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Mapping Social Capital and Unveiling Emerging Trends through Systematic Literature Review and Bibliometric Analysis

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Abstract

The Social Capital (SC) concept is investigated by researchers in numerous academic disciplines including, business, education, entrepreneurship, economics, human resource management, environmental and health sciences, and political and social sciences. This study is dual-focused and uses a Systematic Literature Review (SLR) and bibliometric analysis to examine the literature on SC both quantitatively and qualitatively. This study examined seven research questions: 1) the descriptive detail of the recognized previous studies on SC, 2) the tendencies of the annual scientific production on SC, 3) the greatly related and greater-influence factors on SC, 4) clustering of sources based on Bradford's Law, 5) the most relevant nations for SC, 6) the highly relevant authors and the authors' productivity through Lotka's Law of Authors' Scientific Productivity, and 7) the emerging trends and themes for future investigations in the field of SC. 4295 articles that were extracted from the Scopus database were analyzed in this study using the SLR and bibliometric analysis mapping approaches. VOSviewer and Biblioshiny software were the analysis tools used. The results indicate that SC is a subject discipline evolving progressively, with a record of 20.21% yearly growth in scientific productivity between 1994 and 2023. The USA, UK, and China were the highly relevant nations in the discipline of SC based on scientific publications and citations. Social networking, entrepreneurship, innovation, knowledge management, social media, sustainability, human capital, psychological capital, intellectual capital, governance, collective actions, and cultural capital are the emerging trends and pathways for impending researchers in the context of SC, as per the keyword clusters co-occurrence analysis, thematic map of keywords analysis, and trend topic analysis. The present article offers an extensive literature evaluation, which contributes to the remaining literature on SC. The results of this investigation will be advantageous for students, entrepreneurs, employers, politicians, government, policymakers, and society worldwide.

Keywords: Bibliometric Analysis, Emerging Trends, Literature Review, Social Capital, Social Networking

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INTRODUCTION

The Social Capital (SC) concept is a broad area investigated by researchers in numerous academic disciplines including, business, education, entrepreneurship, economics, sociology, human resource management, political science, environmental and health sciences, and political and social sciences (Ahmad et al., 2023). Progress in a wide range of fields, including business and management, health and education, economic development, entrepreneurship development, community development, and public policy, is found to be influenced by SC (Brown et al., 2024). Accordingly, scholars in a variety of disciplines have investigated and debated SC, with each focusing on various facets and consequences of the concept.

SC is a combination of resources or shared values that allow individuals to work together in a group environment to achieve a common objective (Ziersch et al., 2023). Because humans are social beings, voluntary associations like this one offer value to their members over time that would be impossible for a person to accomplish on their own. Accordingly, a network of interactions built by a collection of people that enables information exchange boosts productivity, expands the pool of resources, and facilitates goal attainment is referred to as SC (Zhao & Detlor, 2023).

LITERATURE REVIEW

SC is recognized in several forms and SC is classified into three primary forms: bonding, bridging, and linking which function at distinct levels of interactions: micro-level, meso-level, and macro-level in society (Singh, 2024). The bonding form of SC refers to relationships and bonds within homogeneous groups, including family members, close friends, or individuals with the same interests or histories. It usually entails close relationships and personal exchanges between people. Creating links between people or groups with different origins, cultures, or social identities is known as the bridging form of SC. It is vital for creating social cohesiveness, encouraging social mobility, and encouraging cooperation between different social groupings. Connecting people or groups to formal organisations, authoritative leaders, and persons with varying degrees of hierarchy, such as government corporations, government agencies, or non-profit-oriented organisations, is known as the linking form of SC (Meyer, 2023).

Bourdieu (1977) and Coleman (1988) are considered the founder theorists of social capital theory since they were the first to establish the concept of "social capital" systematically. They introduced the concept independently of one another, even though they did it nearly concurrently. Accordingly, Bourdieu and Richardson's theory of capital (1986) and Coleman's Rational-

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Choice Approach to Social Capital (1988) are recognized as the first and founding theories of the social capital concept. Bourdieu's theory of capital expands the concept of economic capital to incorporate a variety of additional types of capital, such as social capital, cultural capital, and symbolic capital that people and groups employ to obtain an advantage in society. According to Bourdieu, these multiple types of capital are transformable and essential for preserving or shifting social standing within the social domain (Kovács & Pusztai, 2023). However, Coleman's theory emphasizes that people estimate the advantages and disadvantages of their social relationships when making logical judgments. According to him, social capital is the assets that prevail in social networks that people can use to advance their objectives. These components include information, norms, and trust (Zhou & Kaplanidou, 2023). Associated with a community or network and forming these kinds of social connections are crucial to the process of creating social capital (Mao & Shen, 2020).

Social capital is a multidisciplinary concept that benefits students, education and higher educational institutions, businesses, entrepreneurs, governments, policymakers, and the general public. Table1 depicts the benefits of social capital for the related parties based on the findings of Tomlinson (2017), Batistic & Tymon (2017), Mao & Shen, (2020), Amarathunga & Wijethunga, (2021), Amiraslani *et al*., (2023), and Sabet & Khaksar, (2024).

Table 1: *Benefits of Social Capital for Related Parties*

Related Party	**Benefits of Social Capital**
Students	• Skills development • Enhancing work readiness and employability • Enabling access to resources • Facilitate collaborative learning • Developing a professional network
Educational and Higher Educational Institutes	• Fostering the sharing of knowledge • Upgraded Educational Environment • A greater level of student engagement • Higher rates of student retention • Collaborations and Community Involvement
Business Organizations	• Enhanced Collaboration and Unity • Improved Engagement and Retention of Employees • Stronger Connections with Customers • Improved accessibility to resources and opportunities • Improved Brand Image and Reputation
Entrepreneurs	• Enabling access to new markets • Facilitating collaborations and partnerships • Receiving genuine feedback on goods or services • Mitigating the risk of investment

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	• Creating chances for development and learning
Government and Policymakers	• Facilitating Effective Governance • Enhancing economic development • Enabling policy implementation and feedback • Increasing education and health practices • Improved mutually beneficial international affairs
General Public	• Accessibility to information and facilities • Increased Security and Personal Safety • Collective Resources and Group Initiatives • Providing possibilities for the economy and Mobility • Enhanced Satisfaction and Wellness

Source: Author Generated

The generation of SC has been brought about progressively by society's greater adoption and rapid development of contemporary technologies. The present society is undergoing the fifth sociological revolution, also known as Society 5.0. To create a human-cantered, super-smart society utilizing robotics, artificial intelligence, cloud computing, 5G, and big data, Society 5.0 converts two categories of relationships: the relationship between society and technological advances and the relationship between people and their society using technology (Wahyuningtyas et al., 2023). Therefore, the creation of SC has been facilitated by current revolutionary telecommunication technology and various social and professional networking platforms.

