Bibliometric Analysis of Research on Socially Responsible Investing

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Abstract

SRI, or socially responsible investing, is an investment strategy that tries to produce profits while simultaneously fostering favourable social and environmental results. SRI has grown in popularity despite being once regarded as a very unconventional method. 85% of individual investors, up from 75% in 2017, expressed interest in sustainable investment, according to a 2019 Morgan Stanley survey. Due to the rising popularity of this investment discipline, research on socially responsible investment (SRI) is gaining importance recently. Therefore, the current attempt is to identify the key topics and the contemporary SRI research dynamics by employing bibliometric analysis using VOS Viewer software. The present study identified the most significant journals, authors, countries, articles, and themes in the field of SRI by conducting a bibliometric analysis of around 297 articles from 1993 to 2023 extracted from the Clarivate Analytics Web of Science database.

Keywords

Socially Responsible Investing, ESG investing, Citation Analysis, Bibliometric Analysis

1. Introduction

Socially responsible investing (SRI) is an investment strategy that incorporates environmental, social, and corporate governance factors in investment decisions to produce long-term, competitive financial returns and to have a beneficial impact on society. Socially responsible investing (SRI) also known as "ethical investing", "green investing", "impact investing", "mission-related investing", "sustainable, responsible, and impact investing", "ESG investing" and "values-based investing".

SRI has its roots in biblical times because Jewish law outlined guidelines for moral investing at that time. By forgoing investments in slavery or war during the American Revolution, Quakers, and Methodist immigrants introduced the idea of values-based investing to the country. In the 1700s John Wesley, a Methodist clergyman, outlined the fundamental principles of social investment like treating your neighbour with respect and avoiding industries like tanning since they might be harmful to employees.

Two schools of thought regarding SRI were presented by Rosen, Sandler, and Shani (1991). According to the first school, socially responsible investing is merely one of several actions investors carry out for social benefit, including recycling, cause dvocacy, energy conservation, etc. So, making investments in socially conscious businesses is only an extension of one's lifestyle. The other school calls the SRI a "guilty yuppie." As a result,

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socially responsible investment is a practice rather than a feature of an all-encompassing lifestyle meant to make up for a "me-oriented" manner of living (Rosen et al., 1991).

Modern SRI may be dated back to the 1960s and 1970s in the United States when issues like civil rights, the Vietnam War, gender equality, climate change, and nuclear power became more significant. (Syed, 2017). Since the 1980s, the concept of sustainable investing has gained widespread acceptance in the financial industry. The term ESG (Environmental, Social, and Governance) investing came into the limelight when UN secretary general Kofi Annan quoted this term in his letter addressed to 55 CEOs across the globe (Meher et al., 2020).

SRIs have been widely used in the financial industry since the 1990s, but they didn't begin to get scholarly attention until the beginning of the 2000s (Renneboog et al., 2008). Since then, academic literature has started to discuss a range of research studies with socially responsible investing as their central focus.

Beginning with altruism, stakeholder, diversity, and performance characteristics, the theoretical discussion of socially responsible investments considered several aspects of ethical investing. Academics in this field are currently very interested in the financial performance of socially conscious investments (Syed, 2017). Since SRI is primarily implemented through mutual or exchange-traded funds, a significant amount of study has been done on it with an emphasis on how profitable it is in comparison to conventional investments (Becchetti et al., 2015). There were also many studies like Chegut (2011) and Renneboog (2008) which provided a comprehensive review of the SRI literature.

Despite this scholarly interest, the bibliometric aspects of the SRI literature that characterize the academic dispute are not subjected to a quantitative examination. The purpose of the present study is to contribute to the literature on Socially Responsible Investing by carrying out a bibliometric analysis of research on SRI using a wider horizon of 1993 to 2023 and by specifically focusing on the

keywords "socially responsible investing" and "ESG investing".

The current study aims 1) To identify and showcase the instrumental aspects of SRI such as prominent authors, journals, keywords, and countries using bibliometric analysis. 2) To identify the analytical dimensions of the literature and divide the currently available literature into different research streams by employing cluster analysis.

