Environmental, Social, and Governance (ESG) as Determinant for Competitive Advantage: A Bibliometric Analysis

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Abstract

The study in the area of ESG has not been able to draw an ultimate conclusion that define the phenomenon. The purpose of this research is to give a more complete and accurate analysis of the development trend of ESG and competitive advantage from the earliest ESG publication in Scopus in 2010 to 2022. The purpose of the study is to establish bibliometric analysis as an extensive review ESG and competitive advantage literature. The method used in this study consists of five steps: defining search keywords, initializing search results, compiling preliminary data statistics, and analyzing data. The result shows that as many as 40 datasets were and collected from Scopus databases and visualized using Vos viewer. The limited number of the study indicated opportunities for potential topics for future study based on the analysis of keywords with less frequent occurrence.

Keywords
ESG Performance, Bibliometric, Analysis, Review, Vos viewer

1. Introduction

To address global issues such as social injustice, environmental degradation, and climate change, the 2030 Agenda is a comprehensive plan that brings together all 17 Sustainable Development Goals (SDGs) and 169 related goals. was formulated as The SDGs are a designation of these goals and targets. The SDGs call for coordinated global action by governments, businesses, and civil society organizations to achieve sustainable and shared prosperity (Khaled et al., 2021). One way to gauge how far along a company is in terms of SDG impact is to measure SDG impact through a company's sustainability performance. Academic research has often used Environmental, Social and Governance (ESG) assessments to empirically quantify a company's sustainability performance. (Tamimi & Sebastianelli, 2017). However, there is no correlation between these ratings and the Sustainable Development Goals (SDGs), making it difficult for companies to demonstrate the value of ESG initiatives that directly contribute to specific SDGs or goals. (Khaled et al., 2021).

Over the past decade, the amount of information about a company's environmental, social and governance (ESG) activities has increased. This is due to the increasing emphasis on sustainability issues (Conca et al., 2021). The relevance of corporate responsibility for social and environmental concerns is illustrated by the growing influence of corporations over various stakeholders. Companies strive to improve their ESG practices, as they are an important component of long-term management.

A company's overall operational efficiency is related to environmental, social and governance (ESG) disclosure. (Xie et al., 2019). Growing evidence that corporate ESG disclosure practices impact profitability (Conca et al., 2021). Additional research shows that when companies in the Eurostoxx50 index make ESG investments and communicate their ESG plans, they have a positive impact on their stock returns (Torre et al., 2020). However, more research is needed in different markets to determine whether there are links between environmental, social and governance factors and the success of financial and non-financial companies. (Liu et al., 2022).

However, previous research has shown a mixed relationship between ESG initiatives and a company's economic success. This is because internal mechanisms and environmental influences have not been fully considered in studies. The results of a unified adjusted mediation model that examined how institutional context affects the relationship between firms' environmental, social and governance (ESG) activities and their financial performance show that each ESG indicator correlates with the success of such firms. This study demonstrates the importance of sustainable management to achieve better results in dynamic environments and the importance of interdisciplinary research in the fields of institutional theory and green management (Liu et al., 2022). Among the various ESG categories, corporate culture has a significant impact, especially in companies with poor governance (Kim & Li, 2021). The current study will fill a gap left by previous ESG research by examining the trend of ESG and competitive advantage. The study's findings would be beneficial to the growth of ESG.

In this study, we would like to conduct bibliometric analysis to review the research trend in area of ESG and competitive advantage since the research topic of ESG performance is still emerging. The research questions (RQ) are proposed as follows:

RQ1   : How is the trend of ESG and competitive advantage research based on the number of publications per year?

RQ2   : What journals have most papers published in the area of ESG and competitive advantage research?

RQ3   : Who are the most contributing authors in publication of ESG and competitive advantage research?

RQ4   : Which are the countries of author that contribute the most to the publication in ESG and competitive advantage research and their collaboration?

RQ5   : What are main research topics and in ESG and competitive advantage field?

RQ6   : What are potential topics for future study in area of ESG and competitive advantage research?

1.1 Objectives

The goal of this study is to give a more complete and accurate analysis on the development trend of ESG and competitive advantage from 2010 to 2022 through bibliometric analysis.

2. Literature Review

2.1 ESG and Competitive Advantage
The essence of corporate social performance is the recognition that companies have multiple long-term obligations to various stakeholders. ESG performance targeting primary stakeholders is more closely related to financial performance than ESG performance targeting secondary stakeholders (community, diversity, human rights, etc.). Employees as key stakeholders are critically important in the context of ESG financial performance. ESG targeting clearly improves financial performance. Similarly, maintaining good employee relations has a significant impact on a company's financial performance. Investors pay more attention to social performance than environmental performance because they expect economic benefits from building good relationships with employees and other stakeholders (such as communities and consumers). In this regard, social investment can create a competitive advantage for companies by creating intangible assets such as human capital and corporate reputation (Nekhili et al., 2021).