However, a range of research techniques need to be used to present novel insights into a subject discipline (Miles, 2017). Numerous scientific research articles on SC have utilised SLR and sophisticated bibliometric analytic approaches. This study aims to address the methodological research gap by integrating a systematic literature review and bibliometric analysis to generate a thorough literature examination. This gap presents a substantial opportunity for novel research and development, as well as for the expansion of the field of SC. The findings of this study will advance the fields of education and higher education, as well as enhance comprehension of the literature on SC. In light of the extensive examination, the present study looks at and responds to the subsequent seven Research Questions (RQs).

RQ 1 **-** What are the descriptive characteristics of the retrieved empirical studies on SC?
RQ 2 - What characteristics distinguish the yearly scientific output on SC?
RQ 3 - What are the extremely pertinent and influential sources on the topic of SC?
RQ 4 - How Bradford's Law of Scattering is used to cluster sources?
RQ 5 - What are the greatly relevant countries for SC?
RQ 6 - Who are the highly relevant authors and the authors' productivity

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through Lotka's Law of Authors' Scientific Productivity?
RQ 7 - What are the emerging trends and themes for future investigations on SC?

RESEARCH METHODOLOGY

Both a Systematic Literature Review (SLR) and bibliometric analysis were used in the present investigation. By eliminating superfluous publications, the transparent, repetitive SLR approach creates an objective baseline and has been shown to reduce author subjectivity. Traditional evaluations were susceptible to author bias due to the lack of defined procedures (Amarathunga, 2024). Advances in technology and sophisticated electronic databases have made it feasible for researchers to assess results more rapidly and methodically, reducing subjectivity. Figure 1 summarises the three elements of the technique used in the present study.

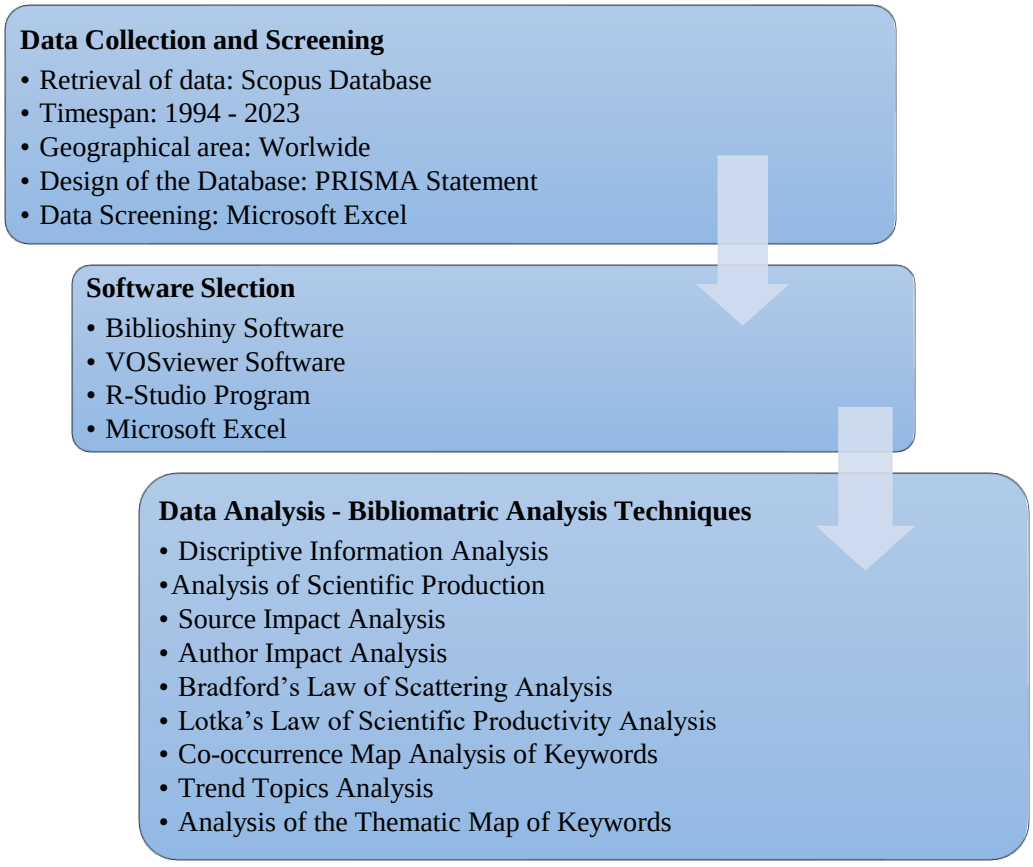

Figure 1: *Summary of the Methodology*
Source: Author Generated

Data Collection and Screening

Data collection and evaluation are important because they can help choose the best bibliometric analysis method and, in turn, the best data format. To gather information for this

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investigation, the Scopus database search engine was utilized. Since 1823, Scopus has produced about 50 million pieces of literature, resulting in the finest database for academic overviews and citation counts (Alzard *et al*., 2022).

Using only the abstracts, titles, and keywords of the papers, 8682 entries containing the term "Social Capital" were discovered up until October 2023. Publications published exclusively in English, publications solely under the subject areas of business management and the field of economics journal article-type publications, and publications in the final stages of the publication process are all covered by the target population's specified inclusion criteria for the current study. Accordingly, this study, the streamlined Scopus database query syntax was TITLE-ABS-KEY (“Social Capital”) AND (LIMIT-TO (SUBJAREA, "BUSI") OR LIMIT-TO (SUBJAREA, "ECON")) AND (LIMIT-TO (DOCTYPE,"ar")) AND (LIMIT-TO (LANGUAGE, "English")) AND (LIMIT-TO (EXACT KEYWORD, "Social Capital")) AND (LIMIT-TO (SRCTYPE, "j")) AND (LIMIT-TO (PUBSTAGE, "final"))

This inquiry outlines the study design and uses the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) statement. Authors may enhance the reporting of systematic literature reviews and meta-analyses using the PRISMA declaration (Sarkis-Onofre *et al*., 2021). The study design for the current investigation, which makes use of the PRISMA declaration, is shown in Figure 2. The diagram also depicts the process of "identification, screening, eligibility, and inclusion" for records (Moher *et al*., 2009).

