

# DETERMINING CORPORATE SOCIAL RESPONSIBILITY AND CONSUMER BEHAVIOR TRENDS AND FORECAST BY A HISTORICAL REVIEW: A BIBLIOMETRIC ANALYSIS

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## ABSTRACT

*The purpose of the study is to examine the regional distribution, size and evolution of the knowledge base by identifying key authors, keywords, journals, and documents by investigating the current literature, intellectual structure, and underscoring topical trends of Corporate Social Responsibility and Consumer Behavior (CSR-CB) research. Furthermore, this study also provides profound insights on CSR-CB research. The sophisticated bibliometric techniques provide updated insights into evolving trends of CSR-CB research, its core authors, and their affiliations. This study also examines the thematic trends of CSR-CB research using bibliographic coupling and the authors also attempted to explore the knowledge structure of CSR-CB research. The findings revealed a knowledge base that is still in the new phase, with a global scope, but most scholarly work is concentrated in developed societies. This review hopes to guide a new generation of CSR-CB research scholars by providing an overview of the current status of the knowledge base. This is the first study of its kind, which probes the bibliometric reflection on CSR-CB research history.*

**Keywords:** Bibliographic Technique, Corporate Social Responsibility, Consumer Behavior, Co-occurrence, VOS Viewer

## INTRODUCTION

Recently, scholars attempted to examine topics concerning sustainability and socially responsible behavior as both these concepts go hand in hand (Eizenberg & Jabareen, 2017). Global warming, climate change, depletion of resources, and other social and cultural impact of the firms

on the society are caused by the behaviors of those who inhabit this planet in different roles, and consumers are one of them (Nova-Reyes, Muñoz-Leiva et al., 2020). With these environmental and societal issues, individuals have become more concerned about their social and ethical role towards society (Mohammed & Al-Swidi, 2020). Researchers and practitioners are fully aware of these consumers' concerns and have addressed these issues from several perspectives. These perspectives include Corporate Social Responsibility (CSR), socially responsible behavior, Green Behavior, and ethical consumerism (Nova-Reyes & Muñoz-Leiva et al., 2020). Consumers may have a positive attitude towards the socially responsible practices, as they wish to behave in a manner that can reduce their negative impact on society and environment by favoring the socially responsible (CSR) practices of the firms.

The concept of CSR is receiving considerable attention from researchers and practitioners. It has inspired empirical research in the field of organizational behavior, management, and marketing for almost three decades (Raza & Rather et al., 2020; Vishwanathan & Van et al., 2020). In recent years, CSR has been viewed as a tool for companies to develop a long-lasting relationship with their stakeholders (Aljarah, Emeagwali et al., 2018). CSR is referred to as "a strategic commitment of an organization to build a healthy relationship with its stakeholders, serving community, and environment (Williams & Siegel, 2001). Incorporation of the CSR has become indispensable for firms. Previously CSR is considered a philanthropic attribute of a firm, and now its definition has transcended to economic, environmental, and ethical concerns. The incorporation of CSR makes a business model successful and results in comparative advantage in the form of positive consumer behavior (Jarrah & Emeagwali 2017; Ye & Kueh et al., 2020).

By looking at the impact of a firm's activities on society and the environment, we wonder whether consumers demonstrate responsible behavior, and prefer socially responsible products and services. A number of studies investigated this relationship in different industries such as banking, hospitality, tourism, retail, and manufacturing industries (Farrukh & Sajid et al., 2020). The meta-analysis conducted by Jarrah & Emeagwali 2017 synthesized the results of 37 articles on the relationship between CSR and Consumer Behavior (CB). They confirmed that the relationship between CSR and CB is well established, with an effect size of 0.42. They also found that CSR has the most influence on repurchase intention, followed by loyalty intentions, and word of mouth. Several reasons for this positive effect of CSR on CB have been identified. First, CSR activities of the firms were found to have a significant positive impact on the firm's image and reputation. CSR activities of the firms enhance their attractiveness to prospective stakeholders, including customers. CSR activities signal firms' norms and values, which then influence stakeholder's perception of the firm's culture and environment (Vishwanathan & Van et al., 2020). Second, firms' CSR activities result in the emotional attachment of the consumers, which increases their satisfaction and loyalty (Raza & Saeed et al., 2020). Lastly, CSR activities of the firms enhance the relationship quality between the consumers, which results in positive behavioral intentions of the consumers (Nyadzayo & Leckie et al., 2016).

