

A Retrospective Overview of 20 Years of Social Entrepreneurship Research. A Bibliometric Analysis

The area of Social Entrepreneurship (SE) has generated a significant amount of literature on numerous issues. Therefore, it is necessary to conduct a comprehensive review of existing studies in this field. This study presents a bibliometric analysis of two decades of research in the field of SE to ascertain the most important actors. The study further presents information on seven clusters, offering insights into prevailing research patterns within the field of SE. These clusters may be used as a foundation for identifying prospective avenues of future study. The results indicate that there is a lack of representation in terms of research output in the area of social entrepreneurship among institutions in developing countries. This study advocates for further investment in research on Social Entrepreneurship within developing economies, with the aim of identifying innovative and sustainable solutions to the social challenges prevalent in such countries.

Keywords: Social Entrepreneurship, Scopus, Bibliometrics, VOSviewer, Citation Analysis

Introduction

Current developments provide clear evidence that social problems experienced in the world continue to deteriorate (Bacq 2017). One major social problem the world is currently grappling with is the eradication of poverty. This is evidenced in the growth in the number of impoverished individuals in East Asia and Sub-Saharan Africa, as shown by Patel's (2018) study. The analysis reveals that the population of individuals living in poverty in both regions rose from 278 million in 1990 to 413 million in 2015. Unemployment is another societal issue confronting today's world economies. In relation to that, Plecher (2020) indicates that there are about 174.1 million unemployed persons worldwide. The deterioration of global socioeconomic problems is further demonstrated by the outbreak of the Coronavirus (COVID-19) pandemic, which has devastated global economies and infected and killed millions of people globally. These worsening social conditions and efforts made to eliminate its consequences have resulted in the popularity of social entrepreneurship (SE). In view of these developments SE has become well established in most businesses today and an important area of entrepreneurship research (Sassmannshausen and Volkmann 2013).

The field of SE is still considered to be in its infant or nascent stages but is evolving (Dionisio 2019). The field is likewise regarded challenging and developing, with limited research on the discipline's position and legitimacy (Granados et al. 2011; Rey-Marti et al. 2016). Notwithstanding these limitations, there is a wealth of literature available on many facets within the area, necessitating a comprehensive review of existing works in the domain of social entrepreneurship. This review will facilitate the discovery of novel avenues and unresolved issues for future exploration (Low and MacMillan 1988). As a result,

this article conducts a bibliometric study of research in the field of SE in a twenty-year (20) period in order to provide an overview of the subject in general and information on the key authors, nations, organizations, and sources in the area of SE. The paper also presents information on seven clusters which provided an idea of current research trends in the field of SE and can serve as a basis of determining future research directions. The study also offers an overview of the institutions, countries, and co-writer analysis of writers in addition to bibliographic coupling of documents, keywords analysis, citation, co-citation, authors, organizations, countries and sources. Although previous research has been conducted in the field of SE through bibliometric studies by various authors (Coronel-Pangol et al. 2023; Trabskaia et al. 2023; Talukder and Lakner 2023; Ahmad and Bajwa, 2022; Şengüllendi 2021; Campos, Sanchis, and Ejarque 2020; Hota et al. 2020; Dionisio 2019; Persaud, Bayon, and Cartmell 2018; Gonçalves et al. 2016; Rey-Martí et al. 2016; Kraus et al. 2014; Sassmannshausen and Volkmann 2013; Granados et al. 2011), this study aims to address the existing gaps in the literature by conducting additional analyses that can contribute to a deeper understanding of the field (Hota et al. 2020; Dionisio 2019). Furthermore, it responds to the call for a follow-up study after a certain period of time (Hota et al. 2020). The subsequent sections of the paper are structured in the following manner. Section two of this paper outlines the methodology used for the research, while sections three and four offer the findings, which include influential authors, highly referenced papers, the most frequently cited sources, and an examination of co-authorship across writers and nations. The investigation continues with section four, wherein the primary results are summarized, and the article is brought to a conclusion.

Methodology

This bibliometric study used the Scopus database to get the necessary statistical data. This is due to the perspective held by some bibliometricians who consider Scopus to possess a larger scope compared to the SSCI (WOS) database (SciTech Strategies 2012). The present study has a time frame of twenty years, during which data for the investigation was collected by conducting a comprehensive search of the Scopus database spanning from 2001 to 2020. The Scopus database search engine yielded a total of 1106 papers published in 296 sources between the years 2001 and 2020. Table 1 provides a breakdown of these findings, which include a cumulative count of 57,448 references and 2,259 writers.

In order to assess the productivity and impact of journals in the field of SE, a range of bibliometric measures were examined. These indicators included the total number of publications, citations, h-index, and g-index, which together offered a complete depiction of the bibliographic data (Alonso et al. 2009). The measure of a journal's productivity may be determined by the total number of papers (TP), while the relevance and quality of its publications can be assessed by the total number of citations and the number of citations per article (Modak, et al. 2019). The h-index is a statistic that is widely recognized and used in the evaluation of a journal's level of achievement (Merigó and Yang 2017). The measurement of

1 efficacy include both production and citations simultaneously. According to
2 Modak et al. (2019), an h-index of n signifies that a journal has published a
3 maximum of n articles, with each publication receiving at least n citations from
4 other papers published in the same journal.

5 The VOS viewer programme was used to generate network visualisations of
6 bibliographic coupling, co-authorship, co-citation, and co-occurrence of keywords
7 by establishing connections between relevant elements under investigation. The
8 concept of “bibliographic coupling” pertains to the occurrence when two
9 publications have one or more citations in common (Kessler 1963). According to
10 Zupic and Cater (2015), the strength of the association between two articles is
11 directly proportional to the amount of overlap seen in their bibliographies. When
12 two papers are both referenced by a third document, they are considered for
13 inclusion in a co-citation index (Small 1973). The co-authorship indicator
14 evaluates the degree of interconnectedness among co-authors originating from
15 various sources. Graphical network visualisations are generated by considering the
16 quantity of linkages and their collective strength. The number of circles around
17 network connections in graphical depictions signifies the significance of an entity.
18 Bibliometric studies have been employed in various disciplines, such as marketing
19 (Donthu et al. 2020a; Donthu et al. 2020b, Donthu et al. 2020c, Kumar et al.
20 2020), management (Ellegaard and Wallin, 2015; Zupic and Cater, 2015;
21 Podsakoff et al. 2008), tourism (Vishwakarma 2020), entrepreneurship (Hota et
22 al. 2020; Dionisio 2019; Gonçalves et al. 2016; Kraus 2013; Landström et al.
23 2012; Sassmannshausen 2013), operations management (Liao 2018; Merigó and
24 Yang 2017; Chang and Hsieh 2009), finance (Alexander and Mabry 1994), and
25 are a frequently used form of review among marketing researchers (Donthu et al.
26 2020; Hoffman and Holbrook 1993; Kumar et al. 2019; Martinez-Lopez et al.
27 2018; Okumus et al. 2018; Valenzuela et al. 2017). Bibliometrics is a very
28 effective technique for the management of extensive bibliographic data, and its
29 quantitative nature serves to mitigate the influence of author biases (Donthu et al.
30 2020).

Results

Table 1. Main Information

Description	Results
Timespan	2001:2020
Sources (Journals, Books, etc)	292
Documents	1106
Average years from publication	4.46
Average citations per documents	17.47
Average citations per year per doc	2.517
References	57448
DOCUMENT TYPES	
Article	1106
DOCUMENT CONTENTS	
Keywords Plus (ID)	690
Author's Keywords (DE)	2534
AUTHORS	
Authors	2259
Author Appearances	2765
Authors of single-authored documents	207
Authors of multi-authored documents	2052
AUTHORS COLLABORATION	
Single-authored documents	228
Documents per Author	0.49
Authors per Document	2.04
Co-Authors per Documents	2.5
Collaboration Index	2.34

Source: Research Data 2023

Contributing Authors, Institutions, Countries and Sources

Table 2 summarises the most prolific authors in the field of SE. For the period under review, authors such as Tracey P, Gedajlovic E, Neubaum DO, Shulman JM and Zahra SA are the most prolific contributors in the field of SE. With 1182 citations, Tracey P is the most referenced author. Tracey P is followed by Gedajlovic E, Neubaum DO, Shulman JM and Zahra SA, all with 962 citations. Other prolific contributors include Nyssens M with 530 citations, Defourny J with 529 citations, Dacin MT with 518 citations, Dacin PA also with 518 citations and Mair J with 508 citations.

1 **Table 2. Most Prolific Authors**

No.	Author	h_index	g_index	m_index	TC	NP	PY_start
1	Tracey P	6	6	0.462	1182	6	2009
2	Gedajlovic E	1	1	0.077	962	1	2009
3	Neubaum DO	1	1	0.077	962	1	2009
4	Shulman JM	1	1	0.077	962	1	2009
5	Zahra SA	1	1	0.077	962	1	2009
6	Nyssens M	3	4	0.25	530	4	2010
7	Defourny J	3	3	0.25	529	3	2010
8	Dacin MT	1	1	0.091	518	1	2011
9	Dacin PA	1	1	0.091	518	1	2011
10	Mair J	4	5	0.4	508	5	2012
11	Kerlin JA	2	2	0.125	482	2	2006
12	Santos FM	1	1	0.1	472	1	2012
13	Bacq S	6	7	0.545	470	7	2011
14	Jarvis O	1	1	0.091	419	1	2011
15	Phillips N	1	1	0.091	419	1	2011
16	Stephan U	3	4	0.429	408	4	2015
17	Janssen F	3	3	0.273	312	3	2011
18	Besharov ML	2	3	0.222	297	3	2013
19	Gonin M	2	2	0.222	292	2	2013
20	Smith BR	5	6	0.417	287	6	2010

2 *Source: Research Data 2023*

3

4 Table 3 summarises the most prolific institutions in the field of SE in terms of

5 publications. Institutions such as Swinburne University of Technology, Glasgow

6 Caledonian University, Queensland University of Technology, University of

7 Birmingham, and University of Sheffield have contributed the most articles in the

8 field of SE. Swinburne University of Technology contributes the most papers with

9 26, followed by Glasgow Caledonian University with 21, Queensland University

10 of Technology with 18, the University of Birmingham with 16, and the University

11 of Sheffield with 18 as well. This table clearly indicates that institutions in

12 emerging economies are underrepresented in terms of research in the field of SE.

