Mapping the Intellectual Landscape of Financial Inclusion and Entrepreneurship Development: A Bibliometric Analysis

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ABSTRACT:

This study presents a comprehensive bibliometric analysis of research on financial inclusion and entrepreneurship development published between 2011 and 2025. Using the Scopus database, 89 relevant documents were extracted and analyzed through Biblioshiny to examine publication trends, influential sources, authorship patterns, institutional contributions, citation structures, keyword dynamics, and collaboration networks. The findings reveal a significant growth trajectory, particularly after 2019, indicating heightened scholarly and policy interest in inclusive and innovation-driven entrepreneurship. The publication landscape is moderately dispersed across interdisciplinary journals in management, innovation, economics, and technology. India emerges as the most influential contributor in terms of both productivity and citation impact, reflecting its central role in the discourse. Collaboration analysis demonstrates clustered yet fragmented author networks, suggesting opportunities for stronger cross-institutional and international integration. Thematic analysis highlights entrepreneurship as the core construct, with increasing emphasis on innovation, sustainability, gender, and economic development. The study underscores the evolving and policy-relevant nature of the field and provides a structured overview of its intellectual development. These insights offer direction for future research aimed at enhancing global collaboration and advancing inclusive entrepreneurial ecosystems.

Keywords: Financial Inclusion, Bibliometric Analysis, Research Trends, Citation Analysis, Financial Literacy

1. Introduction

Financial inclusion may be understood as a comprehensive and purposeful process aimed at ensuring that individuals, particularly those belonging to low-income and marginalized sections of society, have convenient, reliable, and affordable access to a wide range of formal financial services. These services include savings facilities, credit, insurance, and payment systems delivered in a timely and transparent manner. The essence of financial inclusion lies not merely in opening access to banking channels, but in empowering individuals to meaningfully participate in the financial ecosystem, thereby enabling them to manage their resources prudently, mitigate risks, and build sustainable livelihoods. The fundamental objective of financial inclusion is to foster seamless accessibility, wider availability, and active utilization of formal financial institutions among economically weaker segments. By integrating these groups into the organized financial framework, financial inclusion acts as a catalyst for inclusive growth, reducing dependency on exploitative informal sources of finance and encouraging a culture of savings, investment, and financial discipline. In a broader developmental context, it serves as an instrument of social equity and economic transformation, bridging income disparities, stimulating entrepreneurship, enhancing productivity, and ultimately contributing to balanced and resilient economic progress. Entrepreneurship development refers to a systematic process of enhancing the knowledge, skills, and capabilities of individuals so that they can identify opportunities, mobilize resources, and establish sustainable enterprises. It aims to nurture entrepreneurial potential by providing access to training, infrastructure, finance, and institutional support. The progress of any nation or region is closely linked to purposeful human effort and productive economic activity (Cole, 1946). In this context, small and medium-sized businesses serve as vital instruments for raising living standards, generating employment, and stimulating overall economic growth. In recent years, several policy measures have been introduced to foster a culture of sustainable entrepreneurship. These initiatives are designed to encourage the growth of MSMEs, SMEs, start-ups, and research-driven institutions, thereby strengthening innovation and self-employment across sectors. Such programs provide financial incentives, incubation support, skill development, and technological assistance to emerging entrepreneurs, enabling them to translate ideas into viable business ventures. The policy framework also emphasizes mentoring and "handholding" support so that entrepreneurs can access subsidies, credit facilities, and market linkages during the early stages of business formation. Entrepreneurs are individuals who initiate ventures based on innovative ideas, assuming both risk and responsibility in pursuit of value creation (Casil, 2019). Through innovation and enterprise creation, they play a crucial role in employment generation and economic diversification. Prior to the economic reforms of 1991, entrepreneurial activity in India remained relatively limited due to risk aversion and a stronger preference for secure employment. However, increased awareness, policy encouragement, and institutional backing in recent decades have significantly expanded entrepreneurial participation, particularly within the MSME sector. MSMEs are widely regarded as engines of economic growth because of their contribution to manufacturing, processing, and service delivery. Despite their importance, these enterprises are highly sensitive to socio-economic fluctuations, and only a small proportion manage to survive beyond their initial years (Baldwin, 2001). Common constraints include inadequate capital, limited access to quality raw materials, insufficient research and development, and weak market intelligence (Jain & Jain, 2012). Nevertheless, structural transformations such as digitalization have created new opportunities for expansion, with a growing number of enterprises adopting digital payment systems and technology-driven operations (Kaushal, 2021). This transition highlights the evolving nature of entrepreneurship, where innovation, policy support, and technological adoption collectively shape the sustainability and competitiveness of

small businesses. The concept of a start-up first emerged in the United States during the late 1970s and gained widespread recognition in the 1990s with the expansion of technology-driven enterprises. Over time, the term has evolved and does not have a single universally accepted definition due to its broad and dynamic nature (Santisteban et al., 2021). Generally, a start-up refers to a newly established business—often a small firm, partnership, or organization—created with the objective of developing a scalable model that can deliver products or services rapidly and efficiently to the market (Narayan et al., 2019). It is fundamentally an entity formed to search for a repeatable and scalable business model rather than to operate within a predetermined structure (Blank, 2010). Start-ups introduce novel ideas and unconventional business approaches that stimulate innovation and foster competitive markets. Unlike traditional firms, they are not merely smaller versions of established corporations; instead, they function under conditions of uncertainty while exploring untested opportunities. Their founders continuously experiment with new solutions, adapting to changing market dynamics to create value and bring transformative changes to society. Due to their early-stage nature, start-ups often face structural limitations in both tangible and intangible resources, which can constrain their growth and operational capacity (Wymer & Regan, 2005). Despite these challenges, start-up teams emphasize innovation, agility, and efficient resource utilization to introduce new products and services with minimal waste, thereby contributing significantly to entrepreneurial ecosystems.

