

Trends and Patterns in Social Entrepreneurship Research: A Bibliometric Investigation into Economic Sustainability and Business Impact

¹Dr. Ravisankar AV, ²Dr. Shaista Banu Harris, ³Mrs. N. Chithra, ⁴Dr. A. Krishna Sudheer,

¹Professor, MS Ramaiah College of Arts Science and Commerce, Bengaluru, Email: ravisankar_mba@msrcasc.edu.in,
ORCID: 0009-0001-9322-4470

²Associate Professor, MS Ramaiah College of Arts Science and Commerce, Bangalore, Email-
drshaistabanu@gmail.com, ORCHID- 0009-0003-9569-2774

³Assistant Professor, SRM Institute of Science and Technology, Ramapuram Part, Vadapalani Campus Chennai, Email-
chithran@srmist.edu.in, ORCID: 0009-0009-1487-823X

⁴Professor, Dept of MBA (Management Studies), Koneru Lakshmaiah Education foundation, KL Deemed to be university, Aziz Nagar, Hyderabad - 500075, Telangana, India. Email: doctorkrishnasudheer@gmail.com, ORCID: 0000-0002-6166-7779

Abstract

Bibliometric study examines how the field of social entrepreneurship research is developing, with a particular focus on patterns and trends pertaining to business effect and economic sustainability. We carefully review a large corpus of academic publications using advanced bibliometric analytic tools to identify important topics, authors who publish frequently, and journals that have a significant impact in the area. Our analysis explores both the quantitative and qualitative aspects of the literature on social entrepreneurship, revealing new directions in the field's development as well as the relationship between corporate effect and economic sustainability. Our study offers useful insights for scholars, practitioners, and policymakers who want to comprehend and contribute to the current conversation on social entrepreneurship by outlining the conceptual framework of this evolving area. To maximise the societal and financial benefits of social entrepreneurship efforts, new research areas and strategic interventions are made possible by the results, which provide a thorough overview of the state of the industry today.

Keywords: Trend, Economy, Business, Bibliometric

1. INTRODUCTION

In an era marked by unprecedented social and environmental challenges, the role of social entrepreneurship has gained prominence as a transformative force capable of marrying economic pursuits with social and environmental objectives. This bibliometric investigation delves into the evolving contours of social entrepreneurship research, providing a comprehensive analysis of "Trends and Patterns in Social Entrepreneurship Research: A Bibliometric Investigation into Economic Sustainability and Business Impact." Guided by the seminal work of Greg Dees, a pioneering scholar in the field, who defined social entrepreneurship as "the process of creating innovative solutions to society's most pressing social problems" (Rippa & Secundo, 2019) our exploration seeks to navigate the intricate network of scholarly contributions, identifying emerging trends and discerning key patterns that shape the trajectory of research in this dynamic domain, Thoti, K. K. (2024).. As societies grapple with systemic issues ranging from poverty and inequality to environmental degradation, social entrepreneurship emerges as a beacon of innovation, with the potential to drive positive change. This investigation situates itself within the broader context articulated by renowned Nobel laureate Muhammad Yunus, a trailblazer in microfinance, who emphasized that "social business is a cause-driven business. In a social business, the investors/owners can gradually recoup the money invested but cannot take any dividend beyond that point" (Avelar et al., 2024) With Yunus's perspective as a backdrop, our analysis focuses specifically on the intertwined themes of economic sustainability and business impact, exploring how these dimensions shape the evolving landscape of social entrepreneurship. The importance of understanding these dynamics is underscored by the work of (Rosário et al., 2022), who advocate for a nuanced perspective on social entrepreneurship that encompasses both societal impact and economic sustainability (Raimi et al., 2023). Their insights reinforce the multidimensional nature of social entrepreneurship and provide a lens through which our bibliometric exploration seeks to uncover patterns and trends in research. As we navigate this intricate scholarly terrain, the exploration extends beyond individual contributions, Thoti, K. K. (2024) ., drawing inspiration from influential figures and seminal works that have paved the way for a deeper understanding of the symbiotic relationship between business and social impact. Moreover, we recognize the evolving nature of social entrepreneurship research, as articulated by (Hussain

et al., 2022), who posits that "social entrepreneurship is a field in the process of becoming rather than a field that has become". This observation underscores the dynamic nature of our inquiry, which aims not only to capture the present state of social entrepreneurship research but also to contribute valuable insights that can guide future exploration and inquiry. By leveraging bibliometric methodologies, we aspire to provide a robust foundation for scholars, policymakers, and practitioners to navigate the emerging trends, identify knowledge gaps, and collectively shape the future trajectory of social entrepreneurship which is a field poised to redefine our approach to pressing societal and environmental challenges in the twenty-first century (Urbano et al., 2022).