13 **Table 3. Most Prolific Institutions**

No.	Affiliations	Articles
1	Swinburne University of Technology	26
2	Glasgow Caledonian University	21
3	Queensland University of Technology	18
4	University of Birmingham	16
5	University of Sheffield	16
6	Lappeenranta University of Technology	15

7	University Of Cambridge	15
8	University of Pretoria	15
9	University of Cape Town	14
10	Indiana University	13
11	University of Essex	12
12	Auckland University of Technology	11
13	University of Ottawa	11
14	University of St. Gallen	11
15	University of the Witwatersrand	11
16	University of Trento	11
17	University of Valencia	11
18	Miami University	10
19	Université Catholique De Louvain	10
20	University of Economics	10

Source: Research Data 2023

Table 4 summarises the most productive countries that have made significant contributions to the area of SE over the last two decades in terms of total citations. The United States, the United Kingdom, Belgium, Canada, and Australia are all significant contributors. With 4631 citations, articles by authors based in the United States attracted the most attention, followed by authors from United Kingdom with 3762 citations, Belgium with 1225 citations, Canada with 1129 citations and Australia with 833 citations. The table clearly indicates that Asia is well represented in the top twenty (20) most prolific countries in the world with representations from India, Malaysia, Iran and China. Africa, however does not have any representation in the top twenty (20) most prolific countries in SE research. This clearly indicates that institutions and universities in Africa have not invested much in SE research. This observation is surprising, given the persistent challenges and deficiencies in the area, which underscore the need for more investigation into the field of social entrepreneurship in order to address the enduring societal challenges faced by Africa (Diochon and Gore 2016; Claeys 2017).

Table 4. Most Prolific Countries

No.	Country	Total Citations	Average Article Citations
1	USA	4631	30.07
2	United Kingdom	3762	27.06
3	Belgium	1225	49.00
4	Canada	1129	32.26
5	Australia	833	14.61
6	France	729	33.14
7	Germany	648	24.00
8	Italy	546	18.83

9	Spain	380	12.67
10	Netherlands	356	15.48
11	India	328	9.11
12	Malaysia	315	17.50
13	Switzerland	299	27.18
14	New Zealand	286	15.89
15	Sweden	205	12.81
16	Portugal	160	11.43
17	Iran	139	34.75
18	Austria	134	26.80
19	Finland	121	8.07
20	China	105	4.57

Source: Research Data 2023

Mapping of Journals with VOS Viewer Software

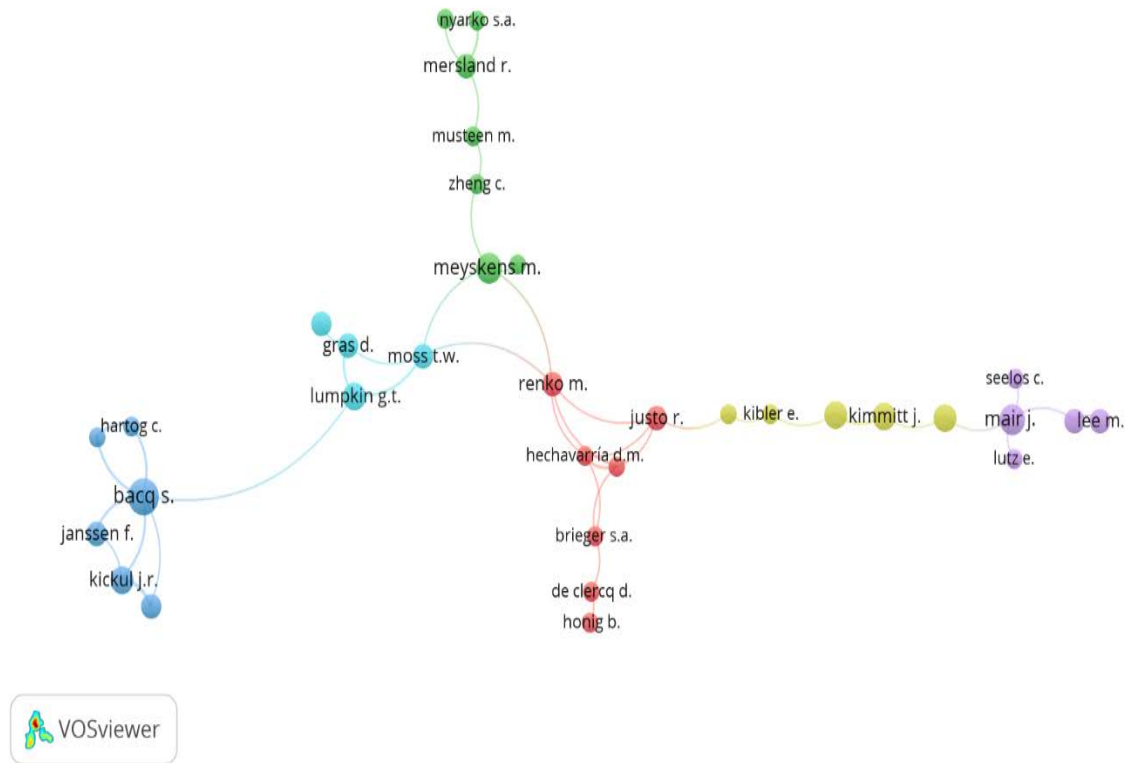
The VOS viewer software is used in this section to provide a visual representation of the data, facilitating a more in-depth exploration of the bibliographic information (Van Eck and Waltman 2010). This research employs a network framework to depict bibliographic coupling (Kessler 1963), co-citation (Small 1973), co-authorship, and keyword co-occurrence.

Graphical network representations are created using the number of linkages and their total strength (Modak et al. 2019). In graphical representations, network connections show the strength of relationships between things, and the size of circles represents the value of an item. The number of inner and outer connections joining and leaving a network node is indicated by the node's size in the network. The thickness of interconnections between any two nodes in a network represents the strength of the connections (Bastian et al. 2009).

Co-authorship Analysis of Authors, Institutions and Countries

The co-authorship network of authors working in the field of SE is depicted in Figure 1. Co-authorship network examines the social networks created by authors, institutions and countries who collaborate on scientific articles (Acedo et al. 2006). For example, Bacqs, Mair, Meyskens, and Lumpkin are the prominent collaborators in the field of SE.

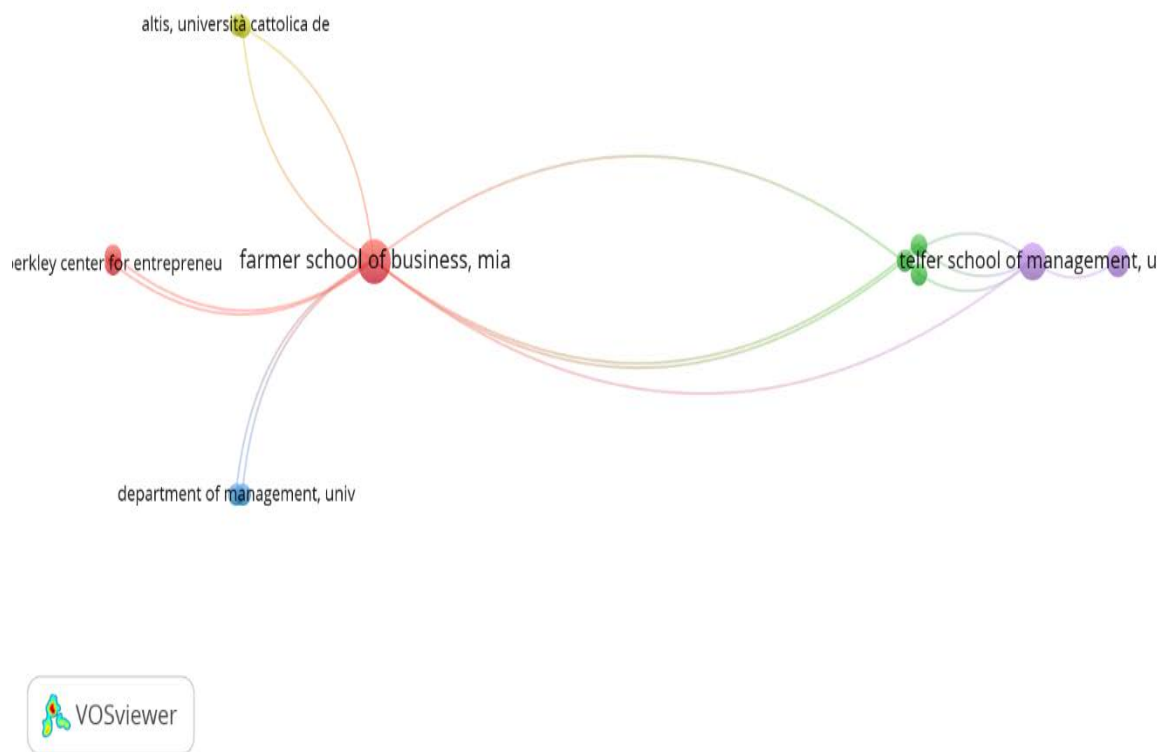
1 **Figure 1. Co-authorship analysis (Authors)**



Source: Research Data 2023

The network of institutions that collaborated on research publications is depicted in Figure 2 below. The Farmer School of Business at Miami University, the Telfer School of Management at the University of Ottawa, and the Smith School of Business at Queen's University in Canada are among the notable universities that have collaborated on research in the area of SE

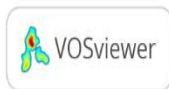
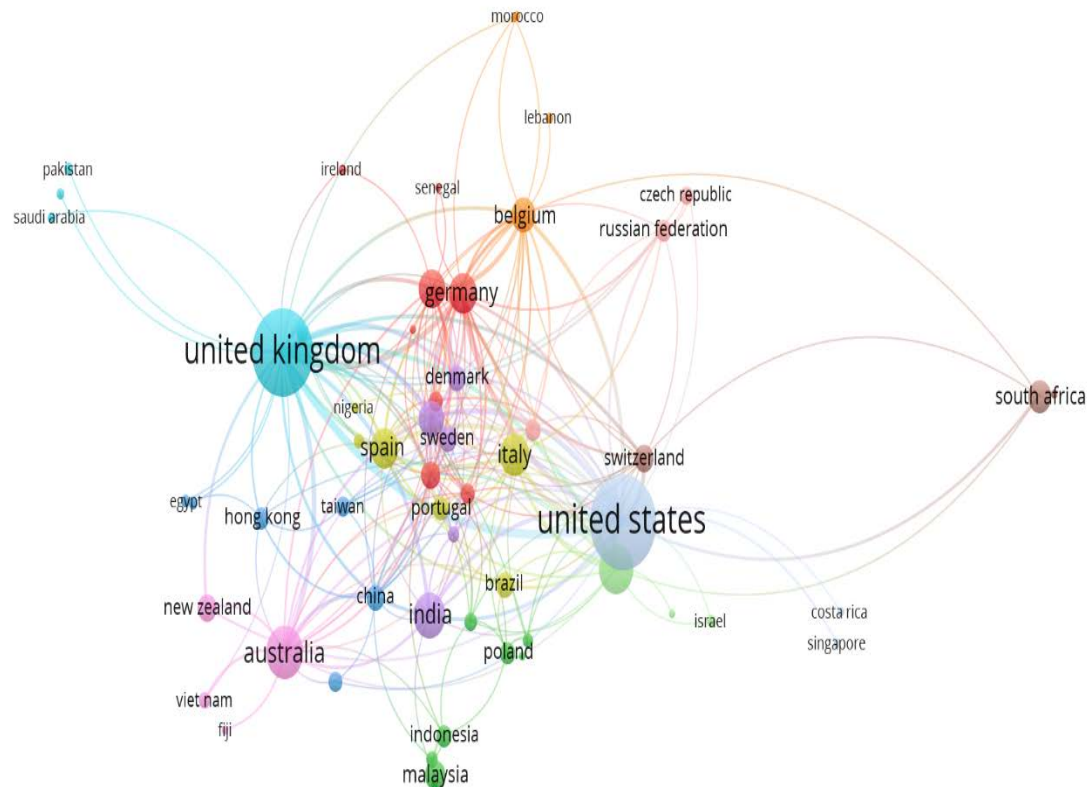
1 **Figure 2. Co-authorship analysis (Organisations)**