Selection of Software

Software compatibility is essential for accurate bibliometric analysis. As part of the bibliometric study, several applications and tools, including "Bibliomatrix," "VOSviewer," "Gephi," "Citespace," "HistCite," "Maxqda," "Publish or Perish," "Pajek," "NVivo," and "Bibexcel," can be used to undertake content analysis, quantitative analysis, and visualizations. The programme VOSviewer, the web application Biblioshiny, and the latest version of the Bibliometric R package were all employed in the present study. Bibliometrix R is an open-source software developed by Aria and Cuccurullo (2017). Bibliometrics and VOSviewer distinguish themselves from other software programmes by providing fast analysis and generating data matrices for performance evaluation and the visualisation of scientific bibliographic databases (Zhang et al., 2024).

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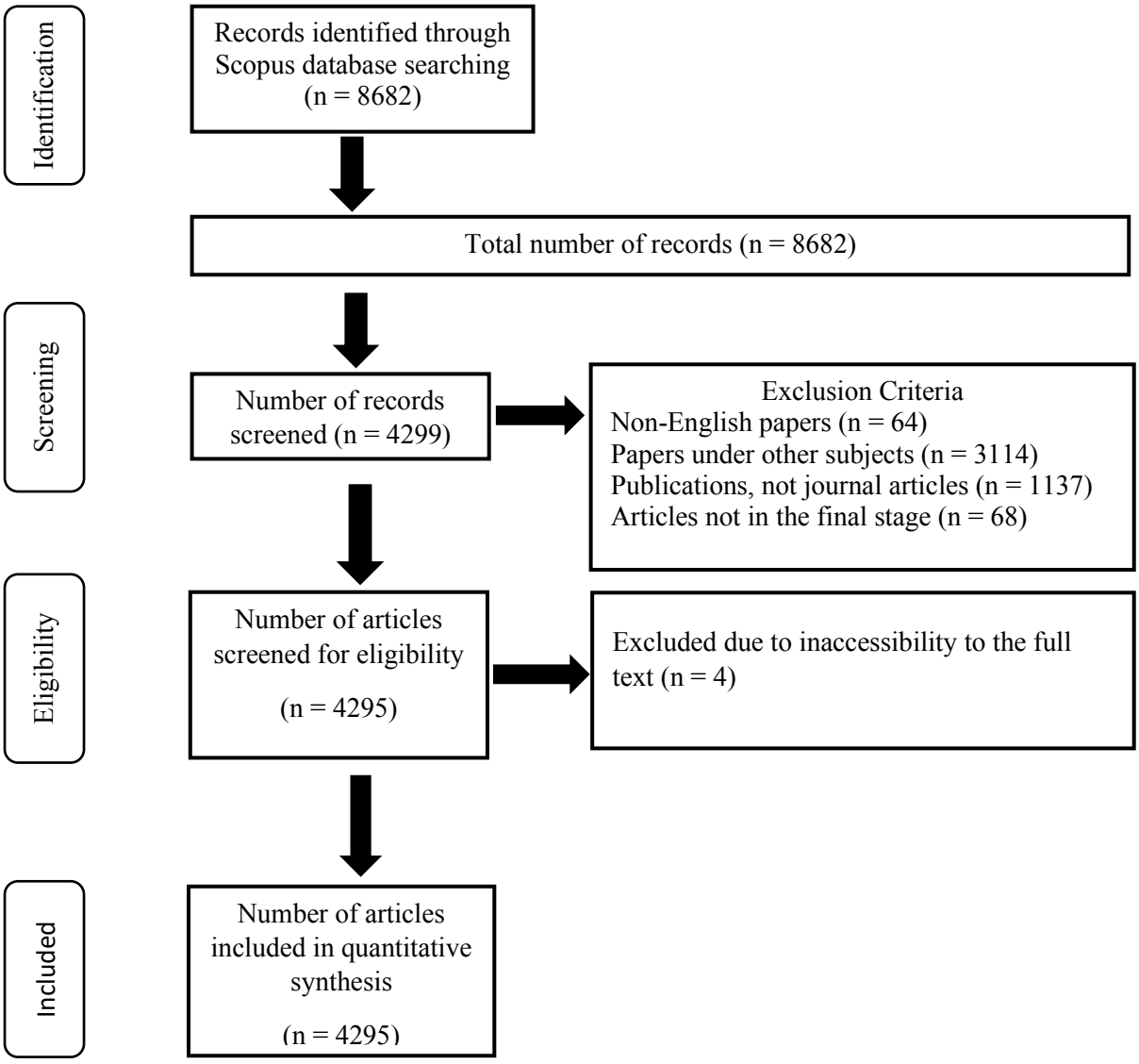

Figure 2: *PRISMA Statement*
Source: Adapted from Moher et al., 2009

Analysis of Data

Both qualitative and quantitative analysis methods were taken into consideration for the data analysis in the current study. The quantitative assessment under the Biliomatrix comprises the descriptive components of the modified empirical study, the most relevant and highly important sources, the most cited papers, the most relevant nations in the field of SC, and annual scientific publications. Furthermore, Lotka's law authors of the scientific analysis, Bradford's Law of scattering of the sources analysis, thematic map of keyword analysis, and qualitative analysis techniques were applied. The gathered data was painstakingly arranged into CSV format by the researchers. Pre-analysis carried out during the data preparation procedure was also done using R-studio.

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RESULTS AND FINDINGS

RQ 1 - What are the basic characteristics of the retrieved empirical publications on SC?

Regarding the current research process, 4295 articles on SC were published between 1994 and 2023 (October) by 8749 authors from 1056 sources available. Scientific publications on SC were initiated in 1994 and significantly increased since 2002 recording a 20.21% annual growth rate. Nine hundred and twenty-three of them were single-authored, while 2.51 co-authors per publication. The fundamental features of the empirical articles in the current study are displayed in Table 2.