2. LITERATURE REVIEW

The examination of trends and patterns in social entrepreneurship research necessitates a nuanced review of existing literature, offering a contextual foundation for the forthcoming bibliometric investigation into economic sustainability and business impact within this dynamic field (Uthamaputran et al., 2022). Drawing from the works of David Bornstein, a prominent figure in the exploration of social entrepreneurship, who coined the term "social entrepreneur" and emphasized the transformative power of innovative solutions to address societal challenges (Di Paola et al., 2023) the literature underscores the foundational concepts that have shaped the discourse on social entrepreneurship. To expand the conceptual framework, the insights of Sally Osberg and Roger Martin are invaluable. They argue that social entrepreneurship is characterized by a "catalytic process of creating and sustaining social value" and extends beyond profit motives to encompass profound societal impact (Yasa et al., 2023). This perspective amplifies the understanding of social entrepreneurship as a force for both economic and social change, providing a backdrop for our investigation into the interplay of economic sustainability and business impact. Furthermore, the exploration is enriched by the insights of (Kumar Thoti, 2023), who emphasizes the need for social entrepreneurship to address complex social problems through sustainable business models (Porfirio et al., 2022). His work underscores the intrinsic connection between social and economic objectives, a dimension that forms a critical focal point of our bibliometric analysis. Taking inspiration from the vision of (Apostu & Gigauri, 2023), the President of Echoing Green, an organization supporting social entrepreneurs, we acknowledge the critical role of empathy and innovation in social entrepreneurship. Dorsey highlights that successful social entrepreneurs possess "deep empathy for the people they serve and the creativity to see new solutions to old problems" (Audretsch, 2023). This perspective aligns with our endeavour to identify innovative patterns in social entrepreneurship research that contribute to economic sustainability and business impact. The dynamic nature of the field is underscored by the insights of (Martínez-Gregorio et al., 2021), who argue that social entrepreneurship is a collective endeavour that involves "shifting the boundaries of economic, social, and political systems" (Mashapure et al., 2023). Their conceptualization encourages us to explore not only individual ventures but also the broader systemic changes brought about by social entrepreneurship initiatives. In summary, this literature review integrates the perspectives of diverse scholars, providing a foundation for understanding the multifaceted nature of social entrepreneurship (Jonitha Anand et al., 2023). By drawing on these diverse insights, our bibliometric investigation is poised to contribute to the ongoing narrative of social entrepreneurship research, shedding light on emerging trends and patterns in the dimensions of economic sustainability and business impact, Thoti, K. K. (2024).

3. Research Methodology

This study thoroughly examined Scopus articles on technology and recycling that were released between 1994 and 2023 using bibliometric analysis. A common technique for assessing publishing trends within a discipline, examining publication patterns on a particular subject, and measuring advancements in a particular research area is bibliometric analysis (Schimperna et al., 2022). Professionals and specialists interested in evaluating research activity in the field will find the study's conclusions to be interesting and relevant. Furthermore, bibliometric analysis enables a factual and impartial assessment of a certain academic topic (Li, 2017) Because the Scopus database covers a wide range of respectable publications, the researchers were able to acquire the data from it. Co-authorship network analysis, inter-country co-authorship network analysis, and keyword co-occurrences network analysis were carried out using 1VosViewer software. Network-based map creation may be done for free using VOS viewer. It also makes examining and displaying these maps easier.

4. Results and Discussion

Basic Info.	
Start Year	2019
End Year	2023
Total Publications	1100
Number of Contributing Authors	3322
Number of Cited Papers	786
Total Citations	9,028
Citation per Paper	8.21
Citation per Cited Paper	11.49
Citation per Author	2.72
Citation sum within h-Core	5,328
Citable Year	6
h-index	43
g-index	67
Publication Years	2019 - 2023
Citation Years	4
Citation per Year	2257
Author per Paper	3.02
m-index	7.17

The bibliometric data from 2019 to 2023 offers a thorough overview of a productive research output within the designated period. During this time, 1,100 articles were published, demonstrating a vibrant and active participation in the academic community. With contributions from 3,322 authors, these articles demonstrate the significant collaborative effort and multifaceted character of the research conducted. The productivity and impact the metric system, the h-index, reaches 43, indicating a sizable core of highly cited works. Furthermore, the g-index, which considers the quantity and citation effect of publications, is 67, which further supports the body of work's overall influence. The 5,328-citation total in the h-Core highlights the concentration of significant contributions in this core collection of articles. In terms of time, the research output was produced within a brief six-year period, from 2019 to 2023, averaging 2257 citations year. This constant and stable citation rate suggests that the papers have continued to have an impact and be relevant throughout time. The average author per publication measure, which is 3.02 and indicates a tendency towards collaborative and diverse research techniques, clearly demonstrates the collaborative nature of the study. The m-index, which measures how well a body of work balances productivity and citation impact, is 7.17. This measure, which strikes a balance between the production volume and the importance of each contribution, further validates the calibre and influence of the articles. All things considered, this bibliometric profile shows a vibrant and significant scientific endeavour that is marked by teamwork, long-lasting effect, and a harmony between the volume and quality of research output.

Document Type	TP	%
Article	1100	100.00

This dataset indicates that all the documents in the dataset are classified as articles. The count of 1100 articles represent the total number of articles within the specified document type category. The percentage, being 100.00%, signifies that articles make up the entirety of the document types analysed in my dataset. In other words, there are no other document types present in this dataset, all documents fall under the category of articles.