Literature Review

Cancino et al. (2018) examined how seed capital initiatives contribute to the development of high-growth enterprises in Chile. Their study focused on a program that offered financial support to entrepreneurs together with technical and administrative guidance delivered through incubators. Using a sample of 238 newly established firms, they compared ventures assisted by universities or incubators with those having similar probabilities of achieving early sales. The findings revealed that, after five years of operation, firms supported by university-linked incubators demonstrated a greater likelihood of attaining superior growth. Nishimura and Tsai (2018) investigated the role of early-stage funding in shaping the growth trajectory of biotechnology start-ups in the United States and Japan. Drawing on longitudinal data from firm inception through the post-IPO phase, they observed that the quality of initial seed investment strongly influenced both patent accumulation and asset expansion among U.S. ventures. Moreira and Martins (2019) explored the effectiveness of an innovation incentive program in fostering start-up development in Brazil's Federal District. Their findings suggested that financial assistance, managerial capacity-building, and institutional networking significantly supported entrepreneurial growth. Zhao and Ziedonis (2020) analysed the involvement of U.S. state governments as financiers of technology-based start-ups, particularly through a Michigan-focused program. Their empirical assessment demonstrated a causal relationship between research and development funding and improved commercial outcomes for new ventures. Nambiar and Balasubramanian (2021) assessed how governmental assistance affects start-up performance in Kerala, India, through qualitative interviews with entrepreneurs, academic experts, and mentors. The study concluded that inadequate funding remains a primary barrier to start-up expansion in the region and recommended greater encouragement of private investment to bridge financial gaps. Tubbicke (2022) evaluated the effectiveness of Germany's reformed start-up subsidy scheme targeted at unemployed individuals. The analysis indicated that the revised policy generated positive causal effects on employment outcomes and income levels, exceeding those observed under the earlier program. Rosario et al. (2024) conducted a meta-analysis to understand how public innovation support influences firm performance. Combining bibliometric, network, qualitative, and quantitative techniques—including meta-regression analysis using VOSviewer and Stata—the study concluded that public innovation

funding generally produces positive performance outcomes for firms. Bruno and Wadle (2019) investigated how public grant programs help bridge financing gaps for enterprises. Their study demonstrated that grants positively influence several firm-level outcomes, including survival rates, access to loans, turnover, value addition, employment generation, and productivity. The evidence particularly highlighted improvements in employment and overall business performance among grant recipients. However, the analysis concentrated mainly on women-led enterprises, leaving a gap in understanding how such financial assistance affects other demographic groups. A broader evaluation across diverse categories of entrepreneurs is therefore required. Engberg and Halvarsson (2020) explored both the direct and indirect impacts of privately funded and government-backed venture capital investments. Their findings indicated that these investments tend to increase firm sales after a lag of two to three years, although no measurable impact on employment was observed. The study suggested that venture capital enhances sales largely through efficiency improvements and, to a lesser extent, through investment in physical assets. Than and Tron (2023) analysed how government support, inter-firm collaboration, and internal financial resources affect the performance of small and medium-sized enterprises (SMEs) in Vietnam. Using questionnaire-based data collected from SMEs, the study revealed that both financial capacity and collaboration among firms significantly enhance business performance. Government support was also found to play a moderating role, strengthening these relationships. Suwaji and Harsono (2024) examined the influence of government policy, market accessibility, and innovation on the development of micro, small, and medium enterprises (MSMEs) in Indonesia. Employing structural equation modelling with partial least squares on a sample of 250 MSMEs, the study concluded that all examined factors exert strong positive effects on enterprise growth. Government policy emerged as a crucial driver, underscoring the importance of a supportive regulatory environment, while financial literacy, innovation, and access to markets also showed significant contributions.

2. Methodology

Bibliometrics is a set of tools that researchers may use to analyze published data and is a field of research that applies mathematical and statistical techniques to study publishing patterns in the distribution of information (McCain, 1996). Such techniques include impact indicators, citation, and co-citation analysis, as well as bibliometric mapping. Citation analysis operates on the premise that authors cite the documents they consider to be significant for their research. Accordingly, how often these articles are cited may be linked to the impact they are felt to have on the topic (Culnan, 1987). Co-citation analysis looks at the articles that cite a certain pair of references, collecting data from databases and using analytical and graphic display techniques (McCain, 1990). This means of citation may reflect the similarity of content and thus help to identify groups of topics and authors, and how they might be related (Pilkington & Liston-Heyes, 1999; Ramos-Rodriguez & Ruiz-Navarro, 2004). Bibliometric Analysis is utilized to assess the qualitative and quantitative interest in a very specific topic. In contrast to conventional methods of literature review, Bibliometric Review allows a large number of pertinent papers to be assessed in terms of productivity and graphical mapping to help better grasp their relevance. In this study, the Scopus database was used to gather the data. The timeframe for the study is from 1249-1263. A total of 89 research papers were extracted and analyzed by using Biblioshiny software. The goal of the study is to map the intellectual evolution and growth trajectory of research on financial inclusion and entrepreneurship development, to uncover the structural and collaborative dynamics of the field by analyzing influential authors, institutions, countries, citation networks, and co-authorship patterns and to identify dominant themes and emerging research directions through keyword and citation analysis, thereby highlighting conceptual shifts toward innovation, sustainability, digitalization, and inclusive growth.