Table 2: *Basic Characteristics of the Retrieved Publications*

Characteristics of Documents	
Number of Sources	1056
Number of Documents	4295
Annual Growth Rate %	20.21%
Duration of Data Extraction	1994 – 2023
Number of Documents Written by a Single Individual	923
Number of Documents with Multiple Authors	3372
Features of Authors' Collaborations	
The total amount of Authors	8749
The number of co-authors in each document	2.51
Percentage of International Co-authorships	25.47
Citations and References	
The average citation amount per document	37.88
The total amount of References	220123

Source: Output Generated by Biblioshiny Software

RQ 2 - What characteristics distinguish the yearly scientific output on SC?

The findings demonstrated that the overall rising trend in publishing patterns indicated a significant rise in the amount of literature over the previous year. The number of scientific publications on SC has increased since 2002, as seen in Figure 3, with the largest scientific production (353 publications) occurring in 2022. However, since data extraction was done in October of 2023, the number of publications for that year was only 208. The yearly output on BL shows a significant increase in 2019, 2020, 2021, and 2022. To sum up, research indicates that the field of study of SC is expanding quickly, with an annual growth rate of 20.21% in scientific productivity.

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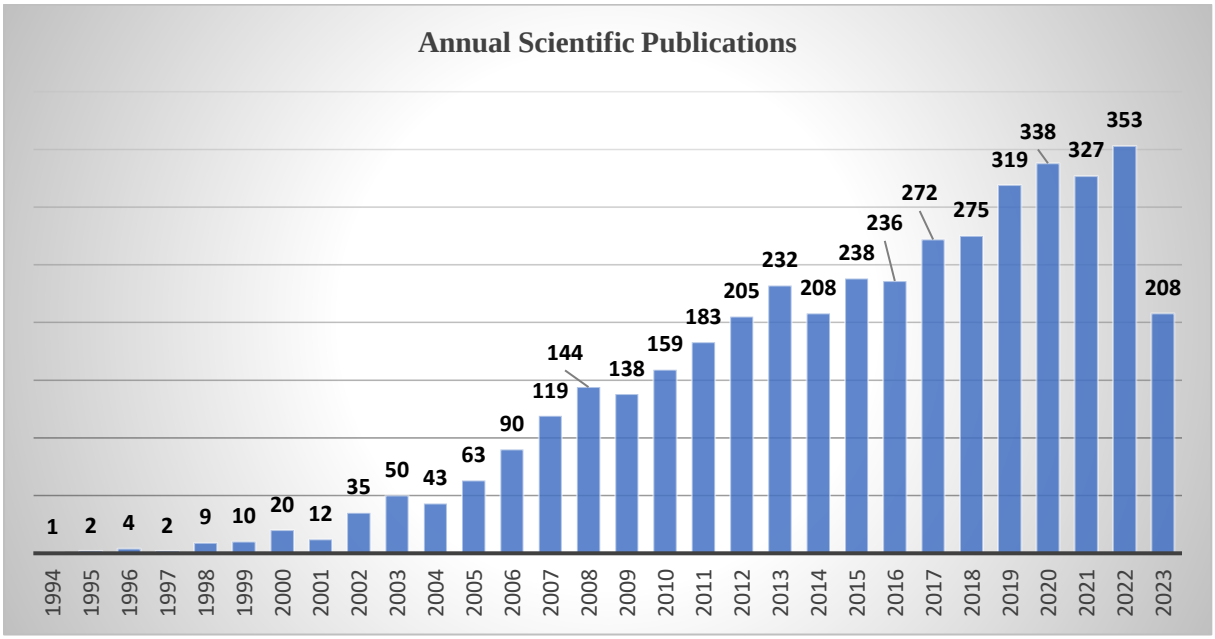

Figure 3: *Annual Scientific Publications*
Source: Output Generated by Biblioshiny Software

RQ 3 - What are the extremely pertinent and influential sources in the topic of SC?

Table 3 lists the top 10 sites that are most pertinent to the study of SC based on the number of scholarly publications. The top scientific research articles on SC have been published in the "World Development" journal, which is published by "Elsevier," since 1996. Additionally, 12 percent of the 4295 articles were published in the top 10 most pertinent sources.

Table 3: *Highly Relevant Top Ten Sources*

Rank	Sources	Published Articles
1	World Development	81
2	Voluntas	59
3	Journal of Business Research	56
4	Journal of Socio-Economics	54
5	Technological Forecasting and Social Change	54
6	Entrepreneurship and Regional Development	48
7	International Journal of Social Economics	46
8	International Journal of Entrepreneurship and Small Business	41
9	Ecological Economics	38
10	Journal of Economic Behavior and Organization	37

Source: Output of Biblioshiny Software

High-impact sources in the SC field are grouped according to their h-index and g-index status, as shown in Table 4. An author or journal's "h-index" is with the greatest h value for that they have

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authored at least h papers, for each which has received at least h citations. Jorge E. Hirsch proposed the h-index in 2005 as a way to assess an individual's contribution to science (Hirsch, 2005). The Hirsch number or Hirsch index is another acronym for the h-index. Norris and Oppenheim (2010) define the h-index as the greatest value of h for which the specified author or journal has published at least h publications, each of which has received at least h citations. In 2006, Leo Egghe developed the g-index. Thanks to this special value, all articles with the highest g will receive at least g2 citations (Egghe, 2006). Papers with a large number of citations are given more weight by the g-index.

The journal "World Development" has the highest influence within the discipline of SC when it comes to cumulative citations, h-index, and g-index. A multidisciplinary journal with an emphasis on development studies is called "World Development." Furthermore, with 9760 citations, "Strategic Management Journal" has earned the greatest amount of citations in the SC discipline.

Table 4: *The Top 10 Most Influential Sources*

Rank	Source	h_index	g_index	Started Year	TC
1	World Development	44	81	1996	8979
2	Entrepreneurship and Regional Development	32	48	1998	4705
3	Technological Forecasting and Social Change	29	50	2002	2518
4	Journal of Business Research	26	44	2007	2012
5	Ecological Economics	24	38	2000	2781
6	Journal of Socio-Economics	24	50	2002	2599
7	International Journal of Human Resource Management	23	33	2002	1427
8	Journal of Business Ethics	23	35	2003	2232
9	International Journal of Entrepreneurial Behaviour and Research	19	28	2009	836
10	Strategic Management Journal	19	23	2000	9760

Source: Output of Biblioshiny Software
Note. TC = Total Citations

RQ 4 - How Bradford's Law of Scattering is being used to cluster sources?

