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STARTUPS-SOCIAL ENTREPRENEURSHIP-ENTREPRENEURIAL ECOSYSTEM : BIBLIOMETRIC ANALYSIS

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Abstract: This study analyzes the interest and progress of research on the construct *of startups, social entrepreneurship, and entrepreneurial ecosystems* through a bibliometric analysis of the Scopus database, applying the search equation (TITLE-ABS-KEY (start AND ups) AND TITLE-ABS-KEY (social AND entrepreneurship) AND TITLE-ABS--KEY (entrepreneurial AND ecosystem)), 99 documents were retrieved (consulted on September 22, 2025), including articles, chapters, proceedings, and books. The records show that interest began in 2016 and grew steadily until 2024, with a slight slowdown in 2025. Thematic analysis shows that the research highlights the interaction between individual competencies (values, mindset, intellectual capital) and external factors (ecosystems, policies, entrepreneurial culture), the link between entrepreneurship and the circular economy and sustainability, and the importance of education and institutions in training entrepreneurs. Ferreira emerges as one of the most prolific authors on the subject, whose recurring themes allow us to propose a research framework based on individual, organizational, ecosystemic, and sustainability dimensions. Gaps are discussed, such as the need to study individual transactions towards entrepreneurship in greater detail, the consolidation of binding theoretical frameworks, and the design of mission-oriented ecosystems that foster sustainable and scalable trajectories.

INTRODUCTION

The study of startups, social entrepreneurship, and entrepreneurial ecosystems has gained relevance in recent decades due to their potential to catalyze sustainable innovation, scalability, and socioeconomic transformation. Startups are characterized by their focus on scalability and innovation under conditions of high uncertainty (Rodríguez, 2019), while entrepreneurial ecosystems integrate political, social, economic, cultural, and environmental factors that facilitate or inhibit entrepreneurial activity in a region (Marin and Cuartas, 2022). For its part, social entrepreneurship emphasizes a focus on solving social problems and generating large-scale impact, integrating social value and productivity (National Institute of Social Economy, 2018).

Forming a unified construct of startup-social entrepreneurship-entrepreneurial ecosystem allows us to understand how contextual conditions and individual capacities interact to enable scalable ideas with social impact. With the aim of identifying academic interest and advances in this intersection, a bibliometric analysis was conducted in Scopus on September 22, 2025, using a specific search equation, supplemented by an online review to establish the current contextual framework useful for the purposes of this study. This approach provides quantitative (number of documents, years, subject areas, authors, and countries) and qualitative (topics, lines of research, and gaps) evidence to guide future research and public policy.

METHODOLOGY

A scientific search was conducted on research on Startups, Social Entrepreneurship, and the Entrepreneurial Ecosystem, using an applied study in the Scopus database (database of abstracts and citations). The search was carried out using the search equation (TITLE-ABS-KEY (start AND ups) AND TITLE-ABS-KEY (social AND entrepreneurship) AND TITLE-ABS-KEY (entrepreneurial AND ecosystem)). The search terms requested were Startups, Social Entrepreneurship, and Entrepreneurial Ecosystem in the title, abstract, and keywords. No restrictions were placed on the date of publication in the journal, nor was the area of knowledge limited. Using the requested criteria, a total of

99 documents were obtained as of the date of the search, which was carried out on September 22, 2025.

In addition to the Scopus search, an online search was conducted using the terms Startups, Social Entrepreneurship, and Entrepreneurial Ecosystem in order to obtain a current conceptual framework for both terms.

RESULTS

A startup is defined by (Rodríguez, 2019: p. 9) as "an emerging company with great growth potential that offers an innovative product or service under great uncertainty as to whether it meets the needs of the market."