The flow diagram of data extraction is given below:

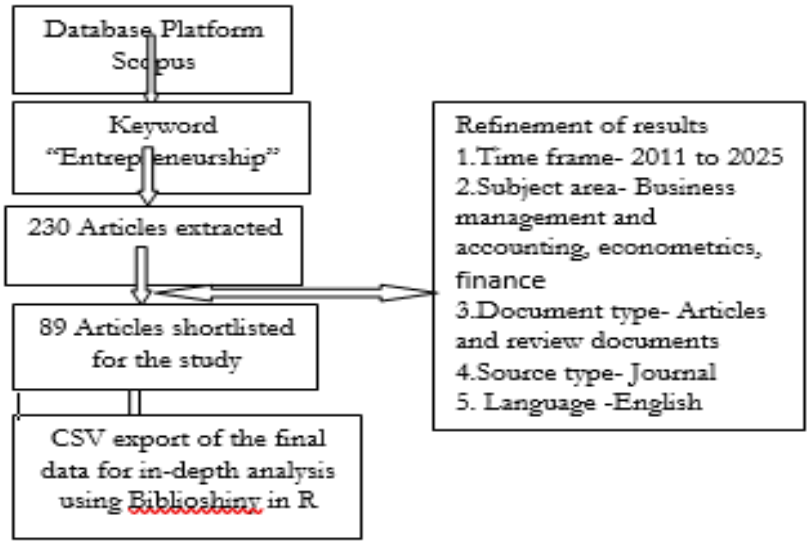

Figure 1: Workflow of the study compiled by Author's (Rosario et al., 2024)

The methodology and materials employed in the current study are shown in Figure 1. It contains 89 research papers in the area of entrepreneurship that were published between 2011 and 2025. The bibtex file for the study was extracted from the Scopus database. For bibliometric analysis, R-studio's Biblioshiny application was used.

3. Results and Discussion

Publication Trends

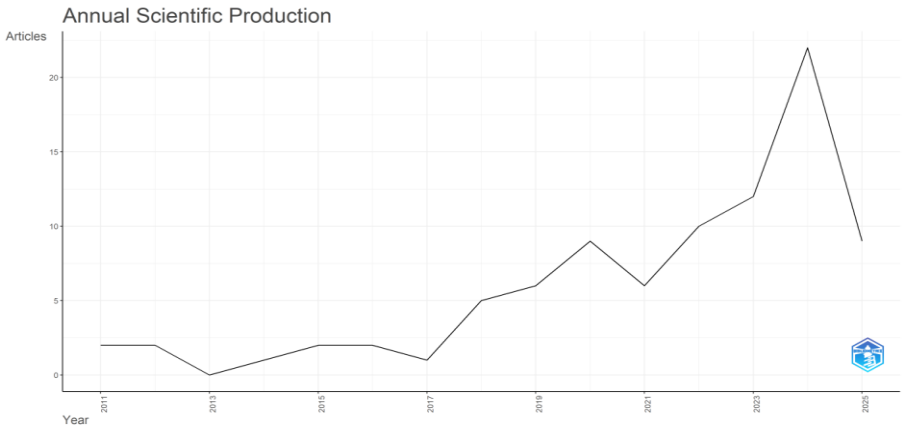

Figure 2: Annual Scientific Production was generated using Biblioshiny developed by Aria & Cuccurullo, 2017

The figure illustrates the temporal evolution of annual scientific production over the study period (2011–2025). The trend demonstrates three distinct phases: an initial phase of low and fluctuating output, a phase of gradual consolidation, and a final phase marked by rapid expansion followed by a slight correction. During the early years (2011–2014), publication output remained minimal and inconsistent, indicating an emergent stage of research activity in the field. This period is characterized by limited scholarly engagement, possibly reflecting low awareness, constrained funding opportunities, or the nascent development of the research domain.

From 2015 onwards, a moderate but steady increase in publications becomes visible, suggesting growing academic interest and the gradual establishment of a research base. Although minor fluctuations appear during

2016–2018, the overall trajectory remains upward, signifying improved institutional participation and expanding collaboration networks. A pronounced acceleration is observed after 2019, where annual output rises sharply. This surge continues through 2023 and reaches a peak in 2024, representing the most productive year in the dataset. Such rapid growth typically reflects heightened policy relevance, increased funding support, technological advancements, and broader recognition of the topic's practical and theoretical significance.

The decline in 2025, while noticeable, does not negate the overall upward trajectory; rather, it may indicate a normalization phase following an exceptional spike in the preceding year. Short-term decreases after peak productivity are common in bibliometric trends and often result from publication cycles, database indexing lags, or shifts in research funding timelines. Overall, the pattern reveals a transition from exploratory research to a mature and expanding knowledge domain. The sustained rise in scientific output underscores the increasing importance of the subject area and signals its consolidation as a significant field of academic inquiry.

Journals Analysis

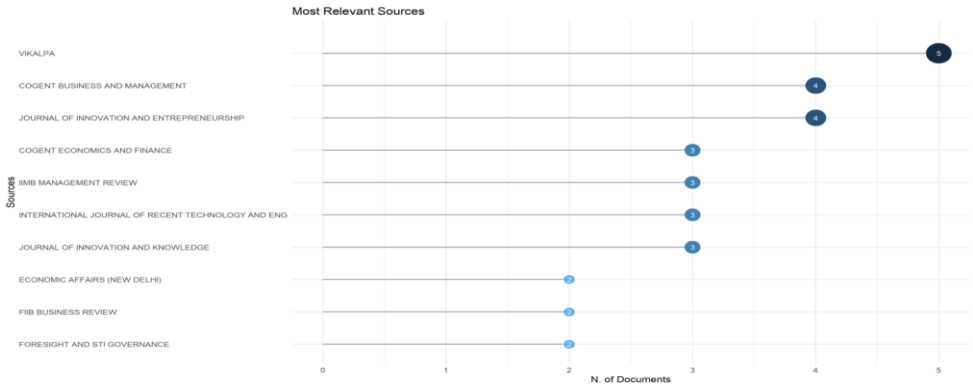

Figure 3: Most Relevant Sources was generated using Biblioshiny developed by Bruno & Wadle, 2019

The figure highlights the leading publication outlets contributing to the development of the selected research domain. The distribution of documents across journals indicates the extent to which knowledge production is concentrated in particular sources versus being dispersed across multiple platforms. Vikalpa emerges as the most influential source, publishing five documents**,** thereby serving as a primary platform for disseminating research in this area. Its prominence suggests strong thematic alignment with the subject and indicates that it functions as a key channel for scholarly communication.

