of the small- and medium-sized enterprise theme in the thematic map. Units of analysis range from the individual entrepreneur, reflected in keywords such as entrepreneur and entrepreneurial orientation, to the founding team, increasingly studied through an upper echelons lens examining how team composition and experience shape strategic choices under resource constraints (Hambrick & Mason, 1984), to the venture level, reflected in new venture creation and business model innovation, to the ecosystem or regional level, reflected in entrepreneurial ecosystems and emerging economies. A further characteristic distinguishing recent contributions is the growing treatment of digital ventures as a distinct analytical category, with studies increasingly differentiating digitally native startups from traditional small businesses in terms of scaling speed, capital intensity, and exposure to platform dependent risks (Nambisan, 2017). The productivity distribution described by Lotka's Law, in which the majority of contributing authors have published a single document, further suggests that this remains a relatively open field of study, with contributions from a wide and growing base of scholars rather than a small number of dominant research groups.

4.4 METHODOLOGY

Methodologically, the literature reflects a mix of conceptual, qualitative, and quantitative approaches. Case study and inductive theory building methods (Eisenhardt, 1989; Eisenhardt & Graebner, 2007) remain influential, particularly within the ecosystem and resilience themes, while thematic analysis (Braun & Clarke, 2006) is commonly applied in qualitative studies of entrepreneurial experience, including the well-being and mental health

related literature. A distinct methodological stream applies formal systematic review procedures, following established guidance on evidence-informed review methodology (Tranfield, Denyer, & Smart, 2003) and the PRISMA 2020 reporting standard where systematic-review screening is reported (Page et al., 2021). Quantitative bibliometric methods are also increasingly used to map the intellectual and conceptual structure of entrepreneurship research (Aria & Cuccurullo, 2017; Donthu et al., 2021).

5. Challenges Facing Startups

The literature converges on eight recurring challenge domains identified from the combined bibliometric and TCCM evidence. These domains represent recurring challenge-related concepts and their connections with the broader entrepreneurship literature.

5.1 Resource and Financial Constraints

Access to capital remains one of the most cited barriers to startup survival. Early-stage ventures typically face limited access to traditional bank financing due to a lack of collateral or track record, heavy reliance on venture capital that concentrates decision-making power and imposes rapid growth expectations, valuation difficulties in the absence of stable revenue, and cash flow volatility that leaves little margin for strategic error.

5.2 Uncertainty and Risk

"Uncertainty" emerges as a structurally distinct, high relevance keyword positioned near "entrepreneur" and "effectuation" in the factorial map. Startups operate without the historical data or established processes available to incumbent firms, forcing entrepreneurs to make consequential decisions under incomplete information. The effectuation and causation literatures (Sarasvathy, 2001) formalize this tension as a choice between shaping outcomes from available means versus planning deductively toward a predefined goal.

5.3 Entrepreneurial Ecosystem and Institutional Dependencies

"Entrepreneurial ecosystems" appears prominently across both keyword and thematic analyses, underscoring that startup survival is rarely determined in isolation. Ecosystem quality, encompassing institutional support, mentorship availability, accelerator and incubator density, and regional innovation infrastructure, substantially shapes venture outcomes (Spigel, 2017; Stam & van de Ven, 2021; Isenberg, 2010). Notably, credit provision and microfinance-oriented research, once a prominent stream addressing financial inclusion barriers in specific regional contexts, appears in the emerging or declining quadrant of the thematic map, suggesting a shift toward broader ecosystem level explanations.

5.4 Digital Transformation and Technological Disruption

Keywords including "digital entrepreneurship", "digital transformation", "digital innovation", and "artificial intelligence" indicate that technology adoption has become a defining, rather than optional, challenge (Nambisan, 2017; Autio et al., 2018). Startups must build digitally native operations, compete against incumbents with far greater technological resources, and manage the internal knowledge management burden of scaling technical capability quickly.

5.5 Sustainability and Grand Societal Challenges

A cluster of terms, "sustainability", "sustainable development", "circular economy", "climate change", and "grand challenges", occupies a central, high-density position in the thematic map, indicating the prominent position of sustainability-related research within the analysed dataset.

5.6 Exogenous Shocks (COVID-19 and beyond)

The keyword "COVID-19" retains a measurable presence in the dataset, reflecting research examining how external shocks can affect early-stage firms, including disruptions to supply chains, investment activity, and business operations. Because the analysed period is 2014–2026, these findings should be interpreted as research attention to the continuing implications and lessons of the pandemic rather than as evidence of pandemic-era publication trends alone.