2
3 Source: Research Data 2023

4
5 In terms of country collaborations, figure 3 shows that the United States of
6 America and the United Kingdom together hold the largest number of nodes in the
7 country co-authorship network, indicating that, among the collaborating countries
8 in the field of SE, the United States of America and the United Kingdom have the
9 greatest number of collaborations with others. Australia, India, Germany, Canada,
10 Italy, and Spain are also prominent collaborators in social entrepreneurship
11 research. The figure indicates a few representation of African countries such as
12 Malawi, Egypt, Uganda, Sierra Leone etc. which serves as an indication that
13 African countries are gradually representing in research in the field of SE.
14

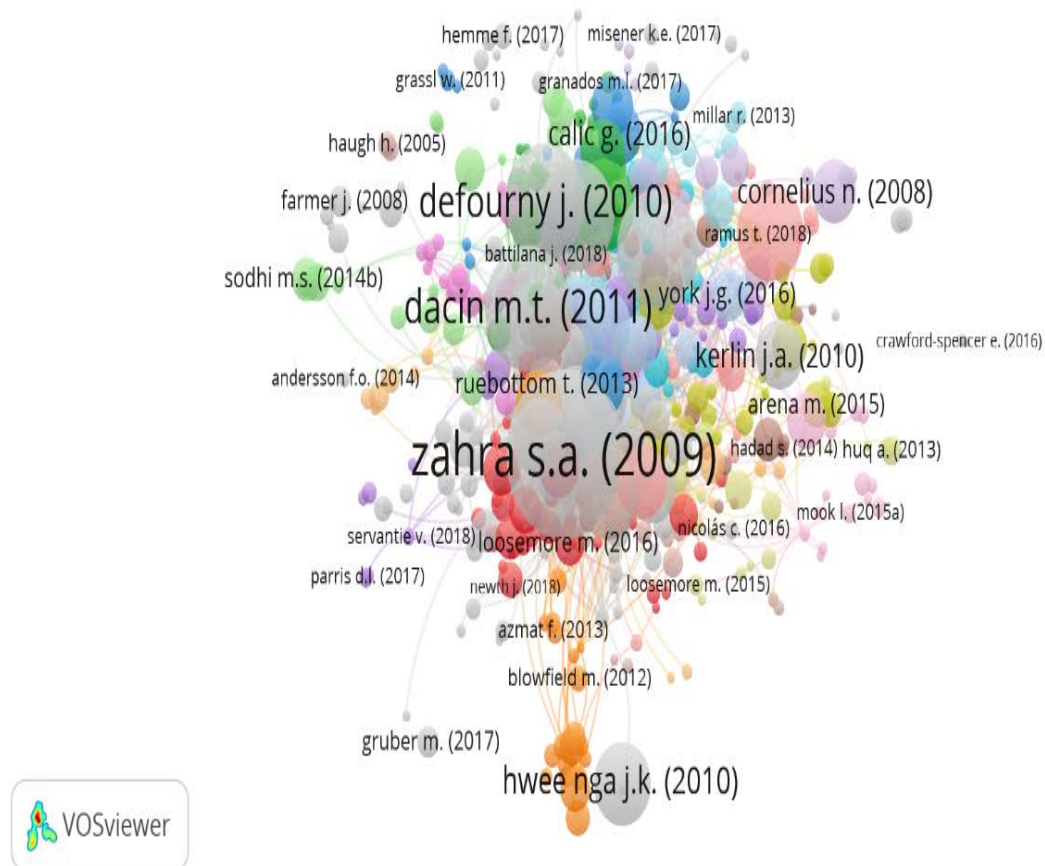
1 **Figure 3. Co-authorship Analysis (Countries)**



Source: Research Data 2023

Analysis of Keyword Co-occurrence - All Keywords

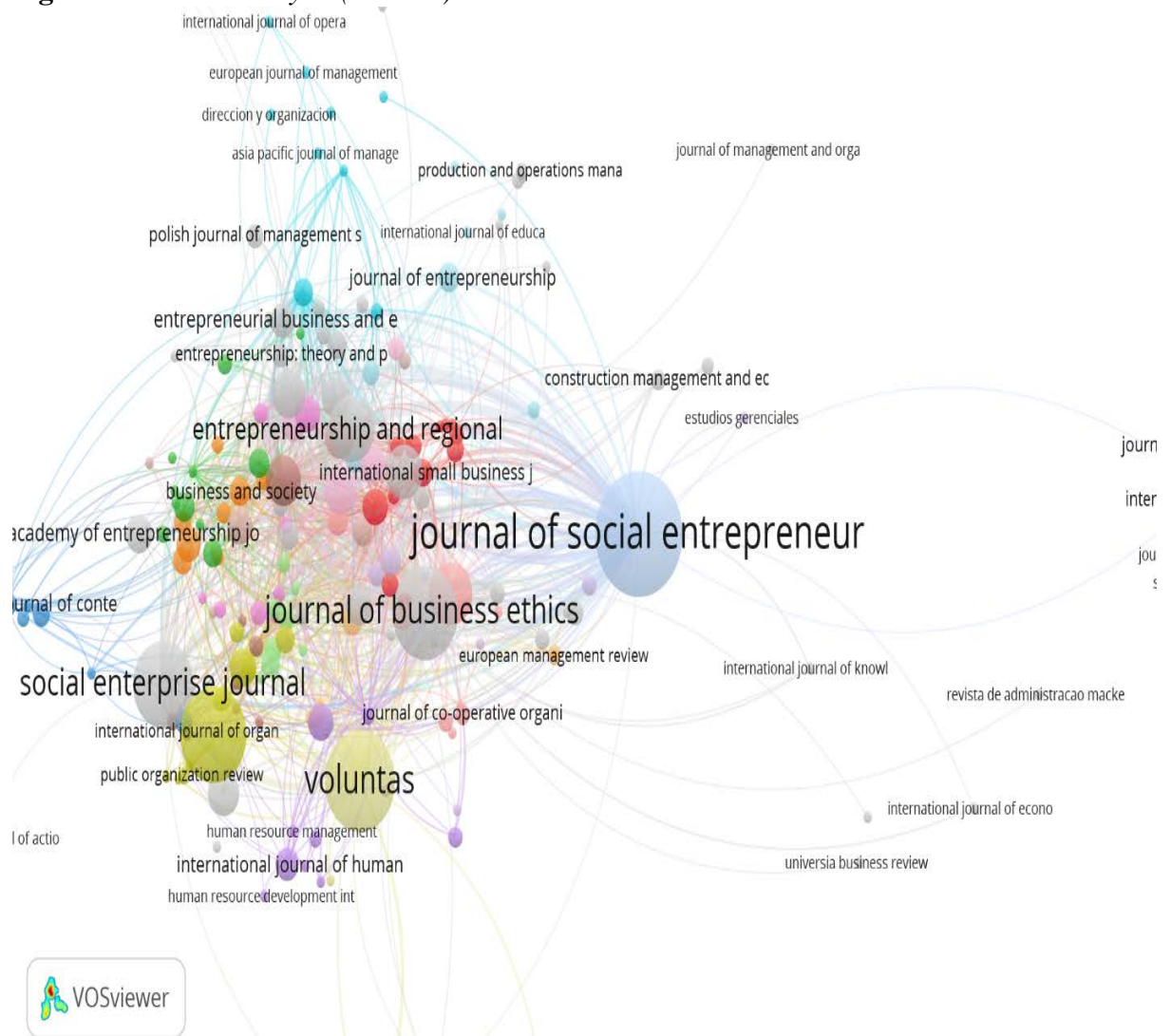
According to Strozzi et al. (2017), author keywords serve as indicators of an article's substance or its relevance to its study subject. Ding et al. (2001) claim that the presence of author keywords appearing together suggests a potential thematic similarity between the respective works. The authors conducted an analysis of the keywords used in order to ascertain the prevailing research patterns in the domain of social entrepreneurship across the years. According to the data shown in Figure 4, the terms that have the highest frequency of occurrence are social business, social entrepreneurship, innovation, sustainable development, organizational structure, and non-profit organization.

1 **Figure 5. Citation Analysis (Documents)**

2
3 Source: Research Data 2023

4
5 Figure 6 depicts the most cited sources in the field of SE. As indicated in the
6 figure, Journal of Business Ethics is the most often cited source within the period
7 under review with 2363 citations. This is followed by Journal of Business
8 Venturing with 1882 citations, Journal of Social Entrepreneurship with 1726
9 citations, Voluntas with 1315 citations and Entrepreneurship and Regional
10 Development with 1198 citations. Other journals among the most cited sources
11 include Organization science with 994 citations, Journal of Cleaner Production
12 with 614 citations and Small Business Economics with 569 citations.
13