Two journals—Cogent Business & Management and Journal of Innovation and Entrepreneurship—follow closely with four publications each. Their comparable contributions reflect an active engagement with themes related to innovation, management, and entrepreneurship, reinforcing the interdisciplinary character of the field.

A second tier of sources includes Cogent Economics & Finance, IIMB Management Review, International Journal of Recent Technology and Engineering, and Journal of Innovation and Knowledge, each contributing three documents**.** These journals collectively indicate the integration of economic analysis, managerial perspectives, and technological dimensions within the research stream. Additional contributions are observed from Economic Affairs (New Delhi), FIIB Business Review, and Foresight and STI Governance, each with two publications**,** demonstrating the presence of supportive but less concentrated dissemination channels.

Overall, the pattern suggests a moderately scattered publication structure, where no single journal overwhelmingly dominates the field. Instead, research outputs are distributed across a range of management, economics, innovation, and technology-oriented journals. Such dispersion is characteristic of an evolving and multidisciplinary domain, indicating that the topic attracts interest from diverse academic communities and continues to expand its intellectual reach.

Author's Analysis

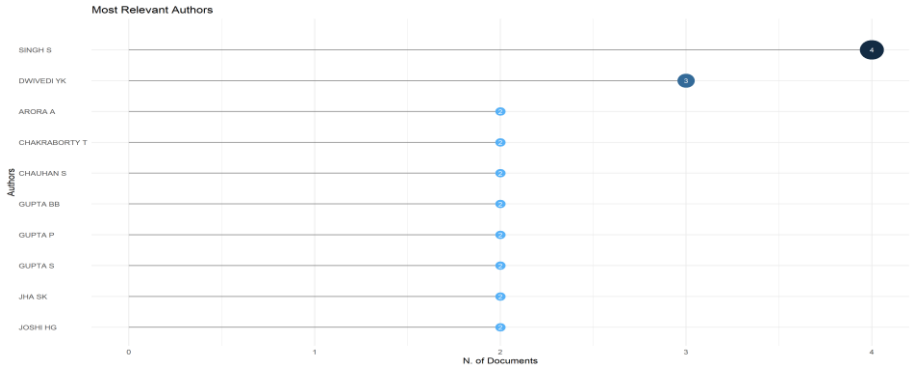

Figure 4: Most Relevant Authors generated using Biblioshiny (Rosario et al., 2024).

The figure identifies the most productive contributors in the selected research domain based on the number of publications indexed in the dataset. It provides insight into the authorship structure and highlights the leading scholars shaping the development of this field. Among all contributors, Singh S. emerges as the most prolific author with four publications, indicating a sustained research engagement and a significant role in advancing the discourse. Dwivedi Y.K. follows with three publications, reflecting notable scholarly influence and continued participation in the knowledge-building process.

The remaining authors- Arora A., Chakraborty T., Chauhan S., Gupta B.B., Gupta P., Gupta S., Jha S.K., and Joshi H.G.-each contributed two publications. This relatively even distribution suggests that the field does not rely on a single dominant scholar but is supported by a cluster of active researchers making comparable contributions. The pattern indicates a moderately dispersed authorship landscape, where productivity is shared among several contributors rather than concentrated in a highly centralized group. Such a structure is typical of emerging and interdisciplinary research areas, where collaborative exploration across institutions fosters gradual expansion of the literature.

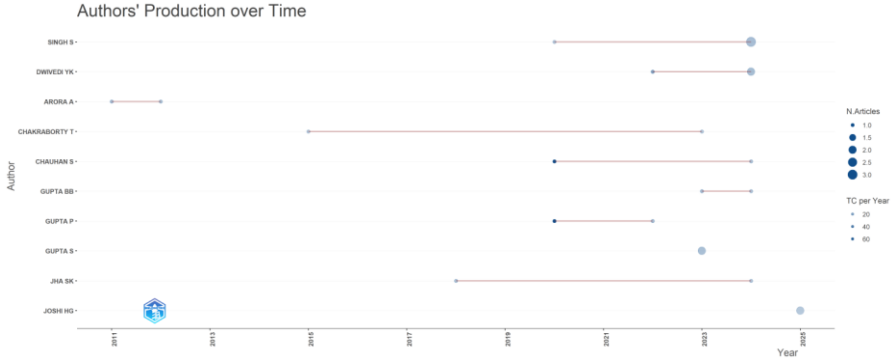

Figure 5: Author's production overtime was generated using Biblioshiny (Bruno & Wadle,2019)

The temporal distribution of authors' scientific production reveals a clear intensification of research activity during the period 2020–2024. While a limited number of contributions are observed prior to 2015, the majority of publications are concentrated in recent years, indicating a marked expansion of scholarly engagement in the domain. Among the contributors, Chakraborty T demonstrates one of the longest publication spans (approximately 2015–2023), reflecting sustained research involvement over time. Similarly, Jha SK exhibits consistent productivity from 2018 to 2024, suggesting long-term engagement and continuity in scholarly output. In contrast, authors such as Arora A show earlier but temporally limited contributions (around 2011–2012), indicating initial engagement without continued presence in later years. A notable surge in productivity is evident from 2020 onward. Authors including Singh S, Chauhan S, and Gupta P display active publication trajectories within this period, highlighting the consolidation phase of the research field. Furthermore, Dwivedi YK, Gupta BB, and Gupta S emerge as relatively recent contributors (post-2022), suggesting the entry of new researchers into the domain. The distribution of article counts indicates moderate but focused productivity across authors, with certain individuals demonstrating higher publication intensity in recent years. In addition, citation impact per year (as reflected by color intensity in the visualization) suggests that some recently active authors have achieved comparatively strong citation performance within a short time frame. This pattern may reflect increasing relevance, methodological rigor, or alignment with emerging research priorities.