There are five sections total in the paper, including the introduction. The study's methodology is shown in Section 2. Section 3 presents the bibliometric analysis (important facets of SRI literature). Network analyses of academic publications (research pathways in SRI literature) are depicted in section 4 and the discussion and conclusion of the paper are presented in section 5.

2. Methodology

The bibliometric analysis approach is the methodology employed in this paper. Pritchard (1969) employed it for the first time, and it has since become widely used to help quantitative analysis in literature comprehension. Using preferences or citations, this strategy helps to find pertinent articles from the network of existing literature. We use the Vos Viewer software to visualize the patterns of previous studies on socially responsible investing (SRI). The methodology employed for the study is shown in Figure 1.
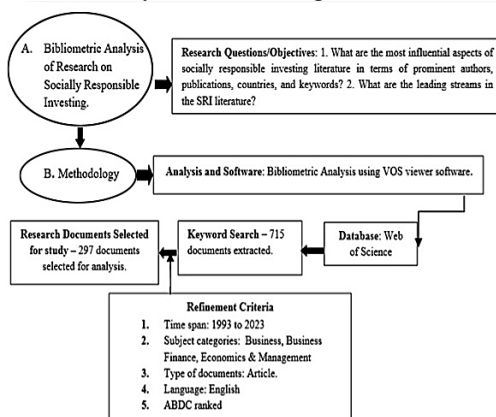

Figure 1. *Methodology structure evolved by the researchers.*

2.1 *Selection of database*

The bibliometric information for the articles was gathered from the Clarivate Analytics Web of Science database to conduct the bibliometric citation analysis. The Web of Science (WOS) database was chosen since it is a substantial database that integrates six other databases and contains all of the important journals from 1950 (Paltrinieri et al., 2023).

2.2 *Selection of Articles*

Data were retrieved from the Web of Science core collection platform in January 2023 to obtain information pertinent to this investigation. Based on the authors' judgment a set of relevant search terms ("Socially Responsible Investing" OR "ESG Investing") was used to search the articles in the fields of the database such as "title", "abstract" or "keywords", yielding 715 initial results. The search was then refined by - *Web of Science Categories*-(Economics OR Business Finance OR Business OR Management) AND *Document types*- (Article) AND *Language*- English, *Timespan*-1993-2023 which resulted in 330 articles. Out of these 330 articles, 297 articles were from ABDC-rated journals, so the authors limited their final number of articles for analysis to 297. ABDC-rated journals are the top-rated journals in Business compiled by the Australian Business Deans Council. The A*, A, B, and C rating categories form the basis of the ABDC list. Thus, a total of 297 articles made up the final database used for this bibliometric review. An overview of the literature search is presented in Table 1.

Table 1. *Summary of Literature Search*

Document Type	Journal article
Language	English
Database	WOS
Technique used	Bibliometric analysis
Analysis Software	VOS viewer
Period of Study	1993- 2023(January)
Total articles selected	297

Source: Compiled by the authors

2.3 *Initial data statistics*

The last few decades' publication patterns of socially responsible investing articles are shown in Figure 2. The growth of publications on responsible investing shows an uneven trend with the highest number of articles in 2021. The academic interest in SRI seems to be increasing from the year 2019 onwards.
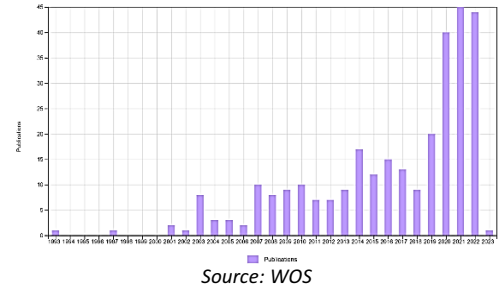

Source: WOS

Figure 2. Annual Number of Publications

2.4 *Data analysis*

To identify the most significant and influential elements of the published literature in the field of ethical investment and to pinpoint potential areas for further study, bibliometric and network analyses were carried out using the VOS viewer software.