What characterizes a startup is its scalability, that is, the fact that the business idea can be replicated in different contexts with successful results. In this sense, it is important to consider that a favorable entrepreneurial ecosystem greatly benefits scalable ideas. Marin and Cuartas (2022: summary paragraph 4) state that in the field of management and business, the entrepreneurial ecosystem is the "interaction of political, social, economic, cultural, and environmental aspects that allow for the development of entrepreneurial activity in a given region." The authors conclude in their study that "ecosystems, being complex, are cumulative and constantly self-reinforcing, both in their positive and negative aspects. In the latter regard, it is essential that those involved in building entrepreneurial ecosystems join forces to prevent the emergence of inequalities in the social and economic progress of regions." (p. 33)

To achieve social progress as a community, we need to join forces. In this sense, entrepreneurs do their part by directing their efforts toward generating and implementing innovative ideas that directly benefit society. The Mexican government believes that "social entrepreneurship is so important because its projects seek to solve the most pressing social issues and find ideas that bring about large--scale change. It is not just about producing more; it is about revolutionizing the way we produce. The key is to leverage the knowledge and customs of communities in order to add value to the production chain. It has been proven that in areas where social enterprises are highly important, social welfare and economic growth are generated." (National Institute of Social Economy, 2018: paragraphs 7 and 8)

The study of these three concepts requires attention in the field of research, since the formation of a startup-social entrepreneurship-entrepreneurial ecosystem construct supports the emergence of ideas that are scalable globally.

Based on the following search equation (TITLE-ABS-KEY (start AND ups) AND TITLE-ABS-KEY (social AND entrepreneurship) AND TITLE-ABS-KEY (entrepreneurial AND ecosystem)) applied in the Scopus database, the results are shown below:

The topic began to be studied in 2016, with interest peaking around 2024. Interest, based on the number of articles published, is shown in Table 1.

Year	Number of publications in Scopus
2016	1
2017	5
2018	9
2019	6
2020	8
2021	10
2022	12
2023	13
2024	23
2025 (September)	12
Total number of documents written on the topic of interest	99

Table 1. Number of publications in Scopus

Source: Scopus

The 99 papers correspond to 62 articles, 15 book chapters, 11 conference papers, 6 reviews, 3 books, and 2 conference reviews.

The subject areas covered by the papers reported in the Scopus database are shown in Figure 1.

The topic has shown significant growth since 2016. However, by 2025, growth will be lower than for articles written in 2024, given that an average of 1.92 articles per month were written in 2024. so far in 2025, the number of articles written per month is 1.33, which marks a decrease of 0.59%.

The papers written by Ferreira J. J. are shown in Table 2.

It should be noted that the articles referred to in Table 1 are of interest to researchers in the field, with a total of 140 citations. Among these articles, the one by Suchek stands out. Analysis of the four articles reveals similarities such as the following:

All four articles recognize that startups do not operate in isolation, but rather interact with their ecosystem (networks, policies, institutions, society).

It is identified that in startups, the combination of personal competencies (skills, mindset, values) is intertwined with external structures (ecosystems, policies, entrepreneurial culture).

Entrepreneurship is integrated as a central driver in the case of the circular economy and the transition to sustainable models.

The article written by Patricio and Ferreira (2024) insists on the creation of theoretical and conceptual frameworks that articulate the individual, the organizational, and the institutional.