Overall, the longitudinal analysis reveals three distinct phases: (1) an early exploratory phase with limited output (pre-2015), (2) a consolidation phase marked by sustained contributions from select authors (2015–2019), and (3) a rapid expansion phase characterized by increased author participation and higher productivity (2020–2024). The findings collectively indicate that the research area is evolving, with growing scholarly attention and expanding author networks in recent years.

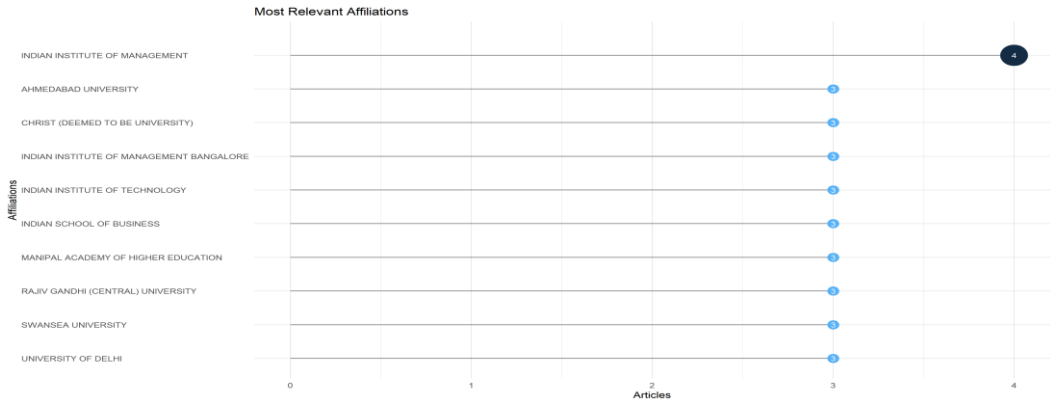

Figure 6: Most relevant affiliations generated using biblioshiny(Aria & Cuccurullo, 2017).

The analysis of institutional contributions indicates a relatively concentrated yet moderately distributed pattern of scholarly output across leading academic institutions. The Indian Institute of Management emerges as the most productive affiliation, contributing four publications, thereby occupying a central position within the institutional landscape of the field. This prominence suggests a strong research orientation and sustained engagement with the thematic domain under investigation.

A second tier of institutions demonstrates comparable levels of productivity, each contributing three publications. These include Ahmedabad University, Christ (Deemed to be University), Indian Institute of Management Bangalore, Indian Institute of Technology, Indian School of Business, Manipal Academy of Higher Education, Rajiv Gandhi (Central) University, Swansea University and the

University of Delhi. The relatively uniform output across these institutions reflects a distributed pattern of scholarly activity rather than dominance by a single institutional cluster.

Geographically, the findings reveal a strong concentration of contributions from Indian higher education institutions, underscoring the regional prominence of the research theme. However, the inclusion of institutions such as Swansea University indicates emerging international participation, suggesting gradual globalization of the research area.

Overall, the institutional productivity pattern suggests (1) the presence of a leading institutional contributor, (2) a cohesive group of moderately productive institutions, and (3) a predominantly national but increasingly internationalized research network. These findings imply that the field is institutionally anchored within key Indian academic centers while simultaneously expanding toward broader collaborative and global.

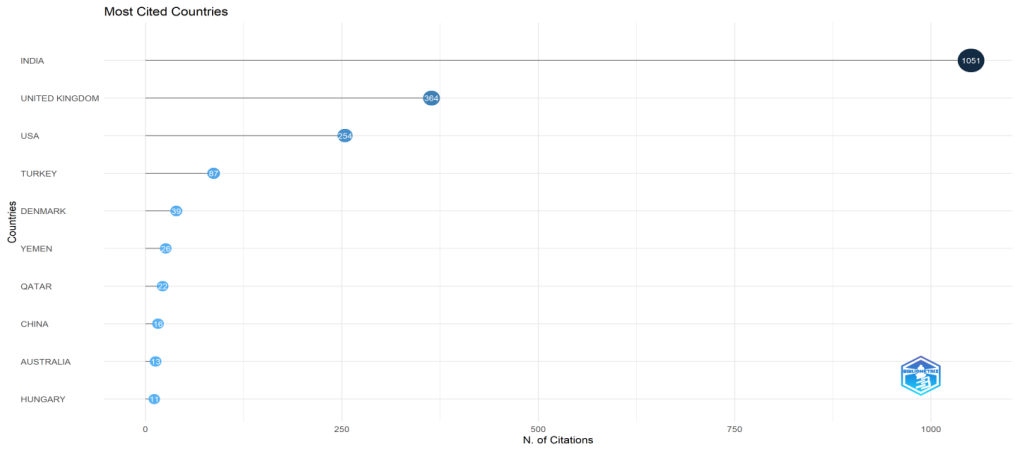

Figure 7: Most cited countries using Biblioshiny (Bruno & Wadle, 2019).