5.7 Competitive and Growth Pressures

Terms such as "competition", "growth", "performance", and "commerce" recur throughout, pointing to the tension between rapid scaling expectations, often imposed by investors, and the operational maturity required to sustain growth. "New venture creation" and "new venture performance" are treated as related but analytically distinct streams: the former concerned with the founding process, the latter with post founding trajectories, including the signaling and legitimacy building activities (Spence, 1973; Suchman, 1995) that help young ventures compete against established rivals.

5.8 Geographic and Institutional Variation

The concentration of corresponding author output in the United States, Italy, Germany, the United Kingdom, China, and India, alongside meaningful contributions from emerging economies such as Indonesia, Brazil, South Africa, and Thailand, suggests that while core startup challenges are broadly universal, their intensity and specific character vary considerably by institutional and economic context (Acs et al., 2014), a distinction increasingly explored under the "emerging economies" keyword cluster.

6. Discussion and Future Research Directions

The bibliometric and TCCM evidence indicates a research field in which sustainability, digital transformation, and ecosystem-related explanations are strongly connected with the broader conceptual structure, while credit provision and microfinance appear as more specialized themes within the analysed dataset. These observations describe the relative positioning of themes in the present dataset and should not be interpreted as evidence that any theme is universally increasing or declining over time.

Organizing these future directions by TCCM dimension clarifies where the field's most pressing gaps lie:

- **Theory:** greater integration of effectuation and uncertainty theory with sustainability, ecosystem, and signalling or legitimacy theories, which currently occupy relatively separate positions in the factorial map despite their conceptual complementarity.
- **Context:** more internationally collaborative (MCP) research designs that compare institutional and resource conditions across high-income and emerging-economy contexts, extending national systems frameworks (Acs et al., 2014) beyond their current concentration in a small number of countries.
- **Characteristics:** expanded attention to later stage and scaling ventures and to founding team level characteristics (Hambrick & Mason, 1984), which are comparatively underrepresented relative to early stage, individual level, and small- to medium-sized enterprise studies.
- **Methodology:** longitudinal designs and comparative studies can extend the predominantly cross-sectional and mapping-oriented evidence base. Future studies can examine whether resilience capabilities developed in response to shocks such as COVID-19 persist over time, while integrating systematic review and transparent reporting practices (Tranfield et al., 2003; Page et al., 2021).

7. LIMITATIONS

As with all bibliometric studies, this analysis is subject to certain limitations. The findings are constrained by the coverage and indexing practices of the Scopus database, meaning that relevant work published in non-indexed outlets, books, or grey literature is not captured. The analysed dataset covers 2024–2026, with 2026 representing a partial publication year at the time of data retrieval; therefore, year-to-year comparisons involving 2026 should be interpreted cautiously. The analysis also depends on the selected Boolean search string and keyword structure, and synonymous terms may not be fully merged unless explicitly normalized. Finally, bibliometric associations indicate patterns of intellectual and conceptual structure but do not by themselves establish causal relationships among startup challenges.

8. CONCLUSION

This article has used a Scopus-based bibliometric analysis, conducted with the Bibliometrix R package and Biblioshiny, and interpreted through the TCCM framework, to map the challenges faced by startups as represented in the academic literature. The 314 articles analysed for 2024–2026 reveal a multidisciplinary research structure involving entrepreneurship, innovation, finance, sustainability, technology, uncertainty, competition, and entrepreneurial ecosystems. Eight broad challenge domains were synthesized: resource and financial constraints; uncertainty and risk; entrepreneurial ecosystem and institutional dependencies; digital transformation and technological disruption; sustainability and grand societal challenges; exogenous shocks; competitive and growth pressures; and geographic and institutional variation. Within the analysed dataset, sustainability, digital transformation, and ecosystem-related themes show strong connections with the broader research structure, while credit provision and microfinance occupy a more specialized thematic position. The TCCM synthesis further shows that startup challenges are examined through diverse theories, contexts, characteristics, and methodologies. Future research would benefit from stronger longitudinal, comparative, and cross-context designs that connect these dimensions and examine how startups develop resilience and sustainable performance under changing institutional, technological, and market conditions.

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