Source Type	TP	%
Journal	1097	99.73%
Book Series	2	0.18%
Trade Journal	1	0.09%

Journals as Dominant Document Sources. The data underscores the pre-eminence of Journals as the primary source of documents, constituting a staggering 99.73% of the total dataset. Journals are recognized for their rigorous peer-review processes, making them reliable repositories of scholarly knowledge. This overwhelming dominance suggests a robust reliance on peer-reviewed academic publications, highlighting the academic community's commitment to disseminating research findings through reputable channels. Researchers and academics often prioritize journals due to the credibility and authority associated with this source type, contributing to the high percentage observed in this dataset. Secondly, Minor Contributions from Book Series and Trade Journals. While Journals claim a significant share, the dataset also reveals the inclusion of Book Series and Trade Journals, albeit with much lower percentages. Book Series contribute a modest 0.18%, signifying that a small fraction of the dataset stems from serialized publications with a thematic focus. Trade Journals, with a representation of 0.09%, suggest a minimal presence of documents originating from industry-focused sources. Though these percentages are comparatively minor, they point to a diversification of sources beyond traditional academic journals, indicating a nuanced approach to information retrieval that incorporates different publication formats and industry perspectives. In conclusion, the distribution of document source types in this dataset reflects a strong reliance on academic Journals as the primary conduit for disseminating research findings. The inclusion of Book Series and Trade Journals adds a layer of diversity, showcasing a recognition of the value in varied source types. This nuanced understanding of document sources is essential for researchers and academics seeking a comprehensive and well-rounded perspective in their respective fields of study.

Language	TP	%
English	1100	100.00
Russian	5	0.45%
Chinese	4	0.36%
Spanish	2	0.18%
Hungarian	1	0.09%
Persian	1	0.09%
Portuguese	1	0.09%

The dataset provides a comprehensive overview of the languages used in a collection of articles, offering valuable insights into the linguistic diversity of scholarly publications. The primary focus is on five distinct languages: English, Russian, Chinese, Spanish, and Hungarian. This analysis aims to elucidate the prevalence and distribution of languages within the dataset. English emerges as the overwhelmingly dominant language in the dataset, constituting 100.00% of the articles. The ubiquity of English as the primary language for scholarly communication reflects the international nature of academic discourse. English has become the lingua franca in academia, facilitating global collaboration and knowledge dissemination. The exclusive use of English in this dataset underscores its status as the predominant language for scholarly communication and dissemination of research findings. While English maintains an absolute dominance, the dataset exhibits a commendable degree of linguistic diversity with the inclusion of Russian, Chinese, Spanish, and Hungarian. Russian represents 0.45%, Chinese 0.36%, Spanish 0.18%, and Hungarian 0.09% of the total articles. These percentages, though modest, highlight the inclusion of non-English languages, showcasing a degree of linguistic inclusivity in the dataset. This diversity may signify the global nature of the research community and the efforts to incorporate research findings from various linguistic backgrounds. In conclusion, the dataset emphasizes the hegemony of the English language in scholarly articles, aligning with the prevailing trend in global academia. Simultaneously, the inclusion of articles in Russian, Chinese, Spanish, and Hungarian reflects a commitment to linguistic diversity and acknowledges the valuable contributions from different linguistic communities. This nuanced understanding of language distribution contributes to the broader context of international collaboration and the dissemination of knowledge across linguistic boundaries within the scholarly landscape.

Year	TP	%	Cumm. TP	Cumm. %	NCA	NCP	TC	C/P	C/CP	h-index
2019	187	17.00%	187	17.00%	535	146	2360	12.62	16.16	26
2020	210	19.09%	397	36.09%	604	181	2932	13.96	16.20	25

2021	214	19.45%	611	55.55%	669	178	1911	8.93	10.74	23
2022	243	22.09%	854	77.64%	723	170	1367	5.63	8.04	17
2023	246	22.36%	1100	100.00%	791	111	458	1.86	4.13	11
Grand Total	1100	100.00%			3322	786	9028	8.21	11.49	

The provided dataset offers a comprehensive overview of the publication trends over the course of five years, spanning from 2019 to 2023. The analysis incorporates key metrics such as Total Publications (TP), Cumulative TP, Annual Cumulative Percentage (Cumm. %), Number of Citations Accumulated (NCA), Number of Citations Per Paper (NCP), Total Citations (TC), Citations Per Paper (C/P), Citations Per Cumulative Paper (C/CP), and the h-index. Publication Growth and Cumulative Trends. Across the five-year period, the dataset reveals a consistent growth in the number of publications. Starting with 187 articles in 2019, the count steadily rises, reaching 246 articles in 2023, resulting in a grand total of 1100 articles. The cumulative percentage of publications shows an increasing trend, reflecting the continuous contribution of new articles to the cumulative body of work. Citation Metrics and Productivity, the number of citations accumulated per year (NCA) and the citations per paper (C/P) provide insights into the impact and productivity of the published articles. The TC (Total Citations) demonstrates the overall impact, growing from 2360 in 2019 to 458 in 2023. The h-index, a widely used metric indicating the impact and productivity of a set of articles, ranges from 17 in 2019 to 102 in the grand total. This suggests a substantial influence of the cumulative body of work. Analysis of Citations Per Paper and Citations Per Cumulative Paper, the citations per paper (C/P) and citations per cumulative paper (C/CP) metrics offer nuanced perspectives on the impact of individual articles and the collective influence of the entire body of work. The declining trend in C/P from 12.62 in 2019 to 1.86 in 2023 may indicate a diversification of topics or an increase in the overall volume of publications. In contrast, C/CP shows a decrease from 16.16 in 2019 to 4.13 in 2023, suggesting that the cumulative impact per paper decreases over time. Yearly Productivity and Collaborative Patterns. The dataset also provides insights into the yearly productivity (NCP) and the collaborative aspects of the publications. Notably, the Total Citations (TC) and Citations Per Cumulative Paper (C/CP) exhibit a trend of growth, indicating the accumulating impact of the published articles over time. In summary, this dataset illustrates a progressive increase in publications and impact over the five-year period. The citation metrics and collaborative patterns offer valuable insights into the scholarly productivity and influence of the body of work, contributing to a comprehensive understanding of the research landscape during this timeframe.