The citation analysis reveals a highly asymmetric global impact distribution, with India emerging as the most influential country, accumulating 1,051 citations. This figure substantially exceeds that of all other countries, indicating the centrality of Indian scholarship within the intellectual structure of the field. The magnitude of this difference suggests both high research productivity and strong visibility of Indian-authored publications in the global academic community. The United Kingdom ranks second with 364 citations, followed by the United States with 254 citations. Together, these three countries constitute the dominant citation cluster, accounting for the overwhelming majority of total citations. Their prominence reflects established research ecosystems, international collaboration networks, and high-impact publication outlets. A secondary tier of countries includes Turkey (87 citations) and Denmark (39 citations), which demonstrate moderate influence. Although their citation counts are significantly lower than those of the leading countries, their presence indicates diversified international engagement in the research domain. The remaining countries-Yemen (26), Qatar (22), China (16), Australia (13), and Hungary (11)—exhibit comparatively limited citation impact. This distribution suggests emerging or specialized contributions rather than broad dominance within the field.

Overall, the citation landscape demonstrates (1) a pronounced dominance by India, (2) strong secondary influence from the United Kingdom and the United States, and (3) a long-tail distribution of moderate to emerging contributors. The findings highlight a geographically concentrated yet progressively internationalized research impact structure, where leadership is clearly defined but global participation continues to expand.

Most Influential Documents

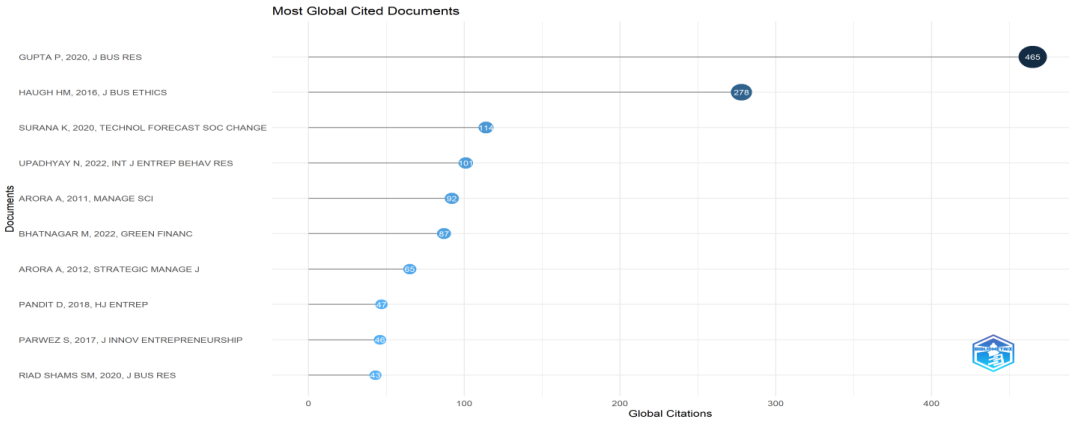

Figure 8: Most Globally Cited Documents generated through Biblioshiny (Bruno & Wadle, 2019).

The figure presents the most globally cited documents within the dataset, ranked by total citation counts. The distribution of citations is highly skewed, indicating a strong concentration of scholarly influence among a limited number of publications. The most cited document is Gupta (2020), Journal of Business Research, with 465 global citations. This substantially exceeds the citation counts of all other documents, positioning it as the dominant intellectual anchor in the field. Its citation volume suggests that it has made a foundational or paradigm-shifting contribution, likely shaping subsequent theoretical development and empirical inquiry. The second most cited work, Haugh (2016), Journal of Business Ethics, has accumulated 278 citations. Although significantly lower than the leading article, it still demonstrates considerable academic impact and indicates sustained engagement from the scholarly community. The gap between the first and second ranked publications reflects a steep citation gradient, underscoring the exceptional prominence of the leading study. A second tier of influential works includes Surana (2020), Technological Forecasting and Social Change(114 citations),Upadhyay (2022), International Journal of Entrepreneurial Behavior & Research(100 citations),andArora (2011), Management Science (92 citations). These documents represent strong mid-range impact and likely contribute to methodological refinement, domain extension, or contextual elaboration within the research stream. Subsequent publications, including Bhatnagar (2022), Green Finance(87 citations),Arora (2012), Strategic Management Journal(65 citations), Pandit (2018), Human Resource Entrepreneurship(47 citations),Parwez (2017), Journal of Innovation and Entrepreneurship(46 citations),and Riad Shams (2020), Journal of Business Research(43citations),form a third cluster characterized by moderate scholarly recognition.

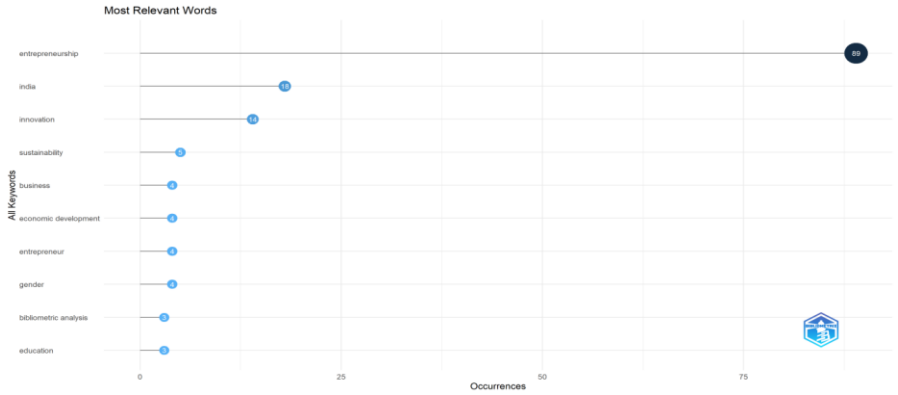

Figure 9: Most Frequent Words generated through Biblioshiny(Rosario et al., 2024).