This study attempted to examine the conceptual evaluation between CSR and CB relationship. Moreover, no study had investigated whether the relationship between CSR-CB is developed or fragmented theme through rigorous compilation of all previous studies. To, address the important research gap, and to decipher the above research questions, a bibliometric analysis was applied to the corpus of manuscripts on CSR-CB relationship indexed in the Scopus bibliographic database from 2001 to 2020. This study attempted to examine the conceptual evaluation between CSR and CB relationship. Moreover, no study had investigated whether the

relationship between CSR-CB is developed or fragmented theme through rigorous compilation of all previous studies. To, address the important research gap, and to decipher the above research questions, a bibliometric analysis was applied to the corpus of manuscripts on CSR -CB relationship indexed in the Scopus bibliographic database from 2001 to 2020. Bibliometric analysis of different journals and topics has been conducted by several researchers for instance Farrukh & Meng, et al., (2020) conducted bibliometric analysis on the Journal of Sustainable Development. Bibliometric analysis on the Journal of Business Strategy and Environment and on Corporate Social Responsibility and Environmental Management is conducted by (Farrukh & Meng et al., 2020; Wu & Farrukh et al., 2021). Gu & Meng et al., (2021) did bibliometric study on international journal of sports marketing & sponsorship.

Bibliometric studies are a quantitative way of measuring your research impact, so are seen as objective (Shahzad & Farrukh et al., Farrukh & Shahzad et al., 2020; Farrukh & Raza et al., 2021; Gao & Meng et al., 2021). As some authors conducted bibliometric studies on journals, some scholars conducted bibliographic studies on topics as well (Nawaz & Saeed et al., 2020; Farrukh & Javed et al., 2021; Gu & Meng et al., 2021).

As per the author's knowledge, there is no study that applied the bibliographic analysis on the relationship between CSR-CB. Research using the bibliometric analysis to review articles on the CSR-CB relationships remains scarce. The bibliographic analysis on the relationship between CSR-CB provides a holistic picture of this domain through unveiling the evolution of the hotspots in this area. Furthermore, this study provides more information on the key issues on the paradigm of ethical consumers. This study also underscores the better comprehension of the main study topics, so that the CSR-CB relationship can be better inferred and consolidated. This will help the scholars and practitioners to discern the "tipping point" that will ultimately result in the development of socially responsible consumer behavior by the agents in the market.

This bibliographic analysis will contribute to the literature in the following ways. First, this study helps to explain more on the CSR-CB relationship, particularly consumer behavior with regards to ethical consumption, green consumption, and responsible consumption. More specifically, this study aids in understanding to what extent the CSR-CB relationship is developed or fragmented in the academic literature. Secondly, this study seeks to answer what are the different themes that evolved in the CSR-CB relationship since 1991. As hundreds of the papers have been published in esteemed journals since 1991. It will be interesting to consider the contemporary status of the different themes that have evolved over some time. Lastly, this study depicts the most important themes and the subject areas in the CSR-CB relationship. As, research on the CSR-CB relationship is fragmented, and the dynamic nature of these concepts make it absolutely necessary to redefine this concept and to consider how it has evolved over a period of time. To accomplish the research objectives, authors use VOS software for analyzing and visualizing the trends and patterns in scientific literature based on Scopus indexing. This will help the scholars, editors, and practitioners in discovering the key points in the development of the CSR-CB relationship while comprehending and interpreting the historical patterns and networks.