1 **Figure 6. Citation Analysis (Sources)**



2 Source: Research Data 2023

3 Table 5 provides details of the most cited sources in the field of SE.

4 **Table 5. Most Cited Sources**

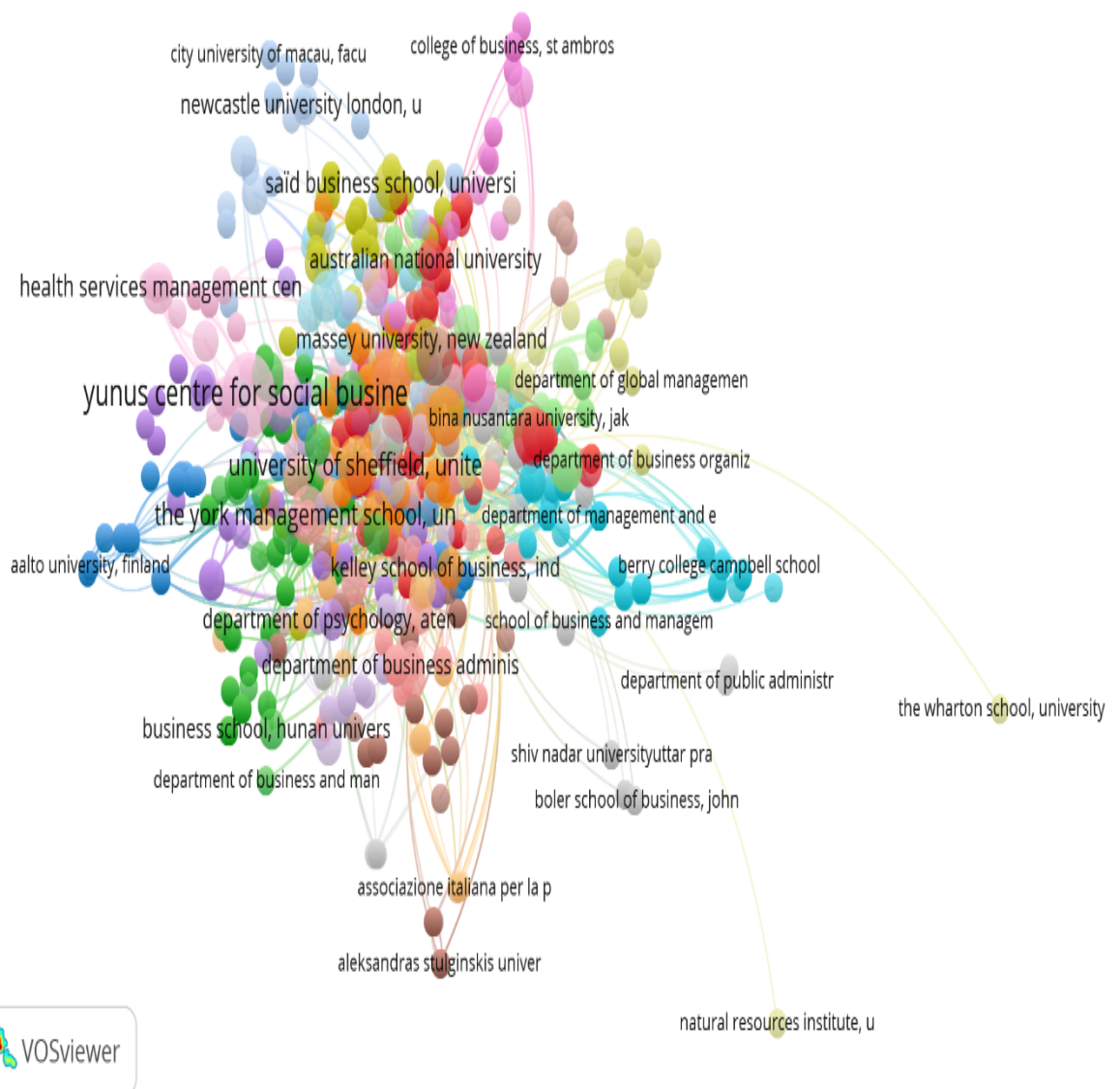
No.	Source	Documents	Citations
1	Journal of business ethics	58	2363
2	Journal of business venturing	16	1882
3	Journal of social entrepreneurship	101	1726
4	Voluntas	65	1315
5	Entrepreneurship and regional development	28	1198
6	Organization science	4	994
7	Journal of cleaner production	26	614
8	Small business economics	5	569

9	Journal of management studies	5	356
10	Organization studies	6	323
11	Journal of business research	17	314
12	Strategic entrepreneurship journal	6	291
13	Journal of nonprofit and public sector marketing	10	269
14	International journal of entrepreneurial behaviour and research	19	242
15	International small business journal	5	239
16	International journal of entrepreneurship and small business	16	209
17	Technological forecasting and social change	12	185
18	Social enterprise journal	50	167
19	International entrepreneurship and management journal	9	153
20	Business and society	6	143

Source: Research Data 2023

The list of the most cited organizations is demonstrated in figure 7. Considering the years under review, the prolific institutions in the field of SE include University of Sheffield, Farmer School of Business (Miami University), Yunus Centre for Social Business and Health (Glasgow Caledonian University), University of Toronto, Canada, Gordon Institute of Business (University of Pretoria, South Africa), the York Management School (University of York), Department of Management and International Business (University of Auckland Business School), Health Services Management Centre (University of Birmingham), Swinburne University of Technology, Telfer School of Management (University of Ottawa) etc.

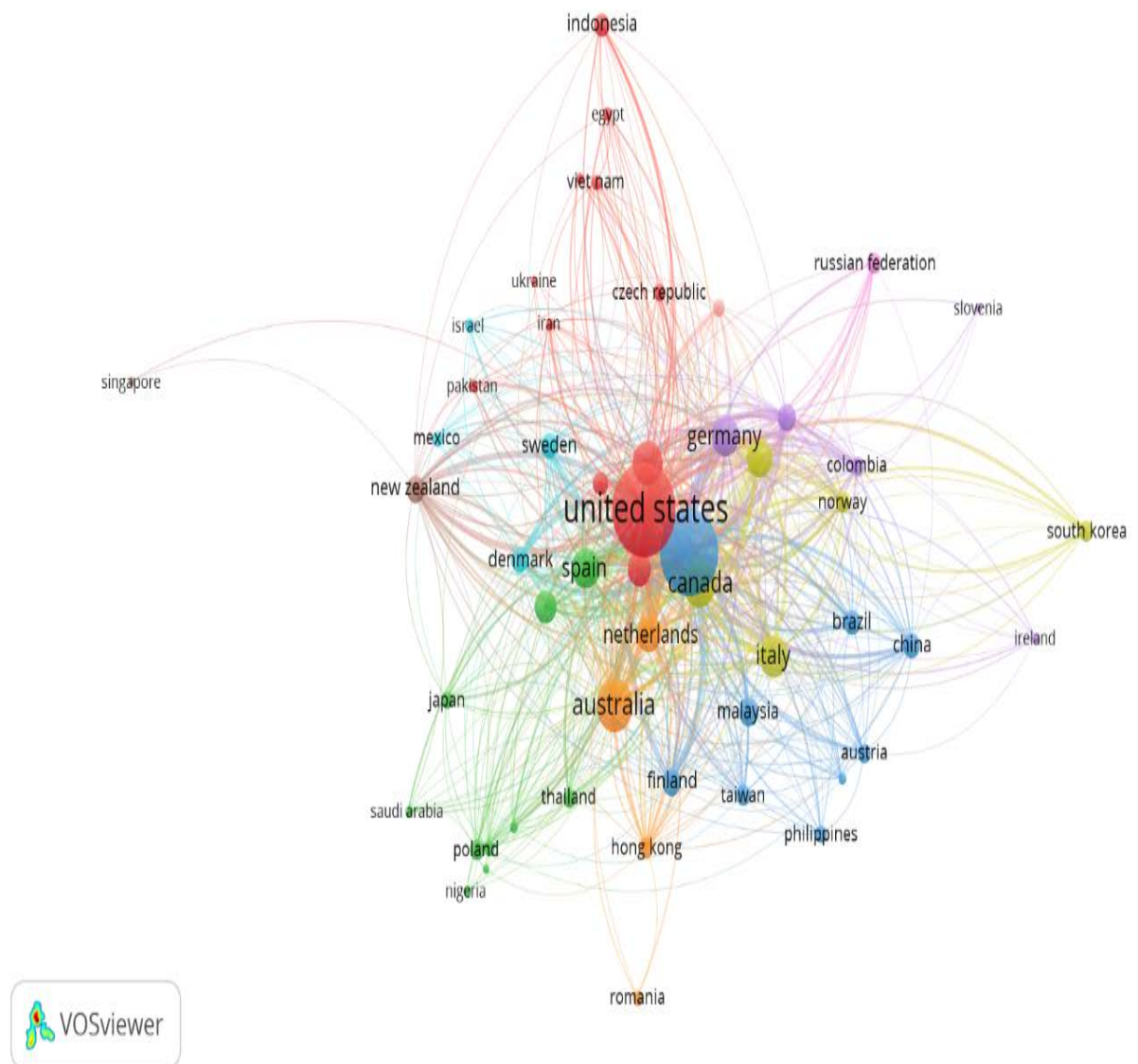
1 **Figure 7. Citation Analysis (Organisations)**



Source: Research Data 2023

The list of most prolific contributing countries in the field of SE is also analyzed. This is demonstrated in figure 8 which indicates that USA and the United Kingdom are the highest contributing countries during the year under review. Other prolific contributing countries include Canada, Australia, Belgium, Italy, Spain, Australia, France, Germany, Netherlands, Switzerland, India, etc.

1 **Figure 8. Citation Analysis (Countries)**



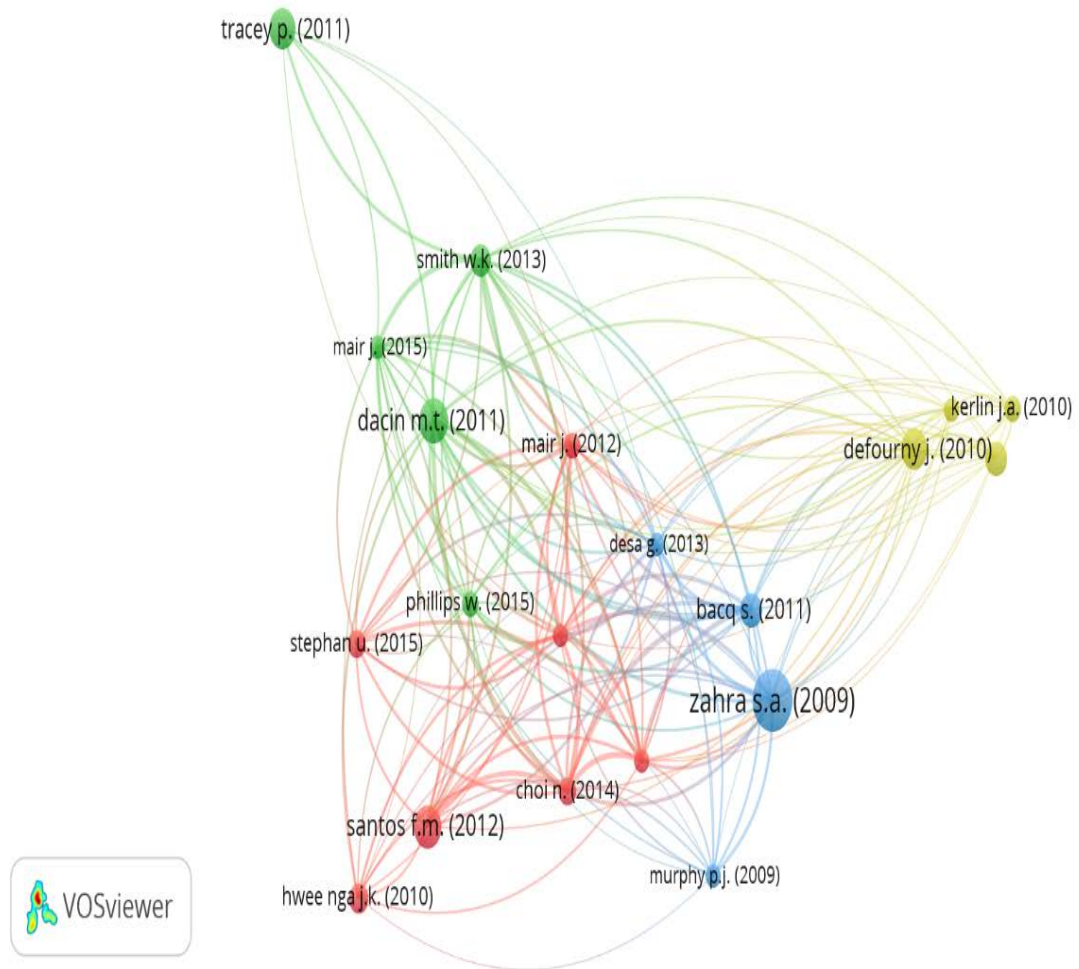
2
3 Source: Research Data 2023

4
5 Analysis of Bibliographic Coupling - Documents, Sources, Authors, Organizations,
6 and Countries