The continually diminishing benefits of looking up references in academic articles are measured by Bradford's law. Bradford's law explains the division of the corpus of information among publications on a given subject. The journals in the discipline are divided into three categories based on

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the number of papers they publish. In that case, each group holds roughly one-third of the total publications, and then one calculation indicates that the total amount of research articles in each group will be proportionate to 1: n: n2 (Bradford, 1934).

Using Bradford's law, each journal was arranged in decreasing order according to the total number of publications on pertinent topics. The quantitative association between journals and scholarly articles on a certain topic is established by grouping journals into many categories based on production levels (Amarathunga et al., 2023). As a result, every publication belongs to one of three groups: the core group (the most productive zone), the allied group (the moderately productive zone), or the periphery group (the least productive zone) (Gupta et al., 2022). Consequently, the core group contains the most pertinent articles that are frequently published on the subject.

Regarding results, Table 5 lists the quantity of SC publications and articles published in each zone. Consequently, 1430 publications, or roughly one-third of all papers on SC, have been published in 56 periodically published productive journals. Additionally, a third of the papers on SC in the peripheral and allied groups—1451 and 1414, respectively—have been published in 798 and 202 sources. Therefore, 56 journals are prominent journals that publish a larger amount of articles on SC out of 1056 sources.

Table 5: *Findings of Bradford's Law of Sources Scattering*

Categories of Groups	Total Amount of Articles	Sources
Core Group – Most Productive Zone	1430	56
Allied Group – Moderately Productive Zone	1451	202
Peripheral Group – Least Productive Zone	1414	798
Total	4295	1056

Source: Output Generated by Biblioshiny Software

RQ 5 - What are the most significant countries for SC?

It was essential to classify the leading SC articles by geographical area to identify the countries that have contributed most to the concept. Contextual evaluations may aid national researchers in better understanding SC by facilitating more trustworthy comparisons and conclusions that lead to an evaluation of contextual knowledge gaps for further research. Figure 4 displays the scientific output of the country in the field of SC from 0 to 2060.

The blue countries in Figure 4 have conducted stem cell research; the dark blue countries have published far more research on SC than the light blue countries. In addition, there are no SC research articles from the nations with grey backgrounds. As a result, the northern European and African nations with grey backgrounds show that no

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scientific work on SC has been published. Furthermore, out of 195 countries in the world, the study's results showed that 105 countries produced research on SC between 1994 and 2023. Therefore, there is at least one research publication on SC from 54% of countries in the world.

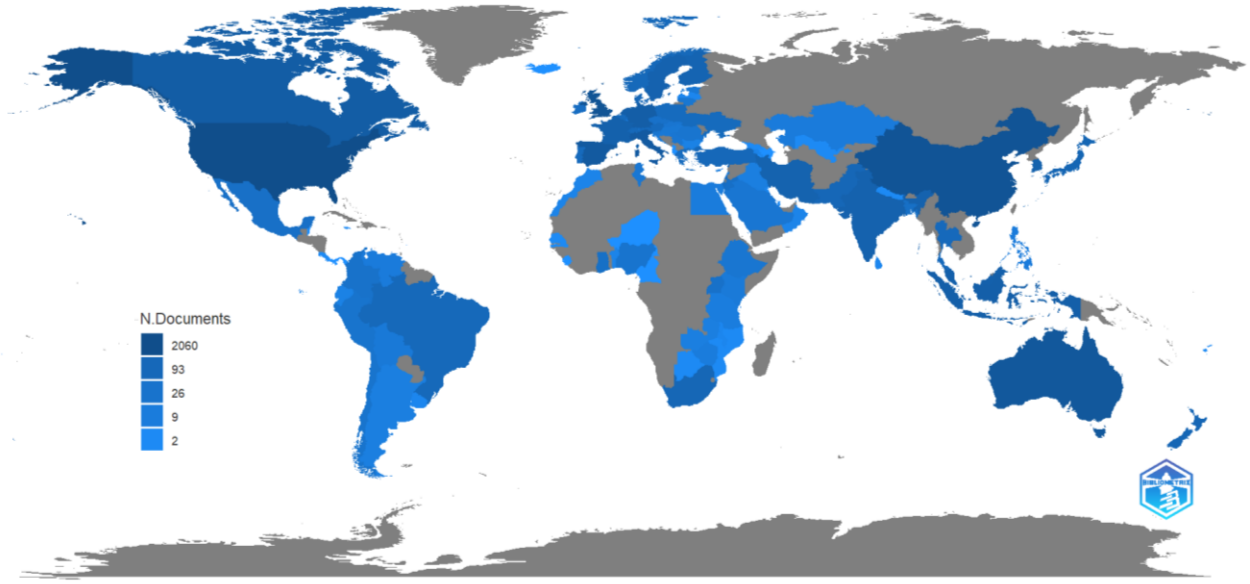

Figure 4: *Country Scientific Production*
Source: Output Generated by Biblioshiny Software

According to the total number of papers published by each country, Table 6 presents the top ten countries with the highest number of SC publications. The United States, the United Kingdom, and China are the top three nations that contribute to the total number of scholarly papers in the field of SC. As a result, the USA has published around 30% of the research output on SC among the top ten nations.

Table 6: *The Top Ten Nations with the Highest Contributions to Scientific Publications*

Rank	Nations	Articles
1	USA	2060
2	UK	1030
3	China	954
4	Australia	618
5	Spain	492
6	Italy	457
7	Canada	352
8	Germany	310
9	Netherland	267
10	Indonesia	255

Source: Output of Biblioshiny Software

RQ 6 - Who are the highly relevant authors and the authors' productivity through Lotka's Law of Authors' Scientific Productivity?