## METHODOLOGY

The data on CSR and CB for bibliometric analysis is extracted from the Scopus database. Two search terms particularly used as the topic, to extract data from Scopus included "TITLE-ABS-KEY ("Corporate Social Responsibility") AND TITLE-ABS-KEY ("Consumer Behavior)". The choice of the database was based on its largest repositories range with wide data. Scopus is useful in the

analysis due to its provision of information regarding bibliography, including authors, journals, and citations. Research results can be significantly impacted by the selection and use of criteria in the searching process. This is evident in the previous bibliometric paper as a highly polluted sample was generated in the study by the use of ["sustainable\*"] as a search query in the WOS database to comprise the relevant phase ("sustainable" and "sustainability"). Another such research situation prevailed when medical, nursing and social sciences content resulted from the use of terms ["Social Responsibility"] and ["CSR"] for the CSR topic. The search term ["Corporate Social Responsibility"] and ["Consumer Behavior"] are used as central phrases of current research, so the academic field of CSR/CB can be accurately presented. Zemigala (2019) ensured the low contamination of data using these central phrases. The current research is only focused on "topic" (including searching in "title", "abstract", and "keyword"). To ensure the inclusion of all research paper that is relevant to both phrases mentioned above, no chronological filter is used. The research only considered scientific articles written in English and have excluded the research sources of editorial, book reviews, meetings, and other sources of less scientific contribution acknowledgment like commercial magazines and conferences. The data set of 272 articles of time series 2001 to 2020 is collected from the selection of raw data for further research analysis.

### **Analytical Tool**

VOS viewer and Bibliometrix package of RStudio was used to draw the intellectual structure. The capabilities of VOS viewer and RStudio in analyzing the structure of potential knowledge from literature make this combination the preferred choice for this study. This software uses an integrated visualization system to analyze literature and interpretable the domain of visualized knowledge at a high level using its functions of visual analytics. Along with this, the importance of its use is enhanced due to its key features including identification of emerging trends, knowledge network of various recent relevant academic papers hotspots, and intellectual basis. In addition to these features, this software can analyze the network of the collection using various dimensions of authors, cited authors, countries, keywords, cited references, institutions, keywords, and cited journals.

The bibliometric technique delivers various benefits that are listed as follows:

Ho (2018) suggested that bibliometric techniques appropriate fit for academic field with massive publications like exploring literature's internal relationship, as compare to qualitative analysis techniques. Secondly, the presence of quantitative statistical analysis and finding base on these analysis and reliable data set provide reliable research from larger regions and covers major discipline (Zemigala 2019). These reliable findings cover the majority of regions and disciplines are supported by a huge quantity of peer-reviewed publications in the bibliometric technique. Thirdly, this technique helps in scope classification. As the study evolutions, hotspots, and insight about the emerging areas of research are based on the essentials of the discovery of influential papers or authors, or the leading cluster of present research (Fahimnia & Sarkis et al., 2015). Structure of discipline is also discovered using this technique due to visualizing network analysis in this method.

## **RESEARCH OVERVIEW**

### **Number of Publications by Year**

Data collection to analyze the developing trends of academics in the Scopus database shows that there was not such a valuable increase in the publication in the Scopus database until 2010 since its first indexation in 2001. The recent rise in publications shows the trend of these topics for

current and upcoming research in the academic field. The summary of publication in the CSR/CB domain over years is present in the table. The novelty of concerning research regarding CSR/CB indicated by the publication in the last decade is 90% (243 out of 272 articles). The current year's publications till Sep 2020 are 30 which show a significant increase as compared to last year's publications. The decreasing trend is observed due to missing data about publication later on August 4, 2019, as the data collection for current research was done on this date.