7 Bibliographic coupling, as described by Zupic et al. (2015), refers to the
8 quantification of the shared references between two texts as an indicator of their
9 similarity. The creation of bibliographic coupling occurs when documents
10 reference one or more shared sources and have a coherent intellectual topic
11 (Kessler 1963). This is used to determine how journals in the discipline of SE are
12 organized thematically. The bibliographic coupling of documents in the field of
13 SE is depicted in Figure 9. Choi (2014) and Bacq (2011) exhibit the strongest
14 connection with link strength of 18. This is followed by Choi (2014) and Dancin

(2011) with a link strength of 17, Lepoutre (2013) and Bacq (2011) with a link strength of 16, Smith (2013) and Mair (2012) with a link strength of 14, Dacin (2011) and Lepoutre (2013) with a link strength of 14 and Choi (2014) and Santos (2012) as well as Choi (2014) and Dacin (2011) with a link strength of 12. This data suggests more frequent collaborations among authors who publish in the field of SE. It is displayed in figure 9.

Figure 9. Bibliographic Coupling (Documents)

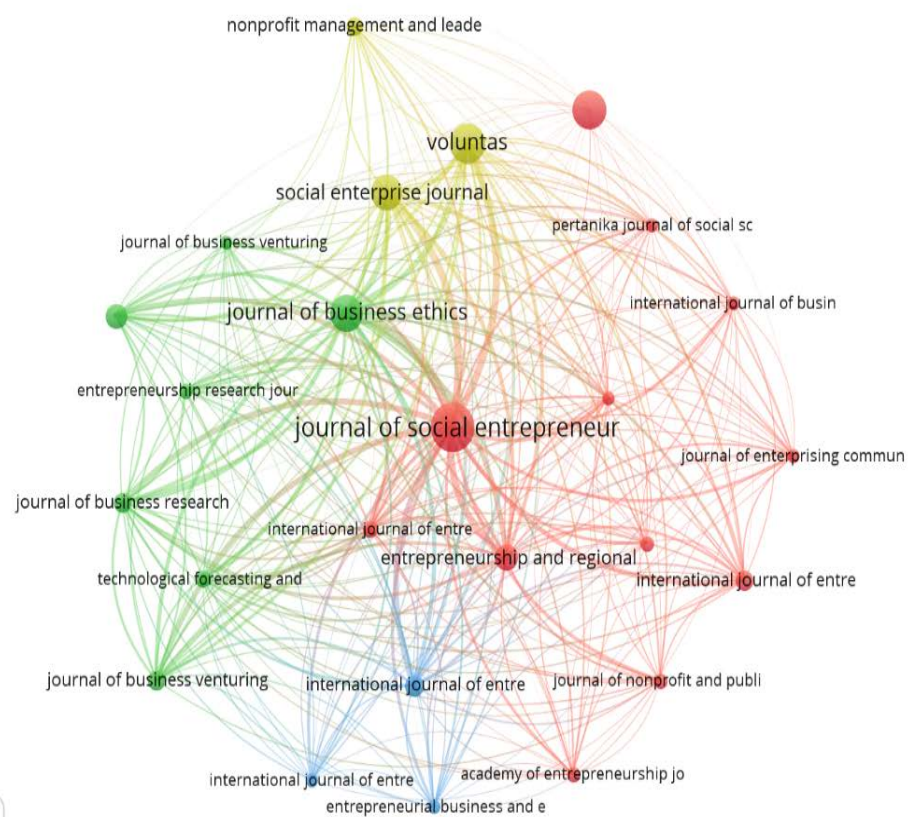


Source: Research Data 2023

Figure 10 illustrates the bibliographic connection of sources within the domain of SE. The data shown in the figure provides clear evidence of the strong interconnectedness between the Journal of Social Entrepreneurship and many other journals that make significant contributions to the area of social entrepreneurship. This finding suggests that the Journal of Social Entrepreneurship has a substantial overlap in references with the aforementioned periodicals. The Journal of Social Entrepreneurship and the Journal of Business Ethics have the most robust relationship, as shown by a link strength of 10,916. The subsequent

associations are observed between the Journal of Social Entrepreneurship and the Social Enterprise Journal, exhibiting a link strength of 7259. Similarly, the Journal of Social Entrepreneurship demonstrates a link strength of 6649 with Voluntas. Additionally, a link strength of 6334 is identified between the Journal of Social Entrepreneurship and both Entrepreneurship and Regional Development. Lastly, the Journal of Social Entrepreneurship is found to have a link strength of 4049 with the Journal of Business Research. There are notable associations between the Journal of Business Ethics and Voluntas, with a link strength of 3837, as well as between the Journal of Social Entrepreneurship and Journal of Business Venturing, with a link strength of 3605.

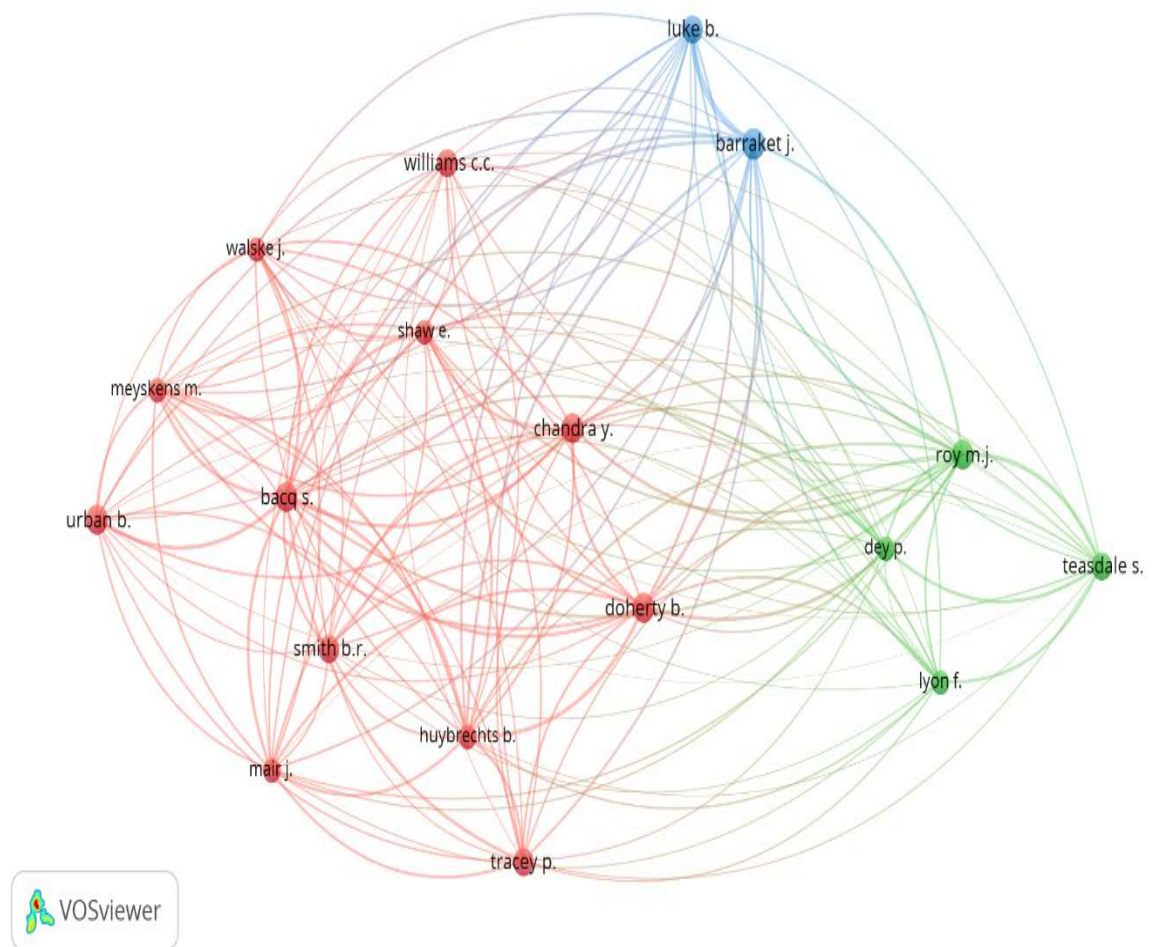
Figure 10. *Bibliographic Coupling (Sources)*



Source: Research Data 2023

Figure 11 depicts the bibliographic coupling of authors in the field of SE. It indicates that Barraket and Luke exhibit the strongest association with a link strength of 457. This is followed by Roy and Teasdale with a link strength of 186, Bacq and Huybrechts with a link strength of 167, Doherty and Huybrechts with a link strength of 154 and Bacq and Urban together with Bacq and Shaw with a link strength of 145.