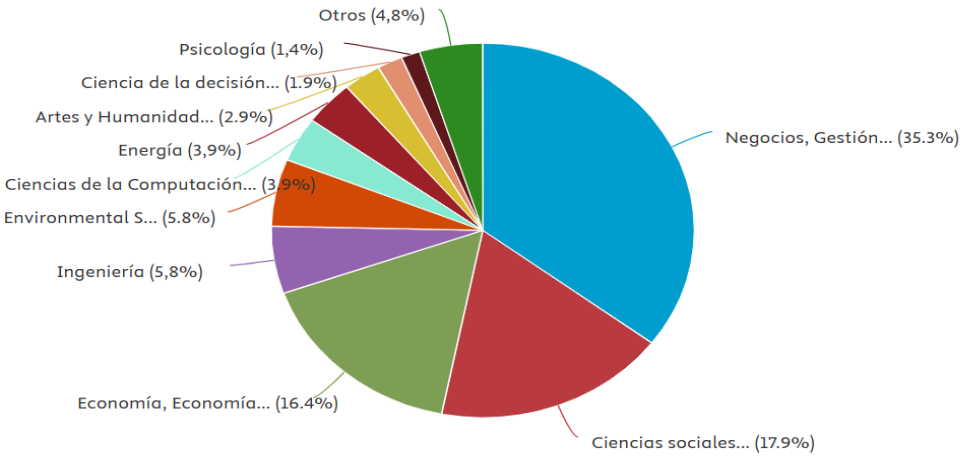
Ferreira and various collaborators (2024; 2025) identify that there is still a lack of studies on individual transitions, i.e., the leap into entrepreneurship. In addition, their studies refer to the lack of consolidated literature on circular entrepreneurship, as well as the need to connect social values and education with business creation. The bibliometric study identified Ferreira as the author with the highest number of papers written, supported by several co-authors, which makes it important to consider that his research presents an interesting direction, as shown in the following matrix:

Among the preprints shown in Scopus, with reference to the topic of startups, the study of food system transitions by Gaitan-Cremaschi and Klerkx (2025) stands out. The study is based on 59 interviews with founders of emerging companies, investors, intermediaries, and policy makers. The authors combined the Multilevel Perspective and Strategic Niche Management with sustainable entrepreneurship and ecosystem literature. In the research results, they report that:

> "We found a symbolic coherence of the global niche around the imaginaries of Agriculture and Food 4.0, but a local fragmentation marked by diverse visions of sustainability and a weak collective identity. Most companies follow regime-compatible substitution paths through adjustment and adjustment or adjustment and transformation strategies, with some reconfiguration and rare stretching and transformation substitution in foodtech; certain paths are driven by incumbents. Ecosystems protect and nurture emerging companies, but often steer them toward commercially scalable innovations aligned with incumbents, even though mission-oriented emerging players offer greater transformative potential. We propose mission-oriented ecosystem designs that provide "nutrient-rich soil" (patient capital, sector expertise, cross-niche learning) and a "supportive climate" (legitimacy, alternative success metrics) to enable more diverse and profound startup trajectories oriented toward sustainability. (Gaitan-Cremaschi and Klerkx, 2025: summary paragraph 1).

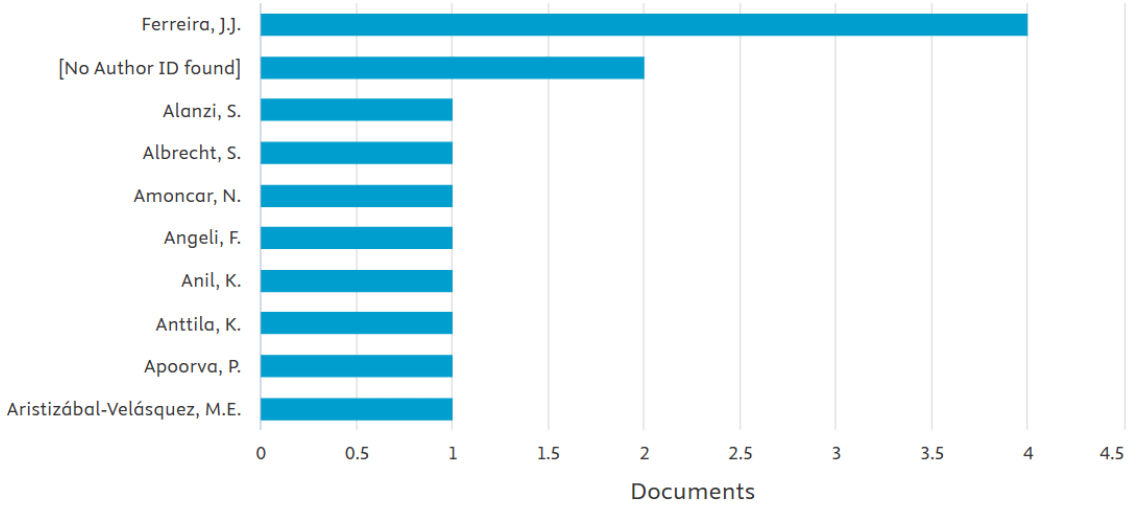
The research we are concerned with here is carried out by different institutions, the top 10 of which are shown in Figure 3.