The authors with the greatest degree of effect and significance on SC in terms of publications, g-index, h-index, and total citations are shown in Table 7. In terms of the h-index and g-index indicators, Glover TD, García-Villaverde PM, and Zhang H are the top three authors with the greatest effect in the context of SC, according to

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the results in Table 7. Furthermore, Wang L, Yamamura E, and Glover TD are the top three authors with the highest number of publications on SC. The authors of Glover TD, Zhang H and Xu Y have garnered the greatest amounts of citations for their publications on SC. Glover TD, on the other hand, received 19% of the total aggregate citations since 2004 among the top 10 authors.

Table 7: *The Top Ten Authors with the Most Impact and Relevance*

Rank	Authors	NP	h_index	g_index	TC
1	Glover TD	13	11	13	768
2	García-Villaverde PM	11	10	11	447
3	Zhang H	10	9	10	574
4	Kim J	11	8	11	224
5	Prashantham S	8	8	8	448
6	Wang L	15	8	15	388
7	Xu Y	8	8	8	488
8	Yamamura E	14	8	12	164
9	Zhang Y	13	8	13	212
10	Chen X	9	7	9	328

Source: Output of Biblioshiny Software
Note. TC = Total Citations, NP = Number of Publications

Lotka's law, first proposed by Alfred J. Lotka in 1926, measures an author's productivity by counting the total number of articles they have written. As a result, Lotka's law (Lotka, 1926) determines how frequently writers in a certain topic publish.

Table 8 displays the results of Lotka's law of writers' scientific productivity. As a result, 908 (10.4%) of the 8749 writers have published two papers in the field of SC per author, whilst 7462 (85.3%) have written just one. Therefore, only 379 writers (4.3%) out of 8749 have published three or more publications. It is evident that the writers' production is very poor, as the majority of them (85.3%) have only written one paper on SC.

Table 8: *Outcomes of Lotka's Law of Authors' Scientific Productivity*

Published Articles	Authors	Percentages of Authors
1	7462	85.3%
2	908	10.4%
3	220	2.5%
4	80	0.9%
5	32	0.4%
6	14	0.2%
7	10	0.1%
8	10	0.1%
9	3	0
10	2	0
11	3	0
12	1	0
13	2	0
14	1	0
15	1	0

Source: Output of Biblioshiny Software

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RQ 7 – What are the emerging trends and themes for future investigations in SC?

Keywords are vital indicators of critical study subjects, themes, trends, and directions, as they embody the fundamental thoughts and summaries of an article. Underlying trends in a field of study can be discerned by keyword analysis, particularly utilising techniques such as keyword clustering and keyword density visualisation in VOSviewer. The principal objective of keyword connection analysis is to assess the relationships among terms within a collection of publications to discern prevalent subjects and improve researchers' comprehension of current scientific matters in SC.

The current study conducted keyword co-occurrence analysis using VOSviewer. Out of the 11563 keywords that were discovered, 178 were found to occur over 20 times. Figure 5 displays the term cluster map that this study produced. The line width shows how strongly two keywords are associated, while the frame size shows how frequently a term appears. Different coloured frames represent different types of keyword clusters.

The analysis found seven groups: cluster 1 (red) had 46 items; Cluster 2 (green) had 37 items; Cluster 3 (dark blue) had 30 items; Cluster 4 (yellow) had 27 items; Cluster 5 (purple) had 22 items; Cluster 6 (light blue) had 14 items, and Cluster 7 (orange) had 2 items. Furthermore, as larger frames for these terms are depicted in Figure 6, the top three highly frequently occurring keywords were "SC" (4495 occurrences), "human capital" (411 occurrences), and "social networks" (396 occurrences).

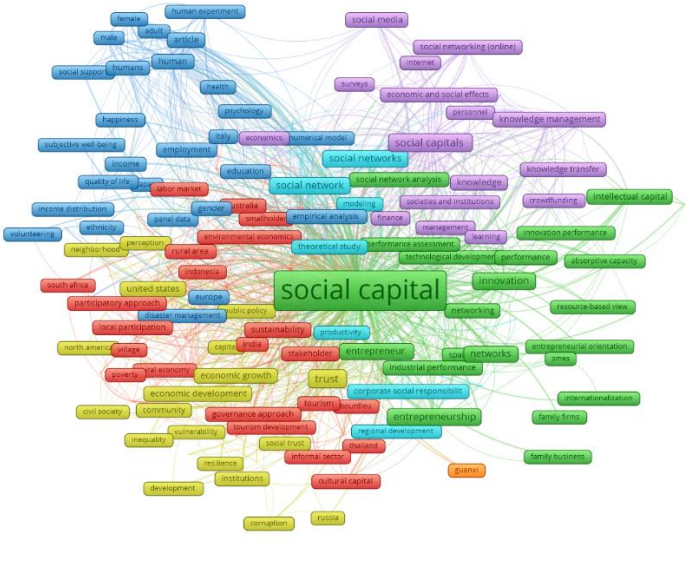

Figure 5: *Map of Keyword Clusters Network*
Source: Output of VOSviewer Software

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The keyword density map in Figure 6 shows the frequency of phrase occurrences. The most frequently used keywords are indicated with a larger text size and yellow. As more keyword occurrences occur, the yellow colour's brightness diminishes proportionately. In addition, the keyword density visualisation map shows the co-occurrence of terms by their closeness.

According to the analysis of keywords co-occurrence through VOSviewer software, the top ten trending keywords in the discipline of SC are SC, human capital, social networks, innovation, entrepreneurship, knowledge management, sustainability, knowledge sharing, collective actions, and intellectual capital.