3. Bibliometric Analysis

Utilizing VOS viewer software, a bibliometric study was done to determine the important authors, sources, words, and countries in the SRI literature. The 297 papers that were chosen for examination are summarized in Table 2 below. These 297 articles, which have 623 authors and 1135 keywords from 48 different countries, were gathered from 106 sources (publications). The following sections highlight the key elements of the literature on socially responsible investing as identified by bibliometric analysis.

Table 2. *An Overview of the Bibliometric Analysis*

Descriptions	Results
Total number of sources	106
Total number of research documents	297
Total number of authors	623
Total number of countries	48
Total number of keywords	1135
Total number of author keywords	704
Total number of index keywords	323
Total number of cited sources	91
Total number of cited documents	255
Total number of cited authors	527
Total number of cited countries	46

Source: compiled by the authors

3.1 *Main Authors*

Overall, 623 authors were identified. Only 80 of these 623 authors, according to the coauthorship map on authors, meet the requirement of at least two documents per author. As illustrated in Figure 3, the coauthorship map based on authors reveals that the highest linked author stands at 8. With a total link strength of 20 in 11 links, those 8 items represent clusters 1 (three items), 2 (three items), and 3 (two items).

Table 3 lists the top 10 authors in the field of socially responsible investment (SRI) based on the number of citations received for their published papers, either as a single author or as a co-author. With the most document contributions and citations, Bert Scholtens came out on top, followed by Jenke R. Ter Horst and Auke Plantinga.
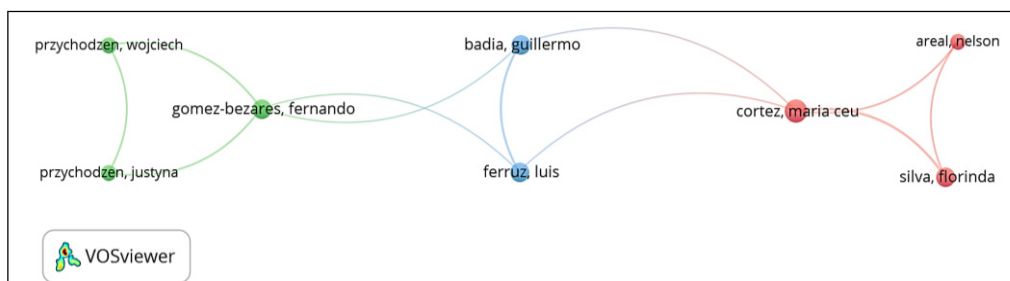

Figure 3. *Visualization of Coauthorship Map*

Table 3. *Top Influential Authors*

Sl.No.	Author	Documents	Citations	Total link strength
1	Bert Scholtens	8	700	6
2	Jenke R. Ter Horst	3	550	4
3	Auke Plantinga	2	463	2
4	Jeroen Derwall	3	395	3
5	Alexander Kempf	2	377	2
6	Peer Osthoff	2	377	2
7	Luc Renneboog	2	370	1
8	Elroy Dimson	3	315	0
9	Christophe Revelli	4	287	0
10	Kees Koedijk	3	284	4

Source: compiled by authors

3.2 *Dominant Journals in the Field*

A citation map based on sources with a minimum threshold limit of one document, with at least one citation, of a source reveals that out of 106 sources, 91sources met the required minimum threshold and they constituted a total of 19 clusters containing 91 items with a total strength link of 783. Figure 4 displays the density visualization of the sources citation map.