The figure illustrates the most relevant keywords identified in the dataset, ranked by frequency of occurrence. The distribution reveals a clear thematic concentration, with one dominant construct and several secondary but substantively important themes. The keyword entrepreneurshipoverwhelmingly leads with 89 occurrences, indicating that it constitutes the central organizing concept of the research domain. Its high frequency confirms that the corpus is strongly anchored in entrepreneurship scholarship, serving as the primary theoretical and empirical foundation for the included studies.

A second tier of frequently occurring terms includes India(18 occurrences) and innovation(14 occurrences). The prominence of Indiasuggests a strong geographical concentration of research, highlighting the country either as the empirical setting or as a contextual focus for theoretical development. This geographic clustering implies that the field may be characterized by emerging economy perspectives, institutional transitions, or context-specific entrepreneurial dynamics. Meanwhile, the substantial presence of innovation underscores the close conceptual linkage between entrepreneurial activity and innovation-driven growth, suggesting that technological advancement, new venture creation, and innovation ecosystems are recurring analytical lenses within the dataset. A third cluster of keywords—sustainability (5), business (4), economic development (4), entrepreneur(4), and gender (4)—reflects thematic diversification within the broader entrepreneurship discourse. The inclusion of sustainabilitysignals increasing scholarly attention to sustainable entrepreneurship and environmentally or socially responsible venture practices. Similarly, economic development indicates that entrepreneurship is frequently examined as a driver of macroeconomic growth and structural transformation. The presence of gender suggests emerging interest in gendered dimensions of entrepreneurship, potentially addressing inclusion, access to resources, or differential performance outcomes.

Finally, bibliometric analysis (3) and education(3) represent more specialized yet meaningful subthemes. The occurrence of bibliometric analysis indicates methodological reflexivity within the field, suggesting that scholars are increasingly evaluating intellectual structures, citation patterns, and research trends. The appearance of educationpoints toward the role of entrepreneurial education, skill development, and institutional capacity-building as components of the research agenda.

Network Analysis

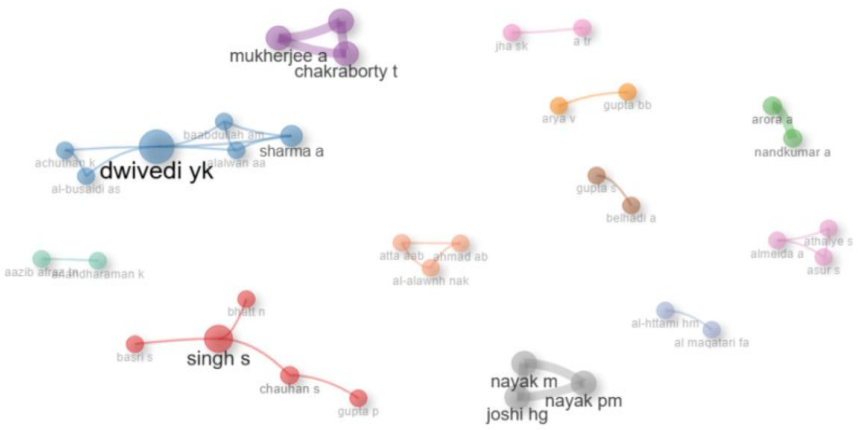

Figure 10: Collaboration Network usingBiblioshiny developed by Aria & Cuccurullo, 2017

The figure presents the co-authorship network of authors within the dataset, illustrating patterns of scholarly collaboration. Nodes represent individual authors, node size reflects relative productivity or collaboration strength (e.g., number of publications or link strength), and links denote co-authored publications. Distinct colors indicate collaboration clusters, revealing sub-communities within the broader research domain. The network demonstrates a clustered and moderately fragmented structure, characterized by several small, cohesive groups rather than a single, densely interconnected collaboration system. This suggests that research in the domain is organized around localized teams or institutional collaborations, with limited cross-cluster integration.

A prominent cluster centers on Dwivedi YK, who appears as one of the most influential and highly connected authors in the network. The relatively large node size and multiple linkages indicate both high productivity and strong collaborative engagement. This cluster includes collaborators such as Sharma A and other associated authors, forming a stable and cohesive research group. The structural positioning of this cluster suggests a significant contribution to knowledge production and intellectual consolidation in the field. Another visible cluster is organized around Singh S,connected with collaborators including Chauhan S, Gupta P, Basri S, and Bhatt N. The density of internal ties indicates strong intra-group collaboration, although the limited connections beyond the cluster point to restricted inter-group knowledge diffusion.

Similarly, the cluster involving Nayak M, Nayak PM, and Joshi HG forms a tightly connected triad, suggesting either institutional co-affiliation or repeated collaborative engagement. The compact structure indicates concentrated research activity but limited outward linkage.

Additional smaller clusters—such as those centered around Mukherjee A and Chakraborty T,Arora A and Nandkumar R, and other dyadic partnerships—reflect specialized or short-term collaborative relationships. These dyads and triads contribute to thematic diversification but do not significantly bridge the broader network.