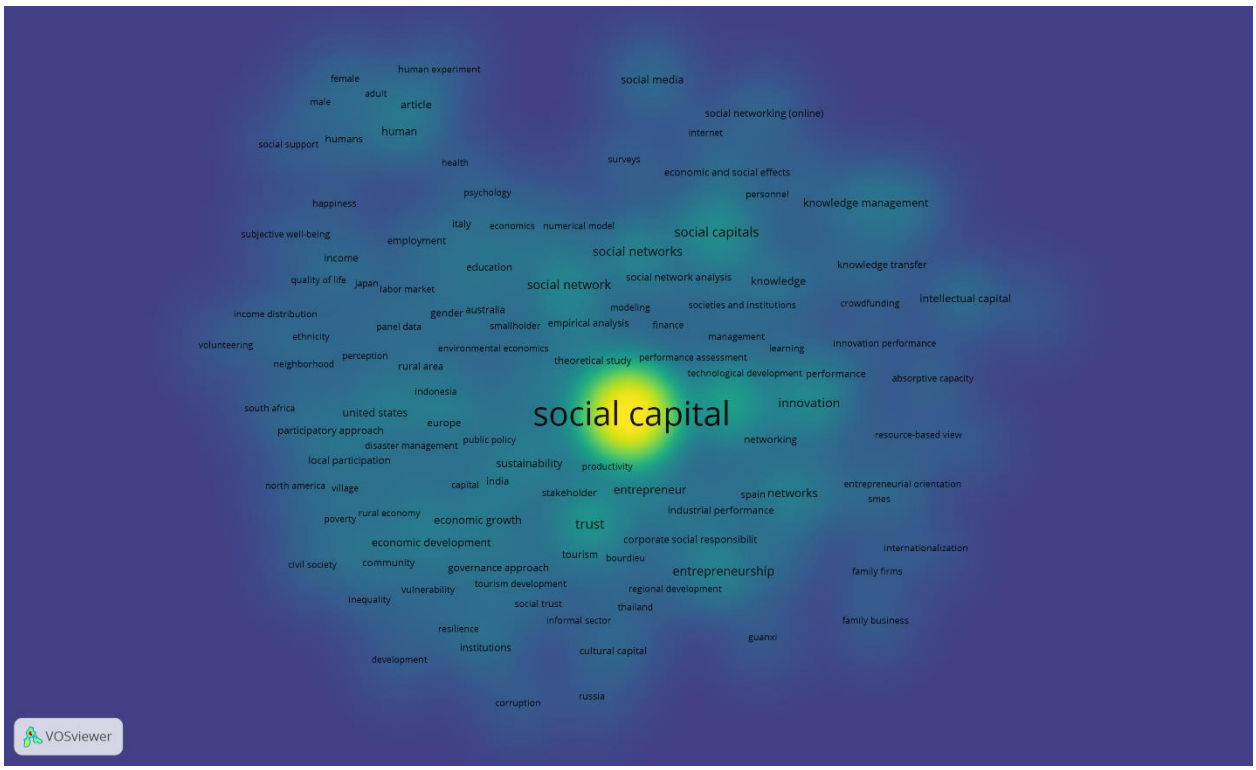

Figure 6: *Keywords Density Visualization Map*
Source: Output of VOSviewer Software

Emerging topics on SC investigated since 2004 are shown in Figure 7. More precisely, the blue circle filled with colours on the right hand of the graphic represents subjects from 1000 to 3000; the bigger the circle, the more frequently a topic appears. On the other hand, since 2004, every topic on the left-hand side of the image has been recognised as a trending topic in SC. It is suggested that future researchers on SC explore these hot themes.

Concerning the analysis of trending topics, the extensively occurring trending topics in the discipline of SC include networking, psychological capital, social media, entrepreneurship, innovation, community, human capital, trust, cultural capital, firm

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performance, and governance. In Figure 7, these subjects are represented by relatively wider circles.

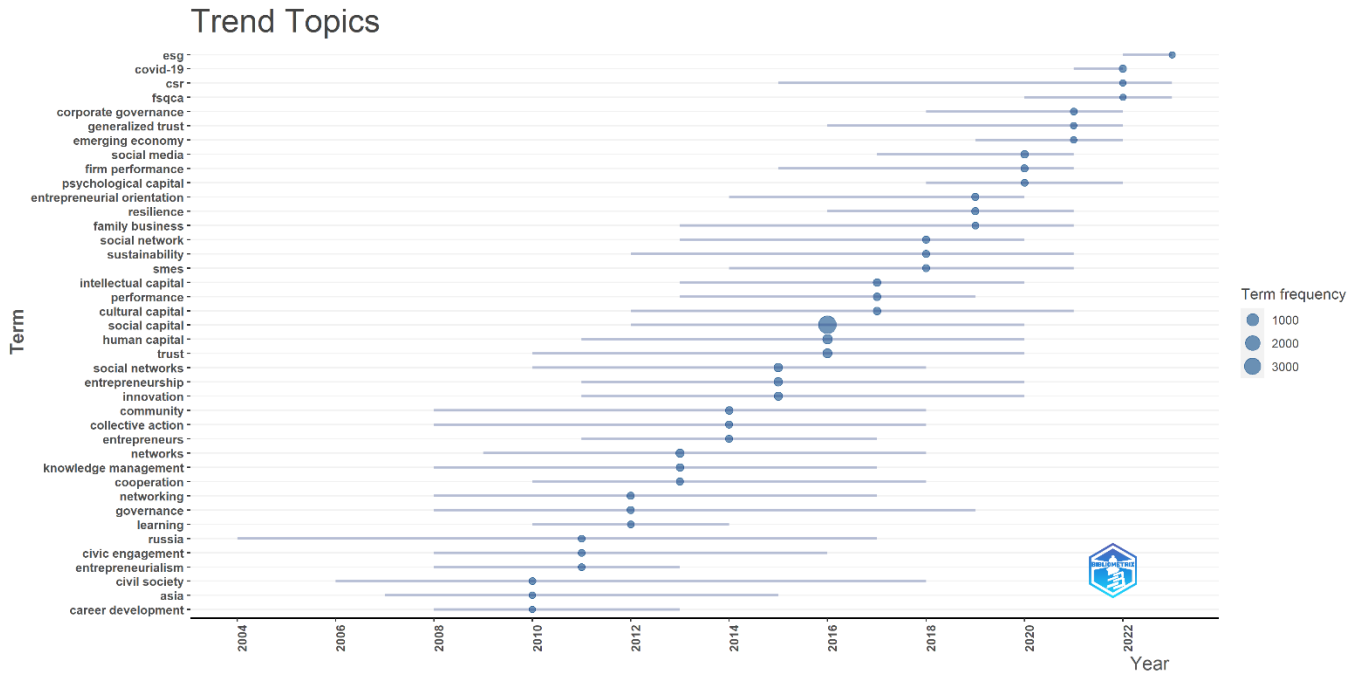

Figure 7: *Trend Topics Map*
Source: Output of Biblioshiny Software

The SC thematic keyword map is shown in Figure 8. The four theme typologies depicted in this thematic map are based on two important dimensions: centrality and density. Centrality uses the authors' keywords to quantify the extent of external linkages to other topics. Density also assesses the strength of internal connections between each keyword that is utilized to define the research theme (Xiao et al., 2022). The thematic map covers four main topics: motor, emerging or declining, niche, and basic. 'Walktrap' clustering method was used to construct the thematic map as its effectiveness has been commended by Lancichinetti and Fortunato (2012).