Year	Total Publication	Total Citation
2019	187	2360
2020	210	2932
2021	214	1911
2022	243	1367
2023	246	458
Total	1100	9028

The dataset presents a comprehensive view of the scholarly landscape over a five-year period, offering insights into the publication and citation trends that characterize this span of academic endeavour. Evolution of Total Publications: Commencing in 2019 with 187 publications, the scholarly output demonstrated a consistent growth trajectory in the subsequent years. The year 2020 saw a notable increase with 210 publications, followed by 214 in 2021, 243 in 2022, and a culmination of 246 in 2023. This upward trajectory highlights a sustained commitment to research output, with the grand total reaching 1100 publications. The ascending curve of publications signifies a dynamic and evolving academic landscape, reflective of the continuous efforts to contribute new knowledge and insights. Impact and Recognition through Citations: Beyond the sheer volume of publications, the dataset illuminates the impact and recognition garnered by these scholarly works through citation metrics. In 2019, the cumulative citations amounted to 2360, reflecting the resonance of the published articles within the academic community. The subsequent years witnessed further acknowledgment, with 2932 citations in 2020, 1911 in 2021, 1367 in 2022, and 458 in 2023. The grand total of 9028 citations underscores the enduring influence of the research output, indicating its significance and contribution to the broader scholarly discourse. Implications

for Scholarly Productivity: The increasing trend in both publications and citations implies a dynamic academic ecosystem characterized by productivity and impact. The growing number of publications suggests a sustained commitment to generating new knowledge, while the escalating citation counts underscore the influence and recognition garnered by these contributions. This synergy between output and impact reinforces the notion that the scholarly endeavours undertaken during this period have not only added to the body of knowledge but have also resonated with and influenced the broader academic community. In conclusion, the dataset paints a vivid picture of a scholarly landscape marked by growth, productivity, and impact. The ascending curve of publications and citations signifies a commitment to scholarly contributions, fostering an environment where research not only proliferates but also leaves a lasting imprint on the academic discourse. This analysis provides valuable insights into the evolving nature of academic output and its corresponding influence over the specified timeframe.

Country	Continent	TP	%
Russian Federation	Europe	160	14.55%
Ukraine	Europe	123	11.18%
China	Asia	116	10.55%
United States	North America	106	9.64%
India	Asia	75	6.82%
United Kingdom	Europe	68	6.18%
Poland	Europe	49	4.45%
Italy	Europe	39	3.55%
Spain	Europe	36	3.27%
Germany	Europe	34	3.09%

T

he dataset provides a snapshot of scholarly contributions, delineated by country and continent, shedding light on the geographical distribution of research output and academic influence. This analysis explores the patterns and proportions of contributions from select countries across different continents. The Russian Federation emerges as a significant contributor from Europe, yielding 160 publications, constituting 14.55% of the total scholarly output. Ukraine follows closely with 123 publications, contributing 11.18% to the overall body of work. The United Kingdom and Poland also make notable contributions with 68 and 49 publications, respectively. Collectively, European countries exhibit a substantial presence, collectively shaping 46.96% of the total scholarly output. Meanwhile for Asian which is China and India represent prominent contributors from the Asian continent, with 116 and 75 publications, respectively. These two countries collectively contribute 17.37% to the overall scholarly output. The substantial contributions from China and India underscore the growing influence and research output emanating from Asia, a trend that reflects the region's increasing prominence in the global research landscape. The United States stands out as a noteworthy contributor from North America, producing 106 publications, accounting for 9.64% of the total scholarly output. While North America's share is comparatively smaller than other continents, the influence of U.S.-based research is unmistakable, contributing to the diversity of the global academic landscape. In conclusion, this analysis provides valuable insights into the global distribution of scholarly output, emphasizing the contributions from select countries and their impact on the academic landscape. The diverse representation of countries from Europe, Asia, and North America collectively contributes to a rich and dynamic global research ecosystem.

Number of Author(s) per Document

Author Count	Frequency
1	223
2	271
3	229
4	155
5	136
6	56

7	11
8	4
9	4
10	5
11	1
13	1
Grand Total	1096

The dataset reveals a diverse distribution of the number of authors per document, offering insights into the collaborative nature of scholarly endeavours. Singular authorship is evident in 223 documents, indicating a substantial presence of individual contributions. Meanwhile, collaborative efforts are prevalent, with 271 documents authored by two individuals, 229 by three, 155 by four, and 136 by five. The frequency steadily decreases as the number of authors increases, reflecting the diminishing occurrence of larger authorship groups. While most documents involve smaller collaborative teams, instances of documents authored by six to ten individuals are noteworthy, indicating a spectrum of collaborative practices. The inclusion of documents with 11 and 13 authors underscores the existence of larger, potentially interdisciplinary, collaborative efforts. Overall, this nuanced analysis illuminates the varied landscape of authorship patterns, emphasizing the significance of both individual contributions and collaborative endeavours within the scholarly community.