Figure 11: Country Collaboration Map generated using Biblioshiny (Bruno & Wadle, 2019)

The map illustrates the global spatial connectivity pattern centered on India, highlighting the intensity and directionality of international linkages. Countries are color-coded using a graduated scale (light to dark red), where darker shades indicate stronger levels of interaction with India. Curved flow lines represent transnational connections, with thicker and more prominent arcs denoting higher intensity exchanges. The visualization reveals a clear concentration of strong linkages between India and major global hubs. The most prominent connections are observed with the United States, Western Europe (notably the United Kingdom and surrounding regions), the Middle East, and parts of East and Southeast Asia. The United States

appears as a major extra-regional partner, indicating substantial long-distance engagement across the Atlantic–Pacific corridor. Similarly, dense linkages with the Gulf region and neighboring South Asian countries reflect strong regional integration and proximity-driven interaction. Western Europe demonstrates moderate to strong connectivity, suggesting sustained institutional, economic, or socio-cultural exchanges. East and Southeast Asia show emerging or significant ties, highlighting India's increasing integration within broader Asian networks. In contrast, relatively weaker connectivity is observed with much of Africa and South America, indicating limited direct engagement compared to other regions.

The spatial configuration suggests a hub-and-spoke structure, with India functioning as a central node in a transcontinental network. The distribution pattern reflects a combination of historical ties, economic partnerships, migration corridors, and geopolitical alignments. The prominence of long-haul connections (e.g., India–North America) underscores the role of globalization and transnational mobility in shaping contemporary interaction patterns.

Overall, the figure demonstrates that India occupies a strategically significant position within the global system, characterized by strong bilateral ties with advanced economies and neighboring regions, alongside expanding outreach toward Asia-Pacific partners. The observed spatial heterogeneity highlights the uneven geography of global engagement and underscores the importance of both regional proximity and global economic integration in structuring international connectivity.

5. Conclusion

This bibliometric investigation provides a systematic and longitudinal assessment of the evolving research landscape at the intersection of financial inclusion, entrepreneurship development, MSMEs, and start-up ecosystems during the period 2011–2025. Drawing upon 89 Scopus-indexed publications and employing Biblioshiny for performance and network analysis, the study offers both structural and thematic insights into the maturation of this domain.

The findings reveal a clear transition from an exploratory phase (2011–2014) to a consolidation phase (2015–2019), followed by a rapid expansion phase (2020–2024). The sharp increase in publication output after 2019 signals heightened scholarly and policy interest, likely driven by digital transformation, fintech expansion, government-led entrepreneurship initiatives, and growing emphasis on inclusive growth. Although a marginal decline is observed in 2025, the overall trajectory confirms that the field has moved beyond nascent development and is now positioned as a consolidated and expanding area of inquiry. Journal analysis indicates a moderately dispersed publication structure, reflecting the interdisciplinary nature of the field. Contributions are distributed across management, innovation, economics, and technology-oriented outlets, suggesting intellectual integration across multiple academic traditions. Author productivity patterns further demonstrate a collaborative yet fragmented knowledge structure, characterized by small, cohesive research clusters rather than a single dominant scholarly network. This indicates that while the field is growing, greater cross-institutional and cross-national collaboration could enhance theoretical integration and knowledge diffusion. Institutional and country-level analyses underscore the central role of India in shaping the intellectual and empirical foundations of the domain. India not only leads in publication output but also dominates global citation impact, highlighting the contextual significance of financial inclusion and entrepreneurship in emerging economies. The strong collaborative linkages between India and countries such as the United Kingdom and the United States reflect expanding international engagement. However, the relatively weaker participation from regions such as Africa and South America suggests opportunities for broader global inclusion in future research networks. The citation structure reveals a highly skewed distribution, where a small number of seminal works exert disproportionate influence.

This pattern suggests the presence of foundational contributions that anchor the theoretical and empirical discourse. At the same time, the increasing diversity of keywords—such as innovation, sustainability, gender, economic development, and education—signals thematic expansion and conceptual deepening. The integration of sustainability and gender perspectives, in particular, indicates a shift toward more inclusive and socially responsive entrepreneurship research.

Despite its contributions, the study is subject to certain limitations. The analysis relies exclusively on the Scopus database and includes a relatively modest number of publications, which may limit coverage of region-specific or non-indexed research. Future studies may expand the dataset by incorporating Web of Science or other databases and apply advanced bibliometric techniques such as thematic evolution mapping, citation burst analysis, or longitudinal co-word analysis to capture deeper intellectual shifts.

Societal Implications

The findings of the study underscore the critical role of financial inclusion and entrepreneurship development in fostering inclusive and sustainable economic growth. The increasing scholarly emphasis on innovation, sustainability, gender, and economic development reflects a broader societal shift toward equitable participation in economic systems. Strengthening financial inclusion mechanisms can reduce income inequalities by enabling marginalized and underserved populations to access formal credit, savings, and insurance services. This, in turn, enhances livelihood security and encourages productive self-employment. The growing integration of digitalization within entrepreneurial ecosystems also highlights the need for improved digital literacy and infrastructure to ensure that technological advancements benefit wider sections of society. Furthermore, the concentration of research in emerging economies, particularly India, signals the importance of context-specific policy frameworks that support MSMEs and start-ups as engines of employment generation and socio-economic transformation.

Managerial Implications

From a managerial perspective, the study emphasizes the importance of strategically leveraging financial inclusion mechanisms and institutional support systems to enhance enterprise sustainability and competitiveness. Managers of MSMEs and start-ups should actively adopt digital financial technologies and innovative business models to improve efficiency, transparency, and market accessibility. The increasing focus on sustainability and responsible entrepreneurship suggests that integrating environmental and social considerations into core strategies can strengthen long-term performance and stakeholder trust. Additionally, the fragmented yet collaborative nature of the research network highlights the importance of forming strategic alliances, participating in innovation ecosystems, and engaging with academic and policy institutions to access knowledge and funding opportunities. Continuous skill development, adaptive leadership, and effective resource mobilization remain essential for navigating dynamic market environments and translating financial access into sustainable entrepreneurial success.

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Author Declaration

The authors confirm that the work presented in the manuscript is original and has not been published elsewhere. The authors declare that there is no conflict of interest among the authors regarding the work reported in this paper.