The main themes in the lower right quadrant of the thematic map are well-known research topics that are extremely pertinent to the field in question. Based on prior research, the lower left quadrant's subject themes indicate issues that are either emerging or waning. As per Figure 9, innovation, economic and social effects, social networking (online), and knowledge come to light as possible themes for further SC research.

Keywords having a growing amount of study attached to them but which might not directly relate to the main theme are considered niche topics below the niche themes quadrant. The motor themes quadrant highlights

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topics that merit more research because they haven't been thoroughly examined in earlier studies (Amarathunga et al., 2024). Within the motor theme quadrant, the terms are particularly relevant and stylish for the discipline. As a result, most people agree that the motor themes represent the most recent developments in the SC area. It is therefore suggested that future scholars explore each of the themes under the motor themes: social network, human capital, and entrepreneur.

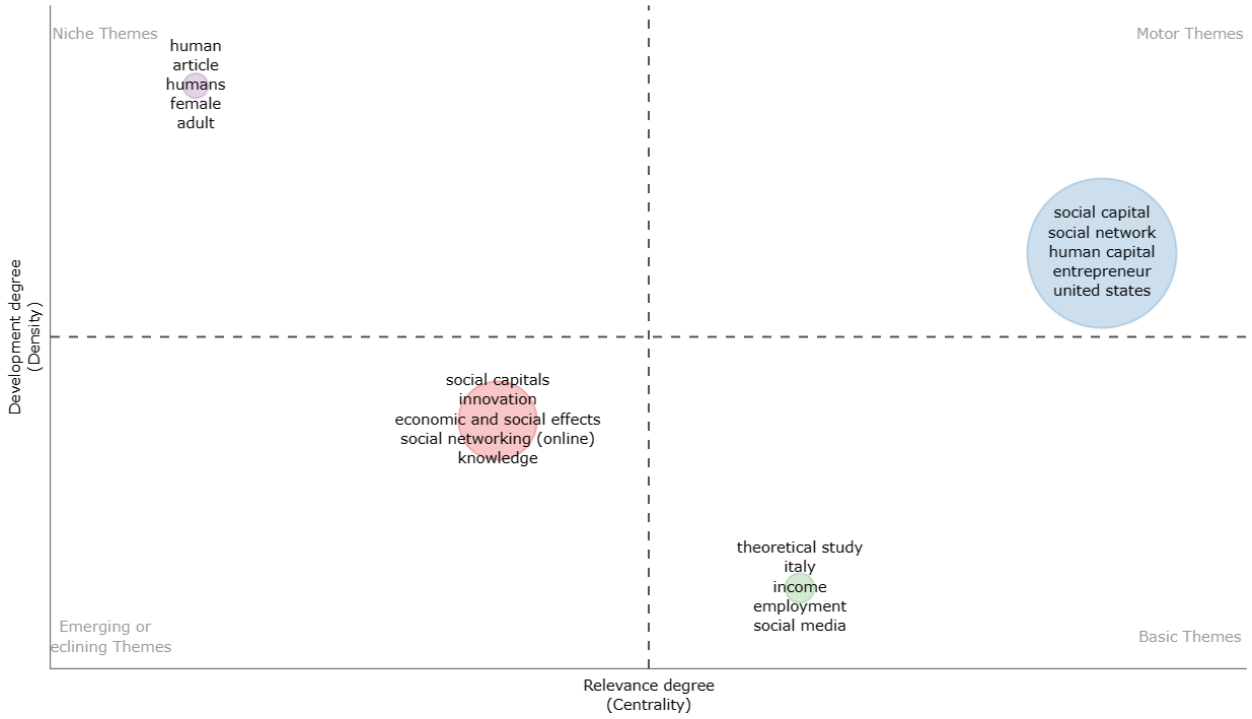

Figure 8: *Thematic Map of Keywords*
Source: Output of Biblioshiny Software

CONCLUSION

The current study searched the database of Scopus from 1994 to 2023 and found pertinent literature on SC. Four thousand two hundred and ninety-five articles covering SC from 8749 writers are found in 1056 reliable sources. It was found that there has been a steady increase in research on SC, with a significant upsurge starting in 2002. To identify productive research subjects, forecast future directions, and comprehend the literature's development and current state, a thorough and quantitative evaluation is required. Social networking, entrepreneurship, innovation, knowledge management, social media, sustainability, human capital, psychological capital, knowledge sharing, intellectual capital, governance, collective actions, and cultural capital are the emerging trends and pathways for upcoming researchers in the discipline of SC,

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performed through the keyword clusters co-occurrence analysis, thematic map of keywords analysis and trend topic analysis.

Although the study's achievements, it is crucial to acknowledge certain limitations that are common to many research endeavours. The analysis in this study was conducted solely using data from the Scopus database. Although Scopus is a useful tool for finding papers in bibliometrics, focusing only on this database may have prevented us from finding several significant ones. Therefore, to perform thorough investigations, researchers can find it useful to gather information from other databases, such as the IEEE, ProQuest Web of Science, and Google Scholar databases. As a result, future research could use a conceptual framework that incorporates several perspectives or a methodological approach to offer metrics that measure the ideas revealed.

Additionally, this analysis only took into account publications published in English; focussing exclusively on pieces written in English would have missed out on significant contributions from platforms that publish in different languages.

The bibliometric analysis in this study was conducted using the programmes VOSViewer and Biblioshiny. Future studies may utilize several programmes, including Publish or Perish, Bib Excel, Gephi, and HistCite, that can help with equal analysis with upgraded visualization. Moreover, prospective researchers can apply diverse scientific illustration analysis tools, such as CiteNet Explore, SciMat, Cite Space, and Sci2tool, to classify papers based on their popularity and reputation and to improve comprehension of the connections among various analytical elements. Despite all of the noted drawbacks, this study is acknowledged as a thorough assessment of the earlier research on SC. The analysis's findings will advance the field and benefit learners, entrepreneurs, employers, legislators, policymakers, the government, and the public at large worldwide.

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