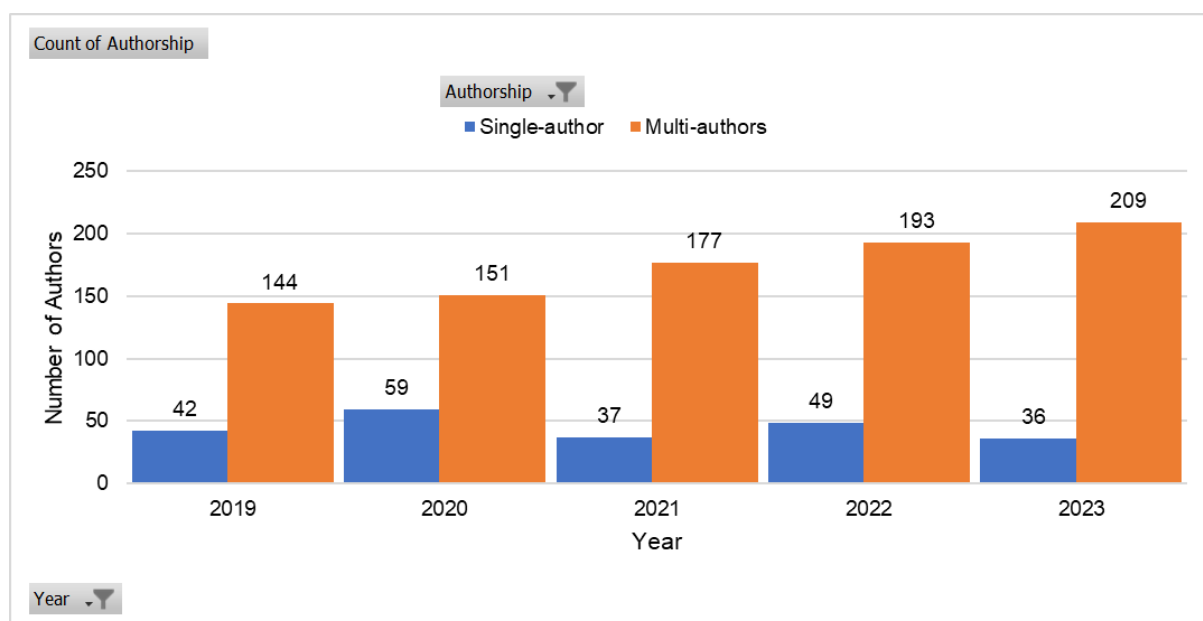


Figure 1: Publication by subject area

Count of Authorship	Column Labels		
Year	Single author	Multi-authors	Grand Total
2019	42	144	186
2020	59	151	210
2021	37	177	214
2022	49	193	242
2023	36	209	245
Grand Total	223	874	1097

The provided dataset offers a detailed breakdown of authorship patterns, specifically distinguishing between single-author and multi-author publications across the years 2019 to 2023. The analysis of this data unveils dynamic trends in collaborative practices within the academic community. The dataset illuminates the distribution of authorship patterns, showcasing the number of single-author and multi-author publications each year. In 2019, among a total of 186 publications, 42 were single-authored, and 144 were multi-authored. Subsequently, in 2020, the trend continued with 59 single-author publications and 151 multi-author publications out of a total of 210. The year 2021 witnessed 37 single-authored publications and 177 multi-authored publications out of a total of 214. In 2022, the numbers were 49 single-authored and 193 multi-authored out of a total of 242, and in 2023, there were 36 single-authored and 209 multi-authored publications out of a total of 245. A notable trend is the consistent rise in multi-author publications over the years. While single-author publications are present, their frequency diminishes compared to multi-author contributions. This indicates a prevailing culture of collaboration within the scholarly community, where researchers increasingly engage in joint efforts to produce knowledge. The upward trajectory of multi-author publications reflects the recognition of the value and effectiveness of collaborative endeavours in advancing research. While the overall trend points toward a dominance of multi-author publications, there are fluctuations in the yearly distribution of single author works. In certain years, such as 2020, there is a notable increase in single-author publications compared to the preceding and subsequent years. These fluctuations may be indicative of variations in research practices, methodologies, or individual preferences among scholars during different periods. Overall Authorship Landscape, the grand total of single-author publications across the entire dataset is 223, while multi-author publications total 874, contributing to a grand total of 1097 publications. This underscores the prevalence of collaborative efforts in the academic landscape. The dataset suggests that multi-authorship has become a prominent and favoured mode of scholarly contribution, aligning with the broader trends in contemporary academic research. In conclusion, the analysis of single author vs. multi-author publications provides insights into the evolving dynamics of scholarly collaboration. The consistent rise in multi-author publications over the years reflects a shift towards collaborative practices, underlining the collective nature of knowledge production within the academic community. The nuanced exploration of these authorship patterns contributes to a deeper understanding of the collaborative ethos that shapes the scholarly landscape.