2020	30
2019	29
2018	29
2017	20
2016	30
2015	21
2014	16
2013	22
2012	17
2011	19
2010	10
2009	8
2008	3
2007	7
2006	2
2005	3
2004	2
2003	1
2001	3

### Source of Publication

Publication distribution from different journals is presented in this section, with the Top 10 journals that are published under CSR/CB presented in table 2. In around 246 journals, 1006 articles related to the topic were published. High-ranked publishers and top journals on CSR/CB are listed as follows; Publication of 16 articles in “Journal of Business Ethics” makes it the most productive Journal. The second best is the “Social Responsibility Journal” with the publication of 10 articles then “Sustainability Switzerland” having 9 articles in it. Followed by “Journal of Business Research with eight articles and seven articles published in the journal of consumer marketing”. While Corporate Social Responsibility and Environmental Management published five articles.

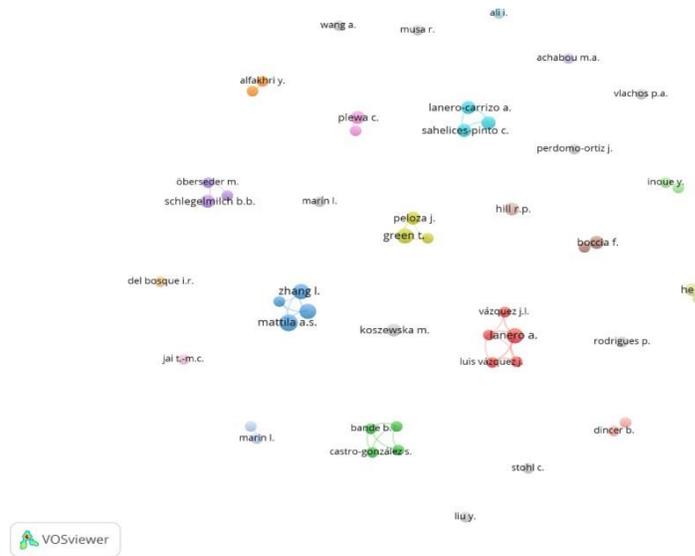
Journal of Business Ethics	16
Social Responsibility Journal	10
Sustainability Switzerland	9
Journal Of Business Research	8
Journal Of Consumer Marketing	7
British Food Journal	6

Corporate Social Responsibility And Environmental Management	5
European Journal Of Marketing	5
International Journal Of Contemporary Hospitality Management	5
Journal Of Cleaner Production	5
European Business Review	4
International Journal Of Bank Marketing	4
Journal Of Retailing And Consumer Services	4
Journal Of Services Marketing	4

### Author and Co-Authorship Analysis

VOS viewer software is used to visualize the cooperative network among authors. The software used the data collection set for the time frame of 2001-2020 and in node type “Author” is selected, with a selection of 50 of the topmost cited items. The author collaboration network that is presented in fig 2 is thus obtained by running VOS viewer after the selection mentioned above. The thickness of the link among nodes shows the strong collaboration among authors’ and author’s name size and node is representing the publication number by these authors. This analysis provided useful information about authors having more publications related to CSR/CB during the time of 2001 to 2020. The highest number of articles is 5 by Mattila followed by Green, Hanks & Lancero with 4 articles each. Boccia, Hill, Koszewska, Peloza, Plewa, Sahelices-Pinto, Schuegelmic, & Vazquez each contributing in the field with 3 articles on the topic. Analyzing the collaboration of research among authors in this research shows that a network of strong connections among research publications is formed by Mattila, and her team members. These authors have worked on applications and implementation of the newly proposed CSR practice index in co-authored articles. The indicators of CSR commitment degree and CSR performance from converted relevant information are found in their co-authored articles. Moreover, CSR development simulated force on company CSR development is focused on the recent articles published by these authors.