The countries where research in the area of emerging companies is reported are: India, the United Kingdom, the United States, and Portugal, with 20, 13, 13, and 7 papers, respectively. It should be noted that 44 countries have conducted studies on startups, entrepre-



Graph 1. Academic areas where the papers are reported

Source: Scopus



Graph 2. Number of papers written per author

Source: Scopus

Title	Year	Author and Co--authors	Main focus	Key contributions
An empirical ecosystem-based study of 'making the leap' from employment to entrepreneurship	2025	de Oliveira Costa, V. Ferreira, J.J. Murphy, P.J.	Transition from employee to entrepreneur in Brazilian startup ecosystems	Success factors: intellectual capital (experiential plus conceptual knowledge), technical and management skills, independent interaction with markets.
Start-ups and entrepreneurial ecosystems in the circular economy: A multi-level approach for safe and just planetary boundaries	2024	Ferreira, J.J. C Fernandes, A.J. Ramírez-Pasillas, M.	Entrepreneurial ecosystems and start-ups in the circular economy (macro, meso, and micro interconnections between emerging companies)	A multilevel framework that connects policies, ecosystems, and startups with sustainability based on an integrative multilevel framework under the challenge of social and environmental sustainability, as well as production patterns.
Unlocking the connection between education, entrepreneurial mindset, and social values in entrepreneurial activity development	2024	Patrício, L.D. Ferreira, J.J	The role of universities, education, and social values in entrepreneurship	Evidence that skills plus values plus institutional support strengthen entrepreneurship
A review of entrepreneurship and circular economy research: State of the art and future directions	2024	Suchek, N. Ferreira, J.J. Fernandes, P.O.	State of the art of entrepreneurship in the circular economy	Identifies thematic groups: circular SMEs (growing), startups, social entrepreneurship, support ecosystems, and proposal for a future research agenda

Table 2. Analysis of papers written by Ferreira

Source: Own elaboration based on: Oliveira, et al 2025; Ferreira, et al 2024; Patricio and Ferreira 2024; and Suchek, et al 2024.

DIMENSION	COMMON FINDINGS	FUTURE DIMENSION OF RESEARCH
INDIVIDUAL/ENTREPRENEUR	Competencies are becoming increasingly important, as are values and mindset in relation to the entrepreneur's intellectual capital.	Delve deeper into how training, social values, and expertise translate into entrepreneurial success in different cultural contexts
ORGANIZATIONAL/STARTUP	Startups as agents of change in innovation and sustainability	Analyze how circular and social business models generate scalability and economic and social value
ENTREPRENEURIAL ECOSYSTEM	Entrepreneurial ecosystems as facilitators for the formation of networks, policies, and entrepreneurial culture	Investigate multilevel interaction to understand the influence they have on the consolidation of startups in emerging economies.
SUSTAINABILITY AND CIRCULAR ECONOMY	Circular economy as a driver of research	Consolidate a comprehensive sustainable entrepreneurship framework that serves to connect startups, ecosystems, and public policies. Integrate field studies to build robust theories about startups with a vision of sustainability and entrepreneurial ecosystems

Table 3. Research direction matrix based on Ferreira's research

Source: Prepared internally based on: Oliveira, et al 2025; Ferreira, et al 2024; Patricio and Ferreira 2024; and Suchek, et al 2024.