Table 4 displays the top 10 sources with the most citations. With 44 documents and 2503 citations, the Journal of Business Ethics came in first. It was followed on the list by the Journal of Banking & Finance and the Journal of Financial Economics, which received 1623 and 1115 citations, respectively.
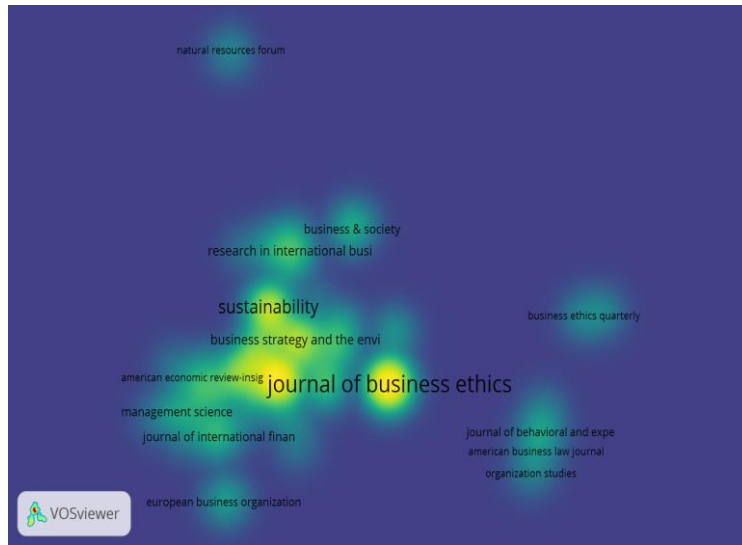
Figure 4. *Density Visualization of Sources Citation Map*

Table 4. *Dominant Journals in the Field*

Sl.No.	Source	Documents	Citations	Total link strength
1	Journal of Business Ethics	44	2503	243
2	Journal of Banking & Finance	10	1623	117
3	Journal of Financial Economics	5	1115	79
4	Strategic Management Journal	2	889	37
5	Financial Analysts Journal	4	398	50
6	European Financial Management	2	352	54
7	Management Science	4	342	30
8	Business Ethics-A European Review	4	334	61
9	Journal of Corporate Finance	1	327	46
10	Business Strategy and the Environment	6	323	31

Source: compiled by authors

3.3 *Top Influential Keywords*

There were 1135 identified keywords in total, however, only 323 of them met the requirement of having at least two occurrences. The co-occurrence map of socially responsible investing and other terms is shown in Figure 5. Only 202 of the 1135 keywords are connected to one another with 2183 linkages and a total strength link of 3579, according to the keyword co-occurrence map.

The authors determined the top 20 keywords based on the highest occurrences, as shown in Table 5, based on these co-occurrences of keywords. "Socially responsible investing", "performance", "risk", and "ESG investing" are the most used keywords in the research domain of responsible investing, with link strengths of 509, 379, 314, and 203, respectively.
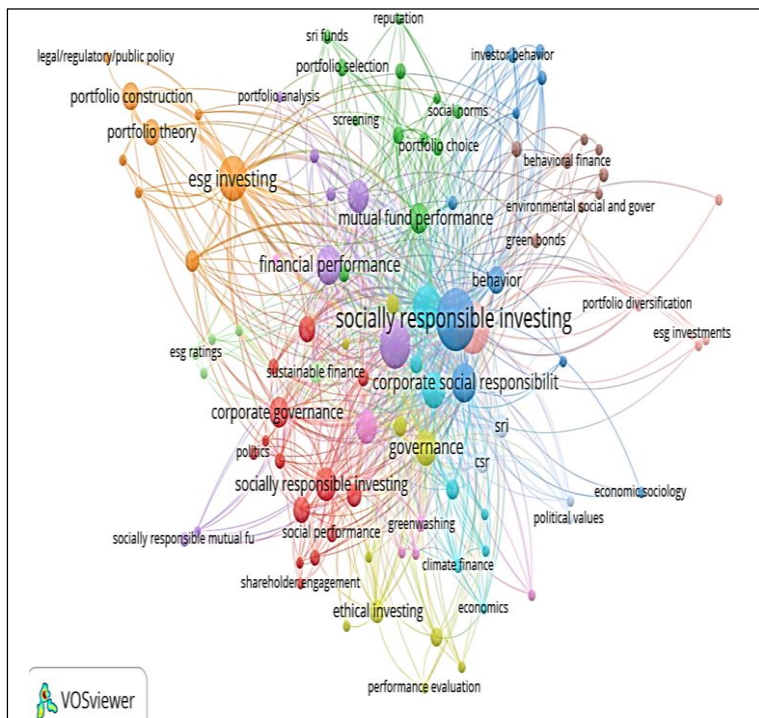
Figure 5. *Visualization of keywords co-occurrence map*