Mattila, A.S.	5
Green, T.	4
Hanks, L.	4
Lanero, A.	4
Boccia, F.	3
Hill, R.P.	3
Koszewska, M.	3
Peloza, J.	3
Plewa, C.	3
Sahelices-Pinto, C.	3
Schlegelmilch, B.B.	3
Vázquez-Burquete, J.L.	3



**FIGURE 1  
CO-AUTHORSHIP**

**Affiliation Analysis**

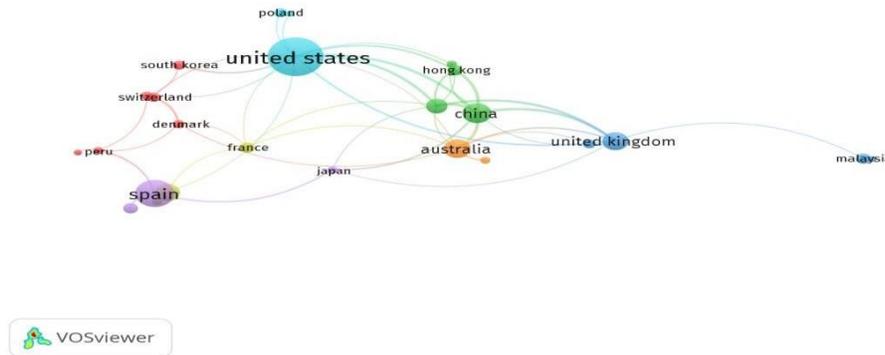
Bibliometric analysis’s organizational distribution of 272 articles relevant to CSR/CB is presented in Table 2, which shows the highest contribution in these articles is 7; by Florida State University and Universidad de León. The second-highest number of articles is 6 contributed by the Pennsylvania State University and then followed by the Parthenope University of Naples 5 papers. The analysis presented in Table 2 shows that the top institute contribution is put forwarded by institutes are from the western economies. This may suggest the high focus of Spain and the Institutes located there regarding CSR in the SD topic.

<b>Table 4 MOST PRODUCTIVE UNIVERSITIES</b>	
Florida State University	7
Universidad de León	7
Pennsylvania State University	6
Parthenope University of Naples	5
Universidad de Murcia	4
Universidad de Cantabria	4
Wirtschaftsuniversität Wien	3
Universidad de Castilla-La Mancha	3
Brock University	3
King Abdulaziz University	3
The University of Adelaide	3
Lodz University of Technology	3
Texas Tech University	3
The University of North Carolina at Chapel Hill	3
University of Michigan, Ann Arbor	3
Michigan State University	3
Griffith University	3
Pontificia Universidad Catolica del Peru	3

## Country/region Analysis

The regional analysis of publications shows the highest contribution of 70% by European countries, which makes the region a frontier in the academic of CSR/CB field publications. Out of 272 articles 63 were published in the USA and 36 in Spain that comprises 36.3% of the total data set of articles. Some of the other major contributions are by China with 21 of total articles, 19 articles from Australia, and 18 articles are from the United Kingdom. These three countries on the whole contributed around 29% of the total published articles of 272. All countries' and regional contributions in this academic field are listed in Table 3. The trend of high publication is mostly observed in countries with rich cultural backgrounds, actively operating businesses, and a high number of academic institutions (Zemigala, 2019). These features of economically developed regions validate with the investigation finding of 5 plus article publications. The findings show that out of 38 countries that published more than 5 articles on this topic 30 belong to the developed nation criteria while the rest of them are developing countries including Brazil, Thailand, Pakistan, China, India, Malaysia, Mexico, & Turkey. Cites Space is used to further explore this collaboration among countries, using the similar setting to run with the node type changed to "Country" as shown in Fig. 3. The result shows a strong inter-group co-operation with a network of 46 nodes, 119 links, and 0.0415 density. High level of national authorship among cross nationals found between USA, China, United Kingdom, and Spain. Where the second largest cluster is observed among Hong Kong and Australia. Spain with a high number of individual publications in the CSR/SD field statically has lesser collaboration with other countries. 61 countries minimum 3 documents 30 connections were identified.