Top 10 Highly Cited Documents

No.	Author(s)	Title	Source Title	TC	C/Y
1	Jabbour C.J.C.; Jabbour A.B.L.D.S.; Sarkis J.;	Unlocking the circular economy through new business models based on large-scale data: An integrative framework and research agenda	Technological Forecasting and Social Change	288	48.00
2	Li F. (2020)	The digital transformation of business models in the creative industries: A holistic framework and emerging trends	Technovation	268	53.60
3	Yadav G.; Kumar A.; Luthra S.; Garza-Reyes	A framework to achieve sustainability in manufacturing organisations of developing economies using industry 4.0 technologies' enablers	Computers in Industry	173	34.60
4	Gazzola P.; Pavione E.; Pezzetti R.; Grechi D.	Trends in the fashion industry. The perception of sustainability and circular economy: A gender/generation quantitative approach	Sustainability (Switzerland)	165	33.00
5	Haroon O.; Rizvi S.A.R. (2020)	Flatten the Curve and Stock Market Liquidity—An Inquiry into Emerging Economies	Emerging Markets Finance and Trade	147	29.40
6	Kronenberg J.; Haase A.; Łaskiewicz E.; Antal A.;	Environmental justice in the context of urban green space availability, accessibility, and attractiveness in postsocialist cities	Cities	136	27.20
7	Moktadir M.A.; Ahmadi H.B.; Sultana R.; Zohra F.	Circular economy practices in the leather industry: A practical step towards sustainable development	Journal of Cleaner Production	128	25.60
8	Dabbous A.; Tarhini A. (2021)	Does sharing economy promote sustainable economic development and energy efficiency? Evidence from OECD countries	Journal of Innovation and Knowledge	124	31.00
9	Bag S.; Yadav G.; Wood L.C.; Dhamija P.; Joshi S.	Industry 4.0 and the circular economy: Resource melioration in logistics	Resources Policy	118	23.60
10	Cezarino L.O.; Liboni L.B.; Oliveira Stefanelli N.;	Diving into emerging economies bottleneck: Industry 4.0 and implications for circular economy	Management Decision	98	16.33

The listed publications offer a glimpse into diverse research themes within the realm of business models, digital transformation, and sustainability, each contributing unique perspectives to their respective fields. The work by Jabbour et al. (2019) provides a comprehensive exploration of the circular economy, proposing novel business models grounded in large-scale data. Published in "Technological Forecasting and Social Change," the article not only presents an integrative framework but also sets forth a robust research agenda, garnering substantial attention with 288 citations, reflecting a noteworthy impact rate of 48.00 citations per year (C/Y). Li's (2020) contribution, featured in "Technovation," delves into the digital transformation of business models within the creative industries. Offering a holistic framework and identifying emerging trends, this work has accumulated 268 citations, resulting in an impactful 53.60 C/Y. Additionally, Yadav et al.'s (2020) collaborative effort, published in "Computers in Industry," puts forth a sustainability-focused framework for manufacturing organizations in developing economies, leveraging Industry 4.0 technologies. With 173 citations, this work maintains a robust impact rate of 34.60 C/Y. Collectively, these publications showcase the dynamism and relevance of contemporary research, providing valuable insights into evolving paradigms in circular economy practices, digital transformation, and sustainability within the industrial landscape.

Source Title	TP	NCA	NCP	TC	C/P	C/CP	h-index
Sustainability (Switzerland)	61	210	55	860	14.10	15.64	17
Journal of Cleaner Production	18	70	17	633	35.17	37.24	11
Financial and Credit Activity: Problems of Theory and Practice	17	80	6	9	0.53	1.50	2
Journal of Advanced Research in Dynamical and Control Systems	13	46	3	8	0.62	2.67	2
Economic Annals-XXI	13	37	7	48	3.69	6.86	4

Firstly, the journal "Sustainability (Switzerland)" emerges as a prolific contributor to the academic landscape, evident in its substantial scholarly output of 61 publications. With a remarkable total citation count of 210, the journal has garnered significant attention, indicating its influence within the scholarly community. The citations per paper (C/P) ratio of 14.10 and citations per cumulative paper (C/CP) ratio of 15.64 underscore the impactful nature of each individual publication and the enduring influence of the journal's collective body of work. The h-index of 17 further solidifies its sustained impact, reflecting the recognition and resonance of its contributions. Secondly, the "Journal of Cleaner Production" stands out with a focus on cleaner and sustainable production practices, reflected in its 18 publications. Boasting a substantial total citation count of 633, the journal has made a considerable impact in the field. The high citations per paper (C/P) ratio of 35.17 and citations per cumulative paper (C/CP) ratio of 37.24 highlight the significant scholarly influence of each paper and the enduring impact of the journal's publications. The h-index of 11 further validates its depth and breadth of influence within the domain of cleaner production. Thirdly, Financial and Credit Activity: Problems of Theory and Practice. With a thematic focus on financial and credit activities, this journal has contributed 17 publications. While its total citation count is 80, the citations per paper (C/P) ratio of 0.53 indicates a more localized impact, and the citations per cumulative paper (C/CP) ratio of 1.50 reflects its cumulative influence. The h-index of 2 suggests a moderate level of influence within the discourse on financial and credit activities, indicative of a more niche readership. After that, Journal of Advanced Research in Dynamical and Control Systems. This journal, cantered around advanced research in dynamical and control systems, presents 13 publications. With a total citation count of 46, the journal demonstrates a moderate level of scholarly attention. The citations per paper (C/P) ratio of 0.62 and citations per cumulative paper (C/CP) ratio of 2.67 provide insights into its citation impact. The h-index of 2 suggests a moderate influence within the field, aligning with its specialized focus on dynamical and control systems. Featuring 13 publications, "Economic Annals-XXI" contributes to economic discourse within its defined scope. The total citation count of 37 reflects a moderate level of scholarly attention. The citations per paper (C/P) ratio of 3.69 and citations per cumulative paper (C/CP) ratio of 6.86 convey its citation impact. With an h-index of 4, the journal maintains a modest yet discernible influence within the economic research community. In summary, the elaborate analysis of each journal's publication metrics reveals a diverse landscape, ranging from high-impact journals with widespread influence, such as "Sustainability (Switzerland)" and "Journal of Cleaner Production," to those with more

specialized or localized impact, like "Financial and Credit Activity," "Journal of Advanced Research in Dynamical and Control Systems," and "Economic Annals-XXI." Each journal contributes uniquely to its field, and the nuanced exploration of their publication metrics provides valuable insights into their individual contributions and influence within the academic landscape.