1 **Figure 11. Bibliographic Coupling (Authors)**

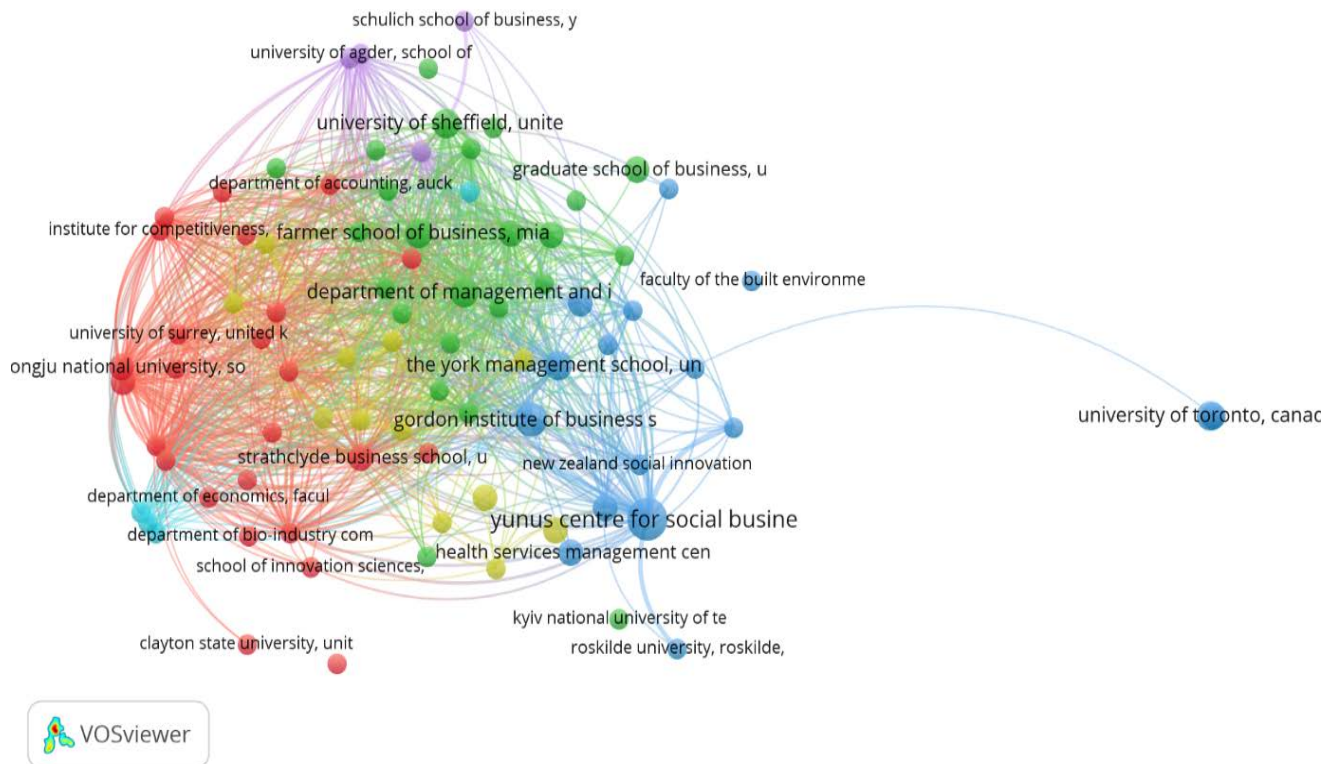


2
3 Source: Research Data 2023

4
5 Figure 12 illustrates the bibliographic coupling across institutions of writers
6 who have made contributions to the subject of SE throughout the twenty-year
7 period under examination. The data shown in the figure provides clear evidence of
8 the robust relationships established by authors affiliated with the Yunus Centre for
9 Social Business and Health at Glasgow Caledonian University. These collaborations
10 serve as a testament to the center's significant contribution to the advancement of
11 the area of social entrepreneurship. The Yunus Centre for Social Business and
12 Health at Glasgow Caledonian University and the York Management School at the
13 University of York have the most robust affiliations. The Yunus Centre for Social
14 Business and Health, located at Glasgow Caledonian University, and the
15 Department of Public Policy at City University of Hong Kong are two more
16 universities that maintain significant affiliations with the aforementioned schools.
17 Additional academic institutions that have established robust affiliations include
18 the Yunus Centre for Social Business and Health at Glasgow Caledonian
19 University, the Strathclyde Business School at the University of Strathclyde, the

Yunus Centre for Social Business and Health at Glasgow Caledonian University, and the Health Services Management Centre at the University of Birmingham. It is worth noting the significant connection between the Yunus Centre for Social Business and Health at Glasgow Caledonian University and the University of Sheffield.

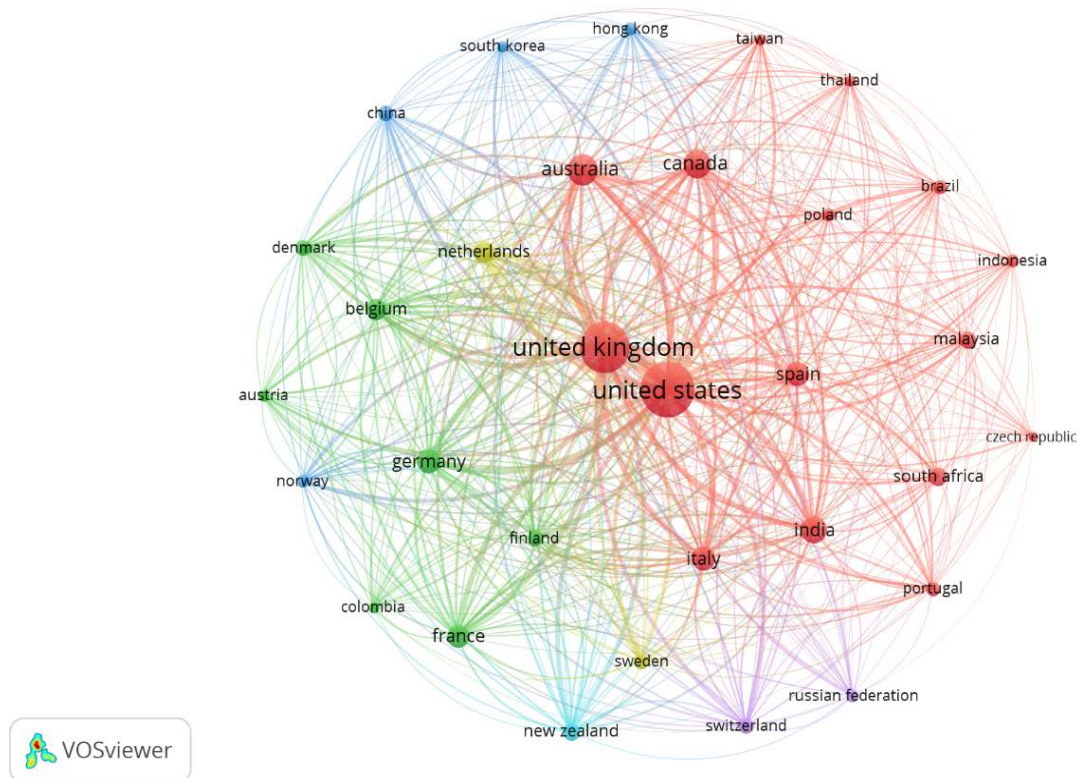
Figure 12. *Bibliographic Coupling (Organization)*



Source: Research Data 2023

Figure 13 displays the bibliographic coupling of country of origin of authors who contribute to the field of SE. The figure indicates that the USA and United Kingdom is the core of all collaborations as they have strong connections with several other countries and the strongest collaborations all involve the USA and United Kingdom. The strongest collaboration though is between USA and United Kingdom with a link strength of 63,866. This is followed by the collaborations between USA and Australia with a link strength of 23,144, United Kingdom and Australia with link strength of 21,843, USA and Germany with link strength of 19,626, and USA and Canada with link strength of 18,905. Other countries with strong collaborations include USA and India with link strength of 17,104, United Kingdom and Germany with link strength of 16004, as well as the connections between United Kingdom and Canada with link strength of 14833.

1 **Figure 13. Bibliographic Coupling (Countries)**



2
3 Source: Research Data 2023

4
5 *Clustering of Articles Based on Bibliographic Coupling*

6
7 Major Themes in Social Entrepreneurship Research

8 Kessler (1963) noted that the pattern of referencing used in scientific
9 investigations demonstrates conceptual similarities between the studies. When two
10 articles cite a third article, it indicates that both pieces address comparable topics
11 (Donthu et al. 2020a). In line with this assertion, Wallin (2005) opined that when
12 two papers share literature references, bibliographic coupling is predicated on the
13 premise that the two documents also contain the same content. In order to
14 categorize research in the field of SE into broad themes, bibliographic coupling
15 was employed. Bibliographic coupling is the process of grouping publications
16 together based on the references they share, and it helps researchers identify the
17 themes that are being promoted in the field (Donthu et al. 2020b). Following the
18 application of bibliographic coupling, seven (7) significant subject groups
19 emerged. The major focus of each of the theme clusters was then determined.
20 Each cluster is summarised in Table 7.

Cluster 1: Human resource practices of social enterprises, performance measurement of social enterprises and sustainability of social enterprises.

The cluster under consideration has a total of 166 publications, which together accumulate 5803 citations. The aforementioned cluster ranks first in terms of the number of articles it encompasses, but it ranks third in terms of the number of citations it comprises. The articles within this cluster mostly focus on the topics of human capital and human resource practices within social businesses, the health and well-being of workers in social companies, performance assessment and management within social enterprises, and the sustainability of social enterprises.

The authors focus on topics such as the performance measurement/management (Mamabolo & Myres 2020; Lall 2017; Arogyaswamy 2017; Narangajavana et al. 2016; Costa and Pesci 2016; Arena et al. 2015), human capital/human resource practices, employee health and well-being (Popkova and Sergi 2020; Zhang et al. 2018; Mirvis and Googins 2018; Gordon et al. 2018; Chan 2016; Villotti et al. 2014), and sustainability of social enterprises (Powell et al. 2019; Oelze and Habisch 2018; Calic and Mosakowski 2016).

The article by Defourny and Nyssens (2010) is often cited in this cluster since it provides a comprehensive analysis of the historical circumstances in Europe and the United States that have influenced the emergence and development of social enterprise (SE) ideas. The authors examine the evolution of these conceptualizations across time. In this scholarly work, authored by Ebrahim et al. (2014), an investigation is conducted into the governance challenges encountered by organizations that use market methods to fulfill a social purpose. The study also differentiates between two distinct types of hybrid arrangements that fall under this category. The work produced by Kerlin (2006) is positioned as the third-ranked study in the cluster. This research does a comprehensive literature review and contrast social entrepreneurship in the American and European contexts. The author delineates the definitions of social enterprise as employed by scholars and professionals in the United States and Europe. Additionally, the author examines the historical factors that have impacted and molded various understandings of social enterprise. Furthermore, the author underscores the unique institutional and legal contexts within which social enterprises function.

A total of 348 authors contributed content to this cluster, 42 of whom submitted single-authored publications and 306 of whom provided multi-authored articles. 43 (26 percent) of the 166 articles are single-authored, while 123 (74 percent) are multi-authored. The CI (2.49) represents a collective effort.

Cluster 2: Feminism in social enterprises, social enterprises in sports, drivers of social entrepreneurship and theories in social entrepreneurship

This cluster contains 146 publications that have been referenced 7061 times. This cluster ranks second in terms of the number of articles represented in the cluster and first in terms of the number of citations. The authors focus on topics such as feminism in social enterprises (Alexandre-Leclair 2017; Kimbu and

Ngoasong 2016; Muntean and Ozkazanc-Pan 2016), SE in sports (Miragaia et al. 2017; Reid 2017; Von Friedrichs and Wahlberg 2016; Ratten 2011), drivers of SE (Mody et al. 2016; Méndez-Picazo, Ribeiro-Soriano and Galindo-Martín 2015; Christopoulos and Vogl 2015; Yiu et al. 2014; Germak and Robinson 2014; Hwee et al. 2010; Zahra et al. 2009), theories/models in SE (Olinsson 2017; Montesano and Montessori 2016; Ebrashi 2013; Santos 2012; Salvado 2011; Perrini et al. 2010; Murphy and Coombes 2009) and issues related to comparing social and commercial entrepreneurship (Halberstadt and Kraus 2016; Stecker 2014; Gras and Mendoza-Abarca 2014; Gimmon and Spiro 2013; Bacq et al. 2013; Williams and Nadin 2012; Trivedi and Stokols 2011).