United States	63
Spain	36
China	21
Australia	19
United Kingdom	18
Italy	17
Canada	13
Taiwan	11
Brazil	7
France	7
Hong Kong	7
India	7
Malaysia	7
Portugal	7



**FIGURE 2**  
**BIBLIOGRAPHIC COUPLING AMONG COUNTRIES**

### CO-CITATION ANALYSIS AND BIBLIOGRAPHIC COUPLING

Co-citation analysis and bibliographical coupling employ citation data to establish measures of influence and similarity. In bibliographic research, co-author analysis incorporates co-authorship data to measure the collaboration of different scholars in different countries and regions. Lastly, co-word analysis is about finding connections among documents, keywords, titles, and abstracts.

Mainly, studies based on the bibliometric methods provide a citation analysis of a research field. Generally, the citation analysis probes the most cited authors, journals, and studies in a specific area. To measure the impact and influence of a study and author, citations are used. For instance, an article has contributed to the body of knowledge if the other scholars massively cited it. It means, other scholars seek this important article one for their work, as it is heavily contributing to the literature. Although citation analysis provides information about the influence of one's work, it has some limitations. For example, citation analysis fails to offer and identify networks of interconnections among the scholars (Üsdiken & Pasadeos, 1995).

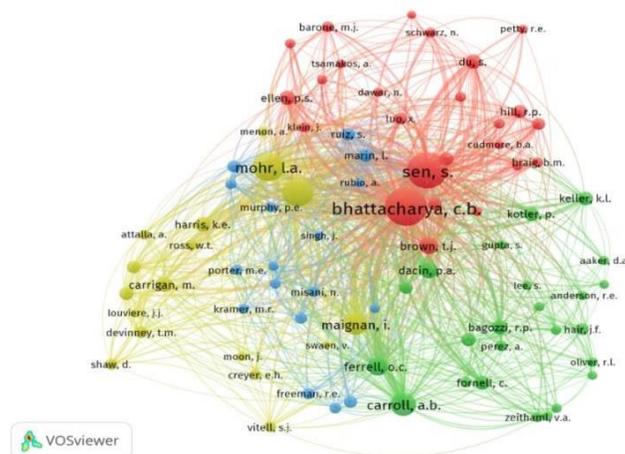
The frequency with which two documents are cited together is called co-citation. This analysis employs co-citation counts to reconstruct measures of similarity between journals, authors, and different documents (Small, 1973). The basic assumption of the co-citation analysis is when two articles are cited together; it is more probable that their content and theme are inter-related. Several types of co-citation analysis: author-co-citation analysis and document co-citation analysis are present in the literature (McCain, 1990). The type of co-citation depends on the unit of analysis.

Furthermore, co-citation links journals, documents, and authors in a way, writers use them. It is an in-depth grouping principle executed by the experts, who cite only those publications they view as valuable. As the publication process consumes a lot of time, therefore the co-citation image unveils the state of the field sometimes, but it does not consider how it may appear currently or in the future. Co-citation analysis is dynamic and changes with time. One of the advantages of co-citation is to detect the paradigm shifts in the subjects and schools of thought over a period (Pasadeos & Phelps et al., 1998). The difference between the document co-citation analysis and author co-citation analysis is that document co-citation links several published documents, research articles, books, and other published material. In contrast, author-co-citation analysis colligates the writing of different authors (White & Griffith 1981). Author co-citation analysis classifies and

categorizes critical authors of the subject matter and links them up through the citation records and identifies what is mapped in the author's citation image (White & McCain 1998). On the same lines, journal citation analysis deals with how different journals are related to each other.

Another important aspect of the bibliometric analysis is bibliographic coupling. Although the bibliographic coupling technique (Kessler, 1963) is older than co-citation (Small, 1973), but co-citation analysis is recurrently used for mapping science (Leydesdorff & Persson, 2010). In comparison, bibliographic coupling employs references shared by the two documents to check the similarity between them. Here, the stronger the bibliographic coupling, the robust would be their connection.