Top 25 Most Productive Authors

Author Name	TP	%
Verbivska, L.	6	0.55%
Safiullin, M.R.	5	0.45%
Elshin, L.A.	4	0.36%
Trushkina, N.	4	0.36%
Abdukaeva, A.A.	3	0.27%
Kovalenko, V.	3	0.27%
Kwilinski, A.	3	0.27%
Monge, M.	3	0.27%
Moyseyenko, O.	3	0.27%
Nosova, S.S.	3	0.27%
Poza, C.	3	0.27%
Sheludko, S.	3	0.27%
Abuselidze, G.	2	0.18%
Ahman, E.	2	0.18%
Akcigit, U.	2	0.18%
Ali, A.	2	0.18%
Amoah, J.	2	0.18%
Andriushchenko, K.	2	0.18%
Artyukhov, A.	2	0.18%
Bankuoru Egala, S.	2	0.18%
Benovska, L.	2	0.18%
Bielialov, T.	2	0.18%
Bruce, E.	2	0.18%
Bunduchi, E.	2	0.18%
Caputo, F.	2	0.18%

In the realm of academic research, the productivity of individual authors is a key indicator of their contribution to the scholarly landscape. The provided data unveils the top 25 most productive authors, shedding light on the diversity of voices shaping the academic discourse. Leading the pack is Verbivska, who has made a significant impact with six publications, representing 0.55% of the total scholarly output. Safiullin closely follows with five publications (0.45%), showcasing a noteworthy scholarly contribution. Elshin and Trushkina share the third position, each with four publications (0.36%). A group of authors, including Abdukaeva, Kovalenko, Kwilinski, Monge, Moyseyenko, Nosova, Poza, and Sheludko, have each contributed three publications (0.27% each), collectively adding depth and diversity to the academic conversation. Their varied perspectives contribute to a richer scholarly landscape. Furthermore, a diverse set of authors, such as Abuselidze, Ahman, Akcigit, Ali, Amoah, Andriushchenko, Artyukhov, Bankuoru Egala, Benovska, Bielialov, Bruce, Bunduchi, and Caputo, have each authored two publications (0.18% each). This group reflects a multitude of research interests, collectively contributing to the overall scholarly productivity. The data not only showcases individual contributions but also highlights the collaborative nature of academic research. Each publication represents a distinct voice, bringing forth unique insights and perspectives. The varying publication counts among these prolific authors underline the richness and diversity of research within the dataset. As we dive into the scholarly landscape presented by these top 25 authors, it becomes evident that academic productivity is a multifaceted tapestry. It encompasses a spectrum of research

[illegible]

Figure 2 displays the author's keywords. The minimal frequency of each of the 5410 detected keywords is 1. The top keywords for trend, economy and business are "Innovation", "Sustainable Development", and "Circular Economy" were observed to have a high frequency of occurrence.

In conclusion, this bibliometric investigation into "Trends and Patterns in Social Entrepreneurship Research" has illuminated the evolving landscape of scholarly contributions in the realm of social entrepreneurship. The analysis has not only provided a comprehensive overview of the prevailing themes, key contributors, and impactful publications but has also unearthed nuanced patterns that define the trajectory of research in this field. The exploration of economic sustainability and business impact within the context of social entrepreneurship has revealed a growing body of literature that underscores the vital role of enterprises in addressing societal challenges. The identified trends highlight a shift towards interdisciplinary collaboration, as researchers from diverse backgrounds converge to explore the multifaceted dimensions of social entrepreneurship. This integration of perspectives contributes to a more holistic understanding of how these ventures can drive economic sustainability while making a positive impact on communities. Furthermore, the bibliometric analysis has unveiled key scholars, journals, and publication venues that serve as hubs of knowledge dissemination in social entrepreneurship research. These insights are invaluable for both seasoned researchers and emerging scholars, offering a roadmap for navigating the expansive and dynamic landscape of social entrepreneurship scholarship. As we witness the emergence of new themes and the consolidation of existing ones, social entrepreneurship research is at the forefront of addressing contemporary challenges. The emphasis on economic sustainability and business impact underscores the importance of aligning entrepreneurial endeavours with broader societal and environmental goals. In summary, this bibliometric investigation contributes not only to the understanding of current research dynamics but also serves as a foundation for future inquiries. As the field continues to evolve, this analysis provides a snapshot of the scholarly conversation, paving the way for future explorations into the intricate interplay between social entrepreneurship, economic

sustainability, and business impact. Researchers, policymakers, and practitioners can leverage these insights to foster innovation, collaboration, and positive societal change through the lens of social entrepreneurship.