The paper by Zahra et al. (2009) is widely cited within this cluster and offers a comprehensive account of social entrepreneurship, along with an examination of its impact on the generation of social wealth. Furthermore, the authors provide a comprehensive classification of the search techniques used by entrepreneurs in order to identify potential opportunities for the establishment of social ventures. Additionally, they elucidate the key ethical challenges that social entrepreneurs may encounter. The subsequent scholarly article under consideration is authored by Dacin et al. (2011), wherein the authors examine social entrepreneurship as a focal point of investigation and provide several suggestions for prospective study topics and inquiries. The article by Santos (2012) is the third most referenced publication within this cluster. It presents a theoretical framework that seeks to enhance academic investigations in the field of social entrepreneurship. The paper examines situations in which externalities are prone to being disregarded, and it further explores the fundamental aim and rationale for the actions of social entrepreneurs, as opposed to their commercial counterparts. The study presents a framework for understanding the growing phenomena of social entrepreneurship (SE) and its importance in the functioning of contemporary society. A collective of 327 writers made contributions to this cluster, with 30 individuals submitting single-authored papers and 297 authors submitting multi-authored publications. A total of 146 publications were analyzed, with 31% (21 papers) being single-authored and 79% (115 papers) being multi-authored. The term "CI (2.58)" refers to the collaborative project, specifically the fourth cluster.

Cluster 3: Scaling Strategies of Social Enterprises and Social Enterprises as Hybrid Organisations

This particular cluster has a total of 89 scholarly publications, which have together garnered a cumulative citation count of 2608. This cluster ranks third in terms of the number of articles represented and fourth in terms of citations. The articles included in this cluster primarily focus on topics related to scaling techniques in social enterprises (Bauwens et al. 2020; Zhao and Han 2020; Giudici et al. 2020; Ometto et al. 2019; Asemota and Chahine 2017) and the examination of social enterprises as hybrid organizations (Siebold et al. 2019; Davies and Doherty 2019; Gillett et al. 2019; Yin and Chen 2019; Folmer et al. 2018; Moss et al. 2018; Davies Chambers and 2018; Battilana 2018; Vickers et al. 2017; Mongelli et al. 2017).

Stephan et al. (2015) conducted a multilevel study involving a sample size of 106,484 individuals. The researchers employed an institutional configuration perspective to examine the factors within national contexts that contribute to the promotion of social entrepreneurship (SE). The study also explored the combined effects of formal regulatory institutions (government activism), informal cognitive institutions (postmaterialist, cultural values), and informal normative institutions (socially supportive cultural norms or weak-tie social capital) on SE. This particular article is frequently cited within the relevant research cluster. In accordance with the aforementioned article, the study conducted by Mair et al. (2015) investigates the manner in which hybrid organizations build their governance structures and practices. The third most often referenced article within this cluster was authored by Parhankangas and Renko (2017) which focused on the language style used in crowdfunding pitches and its impact on the success of fundraising efforts.

A total of 200 authors contributed content to this cluster, consisting of 9 authors who submitted single-authored papers and 191 authors who contributed multi-authored publications. Out of the whole corpus of 89 articles, it is seen that 11 papers, or 12% of the total, are published by a single individual. Conversely, the remaining 78 papers, accounting for 88% of the total, are the result of collaborative efforts involving many authors. The CI (2.45) denotes the collaborative undertaking, which is classified as the sixth cluster.

Cluster 4: Crowdfunding in Social Enterprises, Technology in Social Enterprises and Intention Formation in Social Entrepreneurship

There are 59 papers in this cluster, with 1126 citations. Based on the number of articles that are represented in the cluster, this cluster is ranked fourth; yet, it is ranked fifth in terms of the number of citations. The articles in this cluster appear to be largely concerned with matters pertaining to crowdfunding in Southeast Asia (Bento et al. 2019; Presenza et al. 2019; Laurell et al. 2019; Bernardino and Santos 2016; Meyskens and Bird 2015), technology in SE's (García-Morales et al. 2020), and intention formation in SE (Hockerts 2018; Salhi 2018; Barton et al. 2018; Tiwari et al. 2017; Forster and Grichnik 2013; Ayob et al. 2013).

The article by Urban (2015) has received the most citations in this cluster and the study assesses the impact of diverse institutional features on SE intentions. Next to this paper is the study conducted by Meyskens (2015) which evaluated the significance of crowdfunding in social venture funding and offer expertise in the area of crowdfunding components and avenues through which social worth can be created. The paper further provides prepositions to guide the decision-making process for social investors and social ventures regarding types of crowdfunding (reward, donation, equity, or debt) which makes the most sense for them in light of their social value creation and economic objectives. Utilizing the theory of planned behaviour, Forster (2013) explain antecedents of SE intention creation which led the paper to be the next referenced to Meyskens (2015) work.

A total of 200 authors contributed content to this cluster, consisting of 9 authors who contributed via single-authored publications and 136 authors who

contributed through multi-authored articles. Out of the whole corpus of 59 articles, 9 articles, representing 15% of the total, were produced by a single individual, while the other 50 articles, accounting for 85% of the total, were the result of collaborative efforts involving many authors. The third cluster, denoted as the CI (2.72), represents a collective effort.

Cluster 5: SE in Base of the Pyramid Markets/se in Emerging Markets

This cluster has 56 articles with a total of 1428 citations. This cluster is in fifth place in terms of the number of articles represented and fifth place in terms of citations. The articles in this cluster tend to focus mainly on issues related to SE in Base of the Pyramid Markets (Goyal et al. 2017; Goyal et al. 2016; Pervez et al. 2013; Kistruck et al. 2013) and SE in developing markets (Rosca et al. 2020; Hlady et al. 2017; Ebrashi and Darrag 2017). Well referenced in this group is the work of Smith and Stevens (2010) who built on a typology of variety in SE to predict the function of space and site in social entrepreneurial processes and further described the variance in the location focus of different kinds of SE impacts on the types of social networks within which SE is embedded. This article is followed by that of Ruebottom (2013) which studies 10 social enterprises with the aim of converting existing community practices and assessed the challenges in creating legitimacy that is likely threatened causing compromises to establishing sustainable institutional change. Lettice and Parekh (2010) work is the next frequently referenced to that of Ruebottom (2013). Their work provide explanation to social innovation process and further analyzed the lessons that is transferred from general business innovation theory and practice.

The cluster in question received contributions from a collective of 136 writers. Among these authors, 10 individuals were responsible for single-authored publications, while the remaining 126 people collaborated on multi-authored pieces. Out of the entire 56 publications, 18 percent (equivalent to 10 articles) are produced by a single author, while the remaining 82 percent (equivalent to 46 articles) are co-authored by many authors. The collective effort, as indicated by the CI value of 2.74, is seen to rank second within the cluster.

Cluster 6: Use of Resources in se/ use of Frameworks in Social Entrepreneurship

This cluster is made up of 45 papers referenced 1392 times. This cluster is positioned sixth with regards to number of papers represented in the group and sixth with respect to citations. The papers in the group paid attention to resource utilization in SE (Bacq et al. 2015; Brieger and De Clercq, 2019; Bacq and Eddleston, 2018; Estrin et al. 2016) and framework to guide SE (Macke et al. 2018; Hossain et al. 2017; Brieger et al. 2019). The paper with the highest number of citations within this cluster was authored by Stephan et al. (2015). In their research, they examined the combined influence of informal normative, informal cognitive, and formal regulatory institutions at many levels. Additionally, they aimed to reconcile contradictory claims from the perspectives of institutional support and institutional emptiness. This article is accompanied by the work of

Estrin et al. (2016), which advanced the study of entrepreneurial entrance and human capital by developing a multilevel framework for analyzing the commonalities and distinctions between commercial and social entrepreneurship. The article by Tobias et al. (2013) is the third most often referenced publication within this cluster. The study examines how entrepreneurship may initiate a series of positive outcomes, such as wealth creation and peace, in places characterized by entrenched poverty and war.

A collective of 110 writers made contributions to this cluster, including 8 authors who contributed via single-authored publications and 102 authors who contributed through multi-authored articles. Out of the whole corpus of 45 articles, it is seen that 8 articles, or 18% of the total, were produced by a single individual, while the other 37 articles, accounting for 82% of the total, were the result of collaborative efforts involving many authors. The CI (2.76) suggests that the collective effort shown by the group is the highest within the cluster.

Cluster 7: Supply Chains in se and scaling Social Enterprises

This particular cluster has a total of 17 scholarly works, which have together garnered a substantial number of citations, amounting to 6189 in total. The aforementioned cluster has the seventh position in terms of the number of articles included within it, but it secures the second position in terms of citations received. The primary focus of the articles within this collection mostly revolves on the subject of supply chain management in social companies (Pullman et al. 2018; Sodhi and Tang 2014a; Sodhi and Tang 2014b; Sodhi and Tang 2012), as well as the process of growing social enterprises (Cannatelli 2017; Desa and Koch 2014). The article with the highest number of citations within this cluster was authored by Mair et al. (2012). The study utilized cluster and content analysis techniques to examine social entrepreneurial organizations and develop a typology of social entrepreneur frameworks. The typology is based on the identification of four types of capital that can be utilized: political capital, economic capital, human capital, and social capital. Next to this paper is the scholarly investigation conducted by Sodhi and Tang (2014), which focuses on the utilization of inadequate supply chains in developing countries and endeavors to determine the potential for further research in the field of operations management. In addition to this article, there is a research undertaken by Desa and Koch (2014) that examines the methodologies used by enterprises to evaluate their social impact on base-of-the-pyramid communities.

A collective of 36 writers made contributions to this cluster, consisting of 2 authors who contributed via single-authored publications and 34 authors who contributed through multi-authored articles. Out of the whole corpus of 17 publications, it is seen that 2 articles (12%) were produced by a single individual, while the remaining 15 articles (88%) were the result of collaborative efforts involving many authors. The seventh cluster, denoted as CI (2.27), represents a joint effort. The data pertaining to the clusters may be found in Table 6.