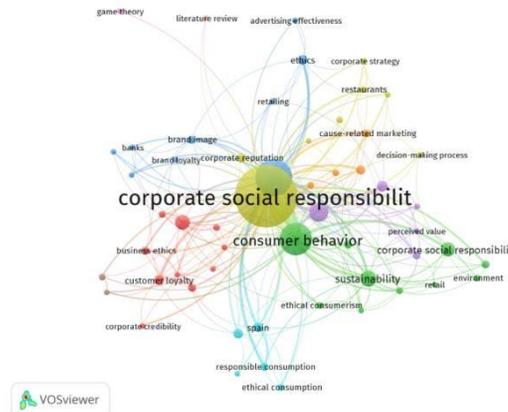
Reference shared between the two documents remains unchanged and remains static over time, whereas relatedness is established on co-citation, and it advances with the citation pattern. Bibliographic coupling performs best within a limited time-framework (Glänzel & Thijs 2012). The difference between the bibliographic coupling and co-citation analysis is that bibliographic coupling is based on the authors of the articles in focus, while co-citation is grounded on the authors who are citing work. The two documents are highly co-cited, meaning that each document is also highly cited (Jarneving, 2005). This suggests that documents selected through co-citation analysis hold much significance by the scholars who cite them. In bibliographic coupling, it is a challenge to identify which documents are more significant than others. Likewise, co-citation analysis also has a weakness: it provides more information about the documents obtained more citations, and it does not have much information for less cited documents. Which method to apply either co-citation analysis or bibliographic coupling depends on the researchers' objectives. Bibliographic coupling is more useful to map current research while considering the older paper; co-citation would be a better choice (Small, 1999). Recent studies also reveal that bibliographic coupling has more accuracy in depicting a research front and is much better than co-citation analysis (Boyack & Klavans, 2010).



**FIGURE 3**  
**CO-CITATIONS OF AUTHORS**  
**CO-OCCURRENCE OF KEYWORDS**

Chen, et al., (2016) suggested that research hot spots and leading trends in the research field are based on the intensity analysis and co-occurrence of keywords. The reason is the reflection of significant study content within words while using several keywords in an article. Cite Space execution is used to determine the analyses of network highly used keywords and its map. The

software is run by changing the node type to “Keyword”. To minimize the impact of knowledge map and search terms, the current research terms of “social responsibility” and “CSR” are used to hide the other search term of current data collection including “sustainable development” and “Corporate Social Responsibility” as possessing the same meanings. A highly concerning term in this research is performance while re-searchers are also attending the other concerned terms including impact, strategy, perspective as shown in Fig 5. This network of keywords demonstrated various but less close connections among them with a network density of 0.0162 with 199 nodes, 780 links.



**FIGURE 4**  
**KEYWORDS**

## CONCLUSION

### Main Findings and Contributions

The objective of this study was to present a holistic picture of the CSR research related to CB to figure out the knowledge map between these two topics. We used a bibliometric analysis method mainly to conduct co-author analysis, co-country analysis, co-citation analysis of authors and articles, co-word analysis, keyword cluster analysis, timeline and time zone analysis, burst detection of keywords and articles, etc. on the CSR/CB related scientific literature in the Scopus database. VOS viewer is used for this quantitative analysis and visualizing the knowledge map of the CSR/CB scientific research. Followed by further interpretation and analysis, the developing status, research hotspot, and frontier evolution were identified. The main findings are as follows:

Firstly, CSR research annual publication trends related to CB. The current trend of dual-themed academic research is growing rapidly. The trend has shown a tremendous increase in the last two years since its increase after 2007. A similar kind of research was conducted by (Engert & Rauter, et al., 2016) with the integration of corporate sustainability into strategic management. The bibliometric results focused on CB (Zemigala, 2019); CSR (Low & Siegel, 2019) field supports the current source of publication analysis as the Corporate Social Responsibility and Environment Management; Journal of Cleaner Production and Sustainability are found to be the topmost influencer publisher in the analysis of the source of publications.