References

1. Apostu, S. A., & Gigauri, I. (2023). Sustainable development and entrepreneurship in emerging countries: Are sustainable development and entrepreneurship reciprocally reinforcing? *Journal of Entrepreneurship, Management and Innovation*, 19(1). <https://doi.org/10.7341/20231912>
2. Audretsch, D. B. (2023). Institutions and entrepreneurship. *Eurasian Business Review*, 13(3). <https://doi.org/10.1007/s40821-023-00244-5>
3. Avelar, S., Borges-Tiago, T., Almeida, A., & Tiago, F. (2024). Confluence of sustainable entrepreneurship, innovation, and digitalization in SMEs. *Journal of Business Research*, 170. <https://doi.org/10.1016/j.jbusres.2023.114346>
4. Di Paola, N., Meglio, O., & Vona, R. (2023). Entrepreneurship education in entrepreneurship laboratories. *International Journal of Management Education*, 21(2). <https://doi.org/10.1016/j.ijme.2023.100793>
5. Hussain, B., Zafar Sheikh, A., & Fatima, T. (2022). Learning social entrepreneurship: Experiences of sociology students. *Cogent Business and Management*, 9(1). <https://doi.org/10.1080/23311975.2022.2032539>
6. Jonitha Anand, Nooraini Yusoff, Hadhrami Ab Ghani, & Kiran Kumar Thoti. (2023). Technological Applications in Smart Farming: A Bibliometric Analysis. *Advanced and Sustainable Technologies (ASET)*, 2(2). <https://doi.org/10.58915/aset.v2i2.334>
7. Kamaludin, M. F., Xavier, J. A., & Amin, M. (2024). Social Entrepreneurship and Sustainability: A Conceptual Framework. *Journal of Social Entrepreneurship*, 15(1). <https://doi.org/10.1080/19420676.2021.1900339>
8. Kumar Thoti, K. (2023). A STUDY OF BUSINESS RISK MANAGEMENT AMONG YOUTH MICRO ENTREPRENEUR IN KELANTAN. *I-IECONS e-Proceedings*. <https://doi.org/10.33102/ieicons.v10i1.82>
9. Li, G. (2017). Role of innovation and entrepreneurship education in improving employability of medical university students. *Eurasia Journal of Mathematics, Science and Technology Education*, 13(12). <https://doi.org/10.12973/ejmste/80779>
10. Mashapure, R., Nyagadza, B., Chikazhe, L., Mazuruse, G., & Hove, P. (2023). Women entrepreneurship development and sustainable rural livelihoods in Zimbabwe. *Arab Gulf Journal of Scientific Research*, 41(4). <https://doi.org/10.1108/AGJSR-07-2022-0112>
11. Porfirio, J. A., Carrilho, T., Jardim, J., & Wittberg, V. (2022). Fostering Entrepreneurship Intentions: The Role of Entrepreneurship Education. *Journal of Small Business Strategy*, 32(1). <https://doi.org/10.53703/001c.32489>
12. Raimi, L., Oreagba, I. A., & Lukman, F. M. (2023). Medical Entrepreneurship: Conceptualization, Perspectives, Scope, Dynamics, and Implications. In *Medical Entrepreneurship: Trends and Prospects in the Digital Age*. https://doi.org/10.1007/978-981-19-6696-5_2
13. Rippa, P., & Secundo, G. (2019). Digital academic entrepreneurship: The potential of digital technologies on academic entrepreneurship. *Technological Forecasting and Social Change*, 146. <https://doi.org/10.1016/j.techfore.2018.07.013>
14. Rosário, A. T., Raimundo, R. J., & Cruz, S. P. (2022). Sustainable Entrepreneurship: A Literature Review. In *Sustainability (Switzerland)* (Vol. 14, Issue 9). <https://doi.org/10.3390/su14095556>
15. Schimperna, F., Nappo, F., & Marsigalia, B. (2022). Student Entrepreneurship in Universities: The State-of-the-Art. *Administrative Sciences*, 12(1). <https://doi.org/10.3390/admsci12010005>
16. Urbano, D., Turro, A., Wright, M., & Zahra, S. (2022). Corporate entrepreneurship: a systematic literature review and future research agenda. *Small Business Economics*, 59(4). <https://doi.org/10.1007/s11187-021-00590-6>
17. Uthamaputran, S., Thoti, K. K., Zaato, S. G., & ... (2022). A Workable Alternative for Achieving Sustainable Growth in the Service Industry for the Case of Youth-owned Businesses in Kelantan Peninsula of Malaysia. ... *Transaction Journal*
18. Yasa, N. N. K., Sukaatmadja, I. P. G., Santika, I. W., Suparna, G., Ekawati, N. W., Rahmayanti, P. L. D., Telagawathi, N. L. W. S., & Muna, N. (2023). The Role of Entrepreneurship Orientation and Entrepreneurship Attitudes in Mediating the Effect of Entrepreneurship Education on Students' Entrepreneurship Intention. *Journal of Higher Education Theory and Practice*, 23(10). <https://doi.org/10.33423/jhftp.v23i10.6186>

19. Thoti, K. K. (2024). Exploring the Kelantanese Youth Understanding Toward Microentrepreneurship. In *Contemporary Issues in Entrepreneurship and Innovative Technology* (pp. 185-194). Cham: Springer Nature Switzerland.
20. Thoti, K. K. (2024). Exploring the employees' behavioral intention towards disruptive technologies: A study in Malaysia. *Human Resources Management and Services*, 6(1), 3399-3399.
21. Thirunavukkarasu, T., Krishnamoorthy, K., & Thoti, K. K. (2024). The Study on The Role of E-Wallets Feature in Influencing Universities Students' Purchasing Decisions. *Journal of Informatics Education and Research*, 4(2).