Table 5. *Top Influential Keywords*

Sl.No.	Keyword	Occurrences	Total link strength
1	socially responsible investing	117	509
2	performance	76	379
3	risk	58	314
4	ESG investing	52	203
5	investment	47	283
6	corporate social responsibility	38	196
7	financial performance	37	206
8	ESG	29	155
9	returns	29	170
10	governance	28	186

Source: compiled by authors

3.4 *Top Influential Countries*

A map of citations based on countries with a ceiling limit of one document per country and a minimum of one citation per country reveals that, out of 48 countries, only 2 did not meet the necessary threshold, and the other 46 formed 8 clusters with 331 links and a total link strength of 1616.

As shown in Figure 6 and Table 6, the US with a total strength link of 539 is the country that contributes the most to the field of Socially Responsible Investing (SRI) both in terms of publications (110) and in the number of citations (6033), followed by the Netherlands and England. Apart from the developed countries, emerging nations like China, India, and South Korea also managed to get into the top 20 list.
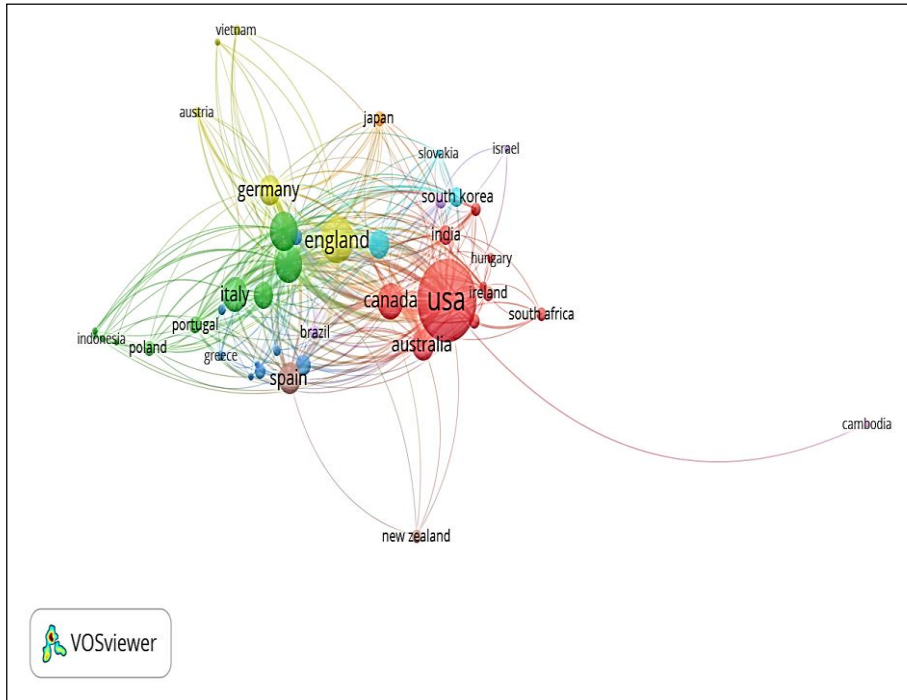
Figure 6. *Visualization of Countries Citation Map*

Table 6. *Top Influential Countries*

Sl.No.	Country	Documents	Citations	Total link strength
1	USA	110	6033	539
2	Netherlands	23	2210	434
3	England	36	1671	317
4	Canada	22	1421	146
5	France	25	1174	202
6	Germany	15	751	193
7	Spain	17	435	150
8	Scotland	12	423	103
9	Belgium	5	376	91
10	Australia	17	362	141
11	Italy	20	339	145
12	Portugal	5	184	86
13	Denmark	4	168	42
14	China	14	140	97
15	Slovakia	1	97	26
16	Switzerland	8	95	35
17	India	7	78	43
18	Finland	2	69	15
19	Hungary	2	63	8
20	South Korea	7	61	36