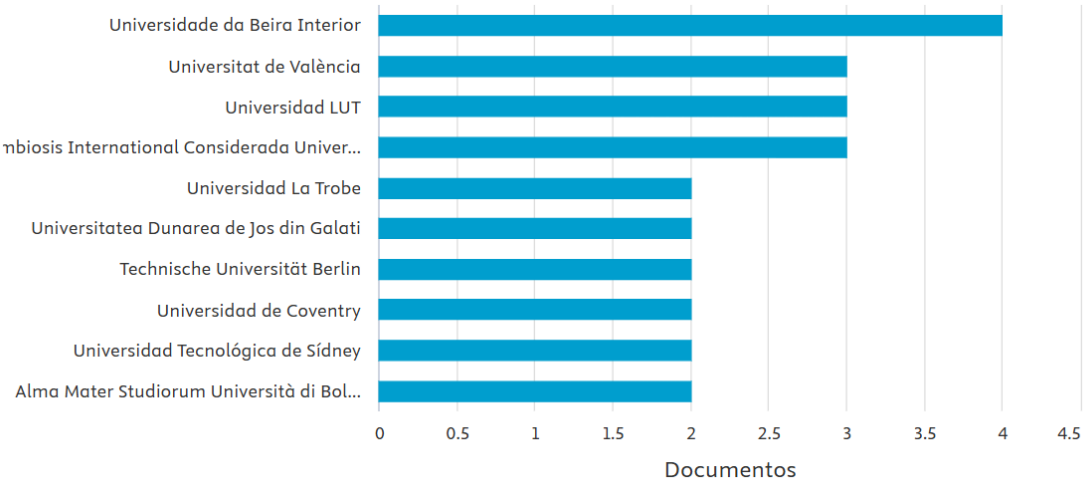


Figure 3. Number of papers written per author

Source: Scopus

neurial ecosystems, and social entrepreneurship, and that Mexico is not included in this report with any studies on the subject; in the Americas (in addition to the US, countries such as Portugal, Canada, Chile, Colombia, and Peru can be seen).

DISCUSSION

In the distribution of the metric, scientific interest in the construct appears in 2016 and shows sustained growth until 2024 (Table 1), when the annual peak is recorded with 23 publications; in 2025, a slowdown is observed until September. The research is mainly concentrated in articles, with a total of 66 (out of 99 papers).

In the individual-organization-ecosystem relationship, the analyses show a convergence: the personal competencies (skills, mindset, values) and intellectual capital of the entrepreneur are determinants of success, but their effect depends heavily on the environment (networks, policies, institutions). This finding reaffirms the notion that an entrepreneurial profile is not enough if the ecosystem does not provide capital, legitimacy, and scaling mechanisms.

Sustainability and the circular economy are seen as recurring thematic drivers, combining studies in areas of business, social, and environmental interest.

The analysis was limited to the Scopus equation and coverage and to complementary online searches; it is possible that there are relevant works in other databases such as Web of Science or institutional repositories. In addition, the Boolean search used requires the simultaneous co-presence of the three concepts in the title, abstract, and keywords, which may have excluded studies that address two of the three requested terms or that use different terminology.

The bibliometric approach quantifies production and trends, but it needs to be complemented with systematic reviews and field studies to explore causalities in greater depth.

CONCLUSIONS

Since 2016, there has been growing academic interest in the intersection of startups, social entrepreneurship, and the entrepreneurial ecosystem, with a peak in production in 2024 and a slight slowdown until September 2025.

Research converges in recognizing the multilevel nature of the phenomenon: personal competencies interact with ecosystem structures to determine the trajectories of social startups.

Sustainability and the circular economy are emerging themes that link the solution of environmental problems with scalable business models.

Scientific production is concentrated in four countries, suggesting geographical gaps and the need to diversify study contexts, especially in emerging economies.

RECOMMENDATIONS FOR FUTURE STUDIES

Design and evaluate ecosystem models that provide: patient capital (which does not require immediate returns), alternative metrics of success and legitimacy for sustainable and social enterprises, as exemplified by the study by Gaitan-Cremaschi & Klerkx (2025).

Combine bibliometrics with case studies, surveys, and interviews to validate hypotheses about the scalability, sustainability, and effectiveness of public policies.

Develop and harmonize indicators that jointly measure the economic and social value generated by startups, to guide both research and policy evaluation.

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