Table 6. *Clustering of Articles Based on Bibliographic Coupling*

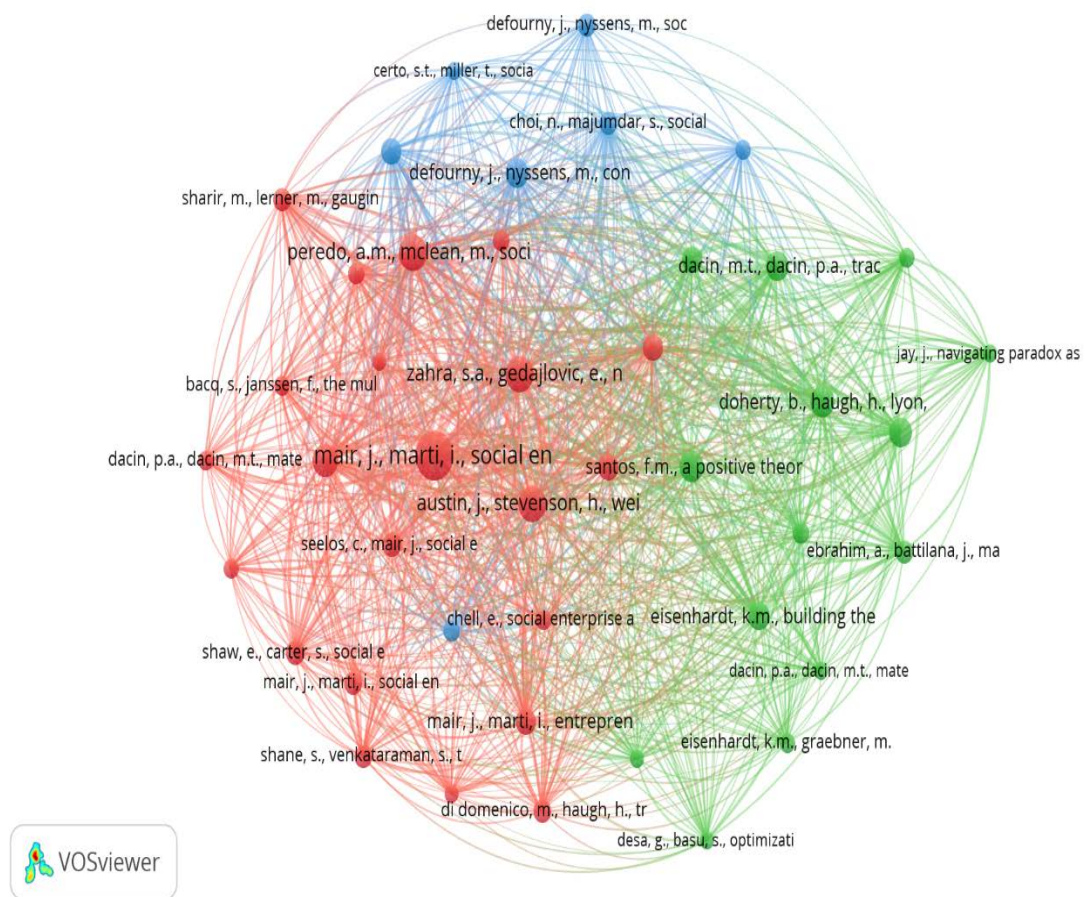
Descriptive Statistics	Cluster 1	Cluster 2	Cluster 3	Cluster 4	Cluster 5	Cluster 6	Cluster 7
TP	166	146	89	59	56	45	17
Period	2004:2020	2001:2020	2014:2020	2012:2020	2008:2020	2012:2019	2006:2020
Sources (Journals, Books, etc)	73	63	42	33	40	29	14
TC	5803	7061	2608	1126	1428	1392	6189
TC/TP	34.96	48.36	29.3	19.08	25.5	30.93	36.41
Co-authorship Information							
AUTHORS							
Authors	348	327	200	145	136	110	36
Author Appearances	394	350	231	155	141	125	40
Authors of single-authored documents	42	30	9	9	10	8	2
Authors of multi-authored documents	306	297	191	136	126	102	34
Single-authored documents	43	31	11	9	10	8	2
Documents per Author	0.477	0.446	0.445	0.407	0.412	0.409	0.472
Authors per Document	2.1	2.24	2.25	2.46	2.43	2.44	2.12
Co-Authors per Documents	2.37	2.4	2.6	2.63	2.52	2.78	2.35
CI	2.49	2.58	2.45	2.72	2.74	2.76	2.27
Note(s): This table presents information about the clusters. Here TP=Total Publication, Period=Period during which publication took place, TC=Total Citations, TC/TP=cites per paper, and CI=collaboration index							

Source: Research Data 2023

Co-citation Analysis (Cited References, Cited Sources and Cited Authors)

Co-citation counts are used to create metrics of similarity between documents, authors, or journals in co-citation analysis (McCain 1990). The philosophy of co-citation analysis hinges on the reasoning that the more two items are cited together, the more likely it is that their content is related. The co-citation of cited references in the field of SE is depicted in Figure 14. The cited sources with the strongest linkage are Pareto and Mair with a link strength of 65. They are followed by Mair and Zahra with a link strength of 64. Mair and Short with link strengths of 58, Mair and Weerawardena with a link strength of 48 as well as Mair and Austin with a link strength of 44. Others include Pareto and Zahra with a link strength of 42, Mair and Dacin with a link strength of 41 and Mair and Santos with a link strength of 40.

Figure 14. *Co- citation (Cited references)*

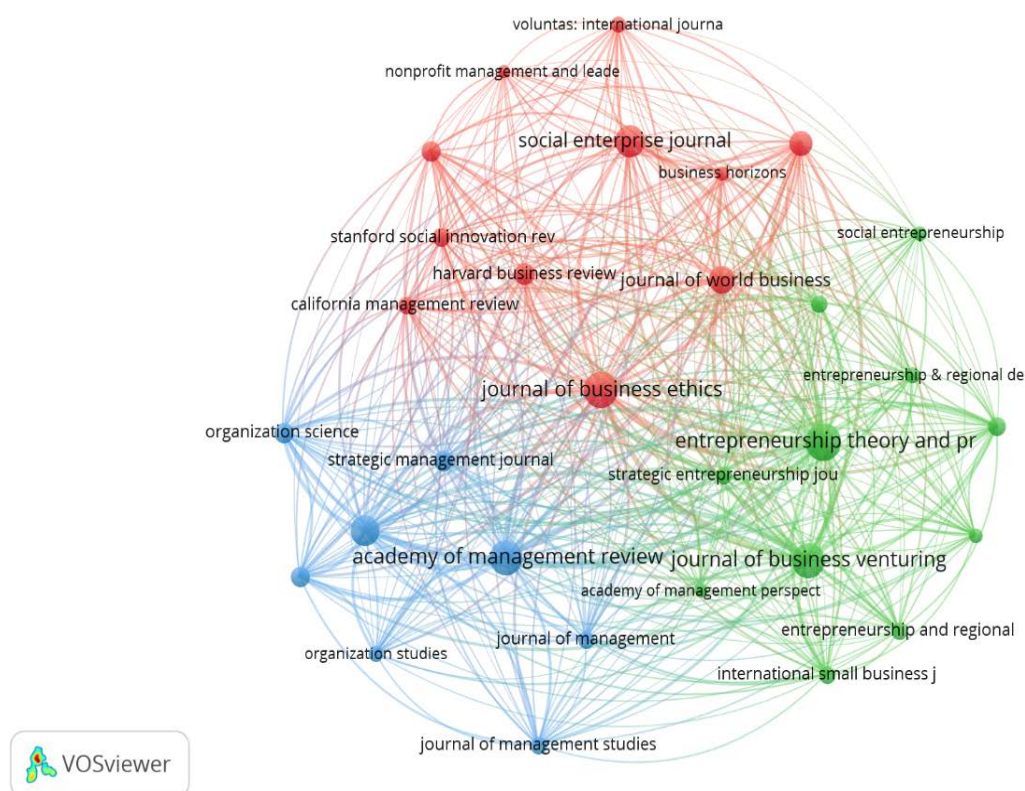


Source: Research Data 2023

Figure 15 illustrates the co-citation patterns among the referenced sources within the domain of SE. The sources referenced, namely the Journal of Business Venturing and Entrepreneurship Theory and Practice, demonstrate a robust

association with a link strength of 6047. The subsequent connections exhibit a link strength of 4389 between the Journal of Business Ethics and Entrepreneurship Theory and Practice, 4224 between the Academy of Management Review and Entrepreneurship Theory and Practice, 4207 between the Academy of Management Review and Academy of Management Journal, and 3938 between the Academy of Management Review and Journal of Business Venturing. Additional sources that have been mentioned and have high links include the Journal of Business Ethics and the Academy of Management Review, which exhibit a link strength of 3720. Furthermore, the Journal of Business Ethics and the Journal of Business Venturing exhibit a link strength of 3608.

Figure 15. *Co-citation (Cited Sources)*



Source: Research Data 2023

The co-citation of referenced authors in the field of SE is depicted in Figure 16. The figure indicates clearly that Mair plays a central role as it has been cited together with almost all prolific authors in the field of SE. The cited authors with the strongest connection are Mair and Battilana with a link strength of 1506. This is followed by Mair and Marti with a link strength of 1505, Mair and Tracey with a link strength of 1140, Mair and Dees with link strength of 1097 and Mair and Haugh with link strength of 985. Other cited authors with strong connections include Mair and Nicholls with link strength of 976, Mair and Lumpkin with link strength of 724, as well as Mair and Austin with a link strength of 705.

demonstrate a robust co-authorship network with the Farmer School of Business at Miami University, the Telfer School of Management at the University of Ottawa, and the Smith School of Business at Queen's University in Canada. The United States of America (USA) has a notable prevalence in engaging in partnerships with several nations. The prevailing subjects of interest included social business, social entrepreneurship, innovation, sustainable development, organizational structure, and non-profit organization. The documents pertaining to the area of SE within the specified time frame were categorized into seven distinct clusters. These clusters provide empirical support for the prevailing trends in the area of social entrepreneurship and will act as a valuable resource for identifying potential avenues for future study.

The findings of this study indicate a notable disparity in research representation within the subject of social entrepreneurship, particularly with regard to institutions located in developing nations. This observation suggests that there has been little investment by institutions in these countries towards research in the field of social entrepreneurship. This position is also disconcerting since many developing countries are now grappling with a multitude of societal issues. The existing obstacles and requirements are far from reaching an optimal state, therefore necessitating more research on the subject of social entrepreneurship (Diochon and Gore 2016; Claeyé 2017). Hence, there is a pressing need for increased funding towards research and scholarly investigations on social entrepreneurship as a viable avenue for identifying innovative and sustainable solutions to the many social challenges encountered in developing countries.

The results of this study have significant potential for professionals and scholars engaged in the field of social entrepreneurship. For example, the findings may assist researchers in identifying subjects within the field of social entrepreneurship that can provide guidance in exploring other study areas within the discipline. The findings of this study may also assist scholars in acquiring knowledge on the prominent institutions, nations, and writers in the field of social entrepreneurship. This information will be valuable in the pursuit of collaborative opportunities or academic exchanges in the future. Ultimately, the findings of this study may assist scholars in discerning significant and pertinent topics and research avenues within the field of SE. This, in turn, can facilitate more investigation and exploration in the future.

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