Source: compiled by authors

4. Network Analyses of Scholarly Publications: Research Pathways in SRI Literature

4.1 *Coauthorship Visualization*

The study examined the coauthorship network of researchers in the field of socially responsible investing using VOS viewer. Two crucial consequences of the coauthorship network are as follows: First, it aids in pinpointing the authors' influential works so that other researchers might approach them. Second, a coauthorship network can help recognize the unique potential work, which is important for advancing any topic of research (see Figure 7 and Table 3).
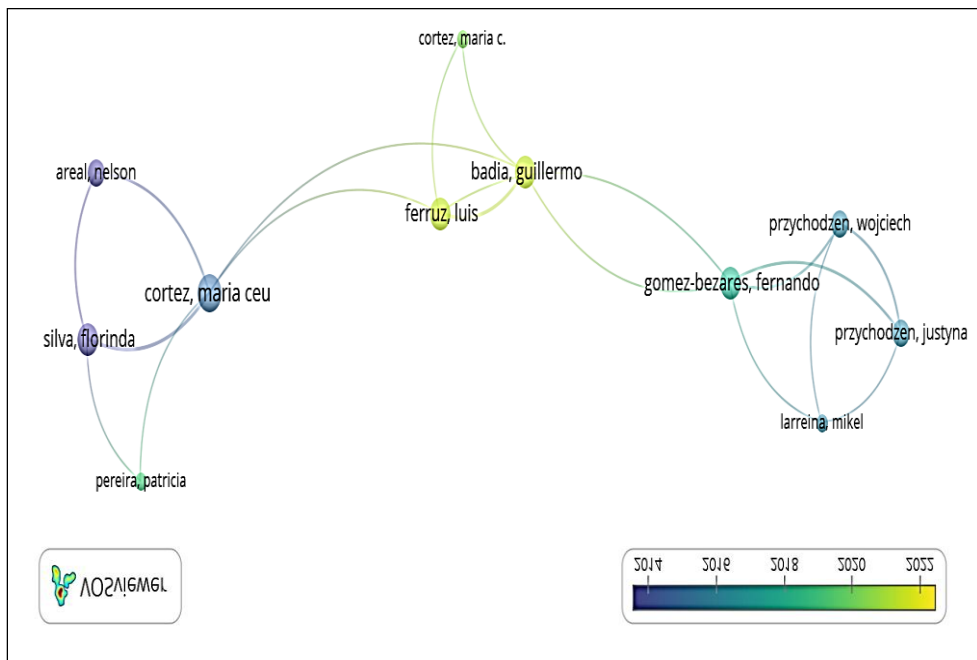

Figure 7. *Overlay Visualization of Coauthorship Map*

4.2 *Cluster Analysis*

The authors used the VOS viewer software to perform a keyword cluster analysis to determine the main research streams. Based on the frequency of terms, a total of 12 clusters with a combined link strength of 1589 and 750 linkages were found. The bibliometric network of research on socially responsible investing is depicted in Figure 8. Table 7 displays the most significant clusters combined with prominent keywords.