Secondly, a low level of author collaboration is found in fragmentary patterns from the author analysis and co-author network analysis. Even though the remarkable contributions in the field of CSR/CB by authors are identified. Most of these topics are explored by authors independently whereas a prominent network of academic partnership is found between by Garcia-Sanchez, Galindo-Alvarez & Amor-Esteban. The bibliometric analysis findings of CB by (Low & Siegel 2019) suggested the highest number of publications in regions of North America, Far East and most in Europe. The current results are also validating these findings as the analysis of co-operation among various countries highlighted the group contribution by Australia and USA; China, Netherland, and England, while independent contributions of Spain are at the top. Overall the highest level of contribution by England and Spain in regional and country analysis is observed. The highest level of affiliated contribution is identified by the University of Salamanca Bucharest, University of Economic Studies, and Universitat Jaume I. Porter ME, Carroll AB, etc. are identified as the most influential authors in the co-citation analysis of CSR/SD study. Thirdly, in the current study, the keywords “performance” and “management” are found to be highly concerned in CSR/SD field from the co-occurrence analysis of keywords. 11 clusters of keywords are categorized to further summarize various themes from the hot spot analysis. The themes include "performance", "external reporting" "stakeholder", "CSR reporting", "local sustainability", "modeling", "development", "market", "online", "NGO" and "social". Most CSR/SD domain researches in recent years are engrossed on these 11 clusters, providing evidence of their importance and hotspot domain of present research focus (see e.g., Garriga & Melé, 2004; Kolk & Van, 2010; Babiak & Trendafilova, 2011; Aguinis & Glavas, 2012; Bocken & Short et al., 2014, Fahimnia, Sarkis et al., 2015; Behringer & Szegedi, 2016; Morioka & Carvalho, 2016; Iglesias & Markovic et al., 2020).

## **Limitations and Future Research**

There are several limitations in the current study as mentioned below:

As the data set from various data collection would result in the different results and would derive infer different solutions (Zemigala, 2019). So the data collection of this study would imply some typical limitations in this study as the data so analyzed is downloaded from WoS/SSCI database (August 04, 2019). Secondly, the limitation of search phrases to [“Corporate Social Responsibility”] and [“Sustainable Development”] along with using scientific researches only would limit the results and findings, and might have not completely covered all the documents and missed out articles of domain CSR/SD while providing the benefits of less polluted data set and ensuring the scientific significance (Zemigala, 2019). Besides that, we used theme (covering titles, abstracts, and keywords) as search range, those only searched in article titles or keywords may lead to other findings. These limitations can be addressed in future research by extending the coverage of databases and types of documents and using similar terms.

Even so, based on our review and findings in this present study, we could suggest several prospective opportunities for future research. Although there seems to be a close relationship between SD and CSR in the academic field, the in-depth connection is still very weak. There still exists some debates on the contribution of CSR (which is a micro-level) to SD (which is a macro level) (Lamarche & Bodet, 2018). Therefore, how can CSR best contribute to SD? Especially, how

to involve it in achieving the SDGs? It needs to be further explored. This is a rising trend in the near recent years, not limited to international business and large corporations, but also for the SMEs (Ye & Kueh et al., 2020). Current empirical studies on corporate engagement in the SDGs are scarce and scattered and being lack of meaningful SDG disclosures in practice (Van & Thijssens, 2020), which calls for future studies a lot.

Moreover, the current study ignores the research from South America and Africa (excluded Brazil and South Africa), while focusing the research mostly from developed countries or regions of developing countries. This lead to the uneven geographical concentration of this study. Chapple & Moon (2007) suggested the presence of differences of CSR and SDGs implantation difference, among various social, national, governance, and economical systems. This leads to a highly unexplored research area of CSR for further research to achieve SDGs in other countries and regions that have missed out on this research. Furthermore, cross-discipline, cross-culture, institutional collaboration, and cross-regional research should be focused on CSR and SD to explore the difference of options. CSR and SD being topics of multidisciplinary and multilevel can conclude various conflicting results when explored from various points of view.

To conclude, the development status of CSR/SD in the research field is assisted by this bibliometric analysis in a precise way using trending topics and the visualization of emerging trends. This research has paved the way for future research by providing a useful knowledge basis.

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