Based on the repetition of keywords, researchers found three clusters. The three clusters identified are Cluster 1: socially responsible investing and performance evaluation indicated by the colour black, Cluster 2: socially responsible investing and corporate social responsibility shown inside the blue colour, and Cluster 3: socially responsible investing and investor behaviour outlined in colour red.
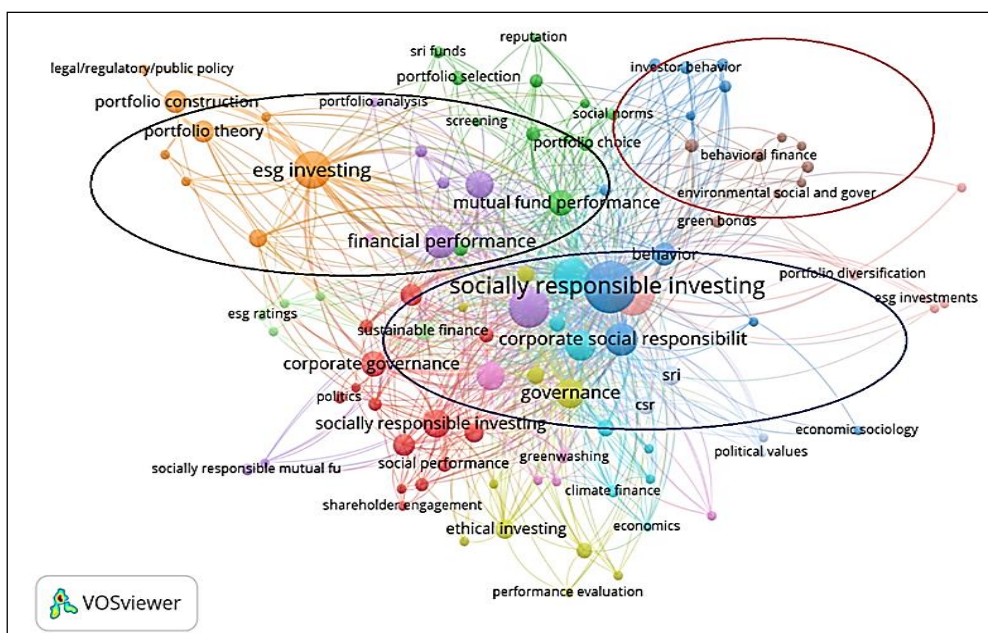
Figure 8. *Visualization of keywords Citation Map using Cluster Analysis*

Table 7 *Significant Clusters with keywords*

Cluster	Name of cluster	Keywords
Cluster 1 (Black)	Socially Responsible Investing and Performance Evaluation	asset pricing, asset prices, environmental issues, socially responsible investing, ethical investing, mutual fund flows, mutual fund performance, portfolio choice, portfolio performance, social norms, sri funds, screening, sin
Cluster 2 (Blue)	Socially Responsible Investing and Corporate Social Responsibility	corporate social responsibility, corporate governance, corporate stakeholders, shareholder activism, shareholder engagement, shareholder resolutions, social movements, responsible investments, social performance
Cluster 3 (Red)	Socially Responsible Investing and Investor Behaviour	investor behaviour, behavioural finance, esg, experimental finance, financial literacy, bias, sin stocks, social norms, social screening, socially responsible investments(sri), ethical investors

Source: compiled by authors

5. Discussion and Conclusion

By utilizing bibliometric analysis to quantitatively analyze the instrumental and analytical aspects of the SRI literature, the current study adds to the academic discourse on socially responsible investing. A total of 297 articles published in 106 academic journals during the last 30 years were used for analysis. The data for analysis were collected from the Web of Science database. The most

influential authors, journals, keywords, and countries in the field of responsible investing were identified in the study.

Along with these, the authors were able to identify three prominent research streams in the socially responsible investing field by conducting a cluster analysis. The identified three dominant research streams are (i)SRI

Performance, (ii) SRI and Corporate Social Responsibility, and (iii) SRI and Investor Behaviour. Future researchers can utilize these themes to guide a thorough content analysis of highly cited publications from different streams to recognize, justify, and validate the relationships between the articles. In the following respects, this study significantly adds to the body of knowledge on socially responsible investing: The study began by identifying the major elements of socially responsible investing, including well-known publications, authors, keywords, and nations. Secondly, three research streams were identified from the literature using cluster analysis. Third, a coauthorship network of authors was introduced, which may help future researchers to find key authors in the field.

One of the study's flaws may be related to bibliometric citation analysis, which is meant to concentrate on highly cited papers and may exclude some articles if they obtain few or no citations depending on the limits of criteria used. The study covers only the published articles in the Web of Science database, so it is recommended that future researchers use other databases like Scopus or a combination of the two to get a comprehensive view of the socially responsible investing arena and contribute substantially to the future research agenda.

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