2.2 Bibliometric Analysis
Bibliometric analysis is a quantitative method for analyzing bibliographic data in articles/journals. This analysis is commonly used to investigate references to scientific articles cited in a journal, map the scientific field of a journal, and categorize scientific articles according to a research field. This method is applicable in sociology, humanities, communication, marketing, and management, among other fields. In bibliometric analysis, the citation analysis approach is used to find one article cited by another, whereas the co-citation analysis approach is used to find two or more articles cited by one. The words used in a document (co-words) can reveal the scientific concept contained within it. The co-occurrence of words or keywords in two or more documents used to index documents is the basis for co-word analysis (Effendy et al. 2021).

3. Methods
The bibliometric analysis in this research follows the suggestion (Garza-Reyes, 2015). The process is performed systematically and uses explicit stages; therefore, it can be reproduced by other researchers. A bibliometric analysis can also be accomplished with a mind-mapping approach that shows the limits of knowledge (Tranfield, Denyer, & Smart, 2003). Bibliometric analysis is commonly used in various disciplines and focus on quantitative studies in journal articles, books, or other forms of written publications (Heersmink van den Hoven, van Eck, & van Berg, 2011). In this research, the stages of the bibliometric analysis will be adapted into four phases, consisting of defining the search keywords, initial search results, compiling preliminary data statistics, and data analysis (Garza-Reyes, 2015).

4. Data Collection
This research was performed on 14th August 2022, using keywords in the form of search strings relevant to ESG performance where keywords are searched based on the title, keywords, and abstract of the article as follows: TITLE-ABS-KEY ("ESG Performance") AND TITLE-ABS-KEY ("Competitive Advantage"). Based on the defined keywords, the process of searching for articles in an electronic database is utilized as a source of information. The electronic database used in this research is Scopus, considering that Scopus is the largest reputable scientific database currently available and provides various peer-reviewed journal articles; thus, the quality of the articles obtained can be guaranteed.

The initial search results with keywords yielded 40 Scopus documents. In finding articles, the period is limited from 2010 to 2022. There is no refinement of search result conducted in this study since we cover all type of article including journals, proceedings, book chapter and book. We also did not limit the publication years for pragmatic reasons to obtain more articles, which are in line with the recommendations by Donthu (2021).

As mentioned earlier, the data collected following the search results are stored in the form of RIS files. Then the file is processed with the help of reference manager software (RMS) Mendeley to complete the metadata of the articles obtained such as the author's name, title, keywords, abstract and journal description (journal name, year of publication, volume, issue, pages). The dataset was verified, and the required information was added when there was incomplete

data. Then the search result data was analyzed and classified based on the yearly number of publications, publication outlets (journals), contributing authors, and productive countries.

5. Results and Discussion

5.1 Number of Publication per Year (RQ1)
Figure 1 shows the trend of research on ESG, and competitive advantage based on the number of articles published per year. In general, ESG and competitive advantage research in the world grew modestly until 2019, and in 2022 reached significant grow. Research trend is still advancing in term of the number of publications.
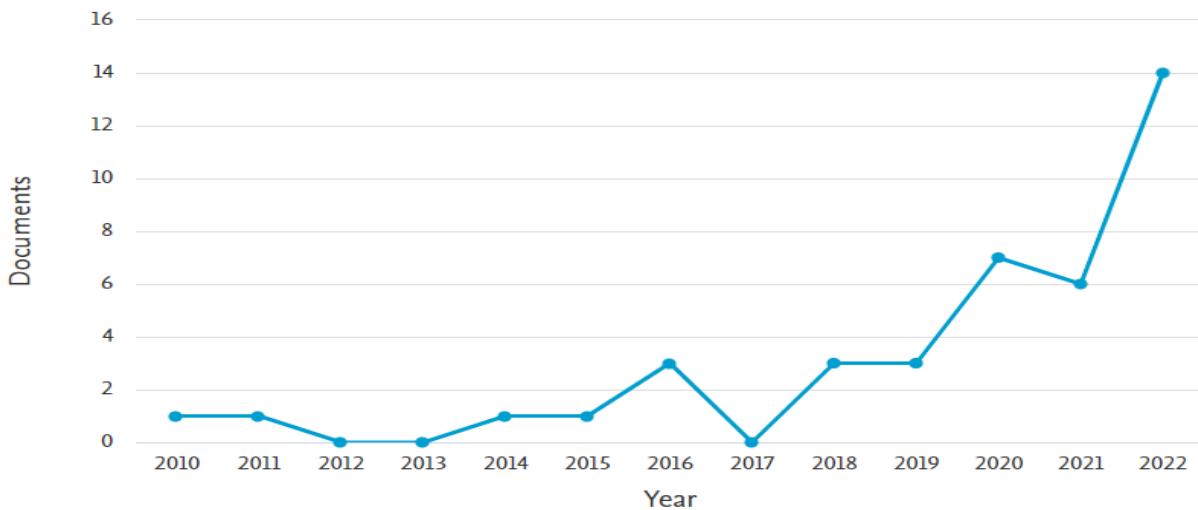
Figure 1. Trend research of ESG and competitive advantage worldwide

5.2 Most Journal Outlet Publication (RQ2)
Figure 2 shows the top ten peer-reviewed journals with the most publications in the research of ESG and competitive advantage. The journal's leader based on publication numbers is Sustainability (Switzerland). This journal was published by Multidisciplinary Digital Publishing Institute (MDPI) AG, then followed by Frontiers in Psychology and Social Responsibility Journal.
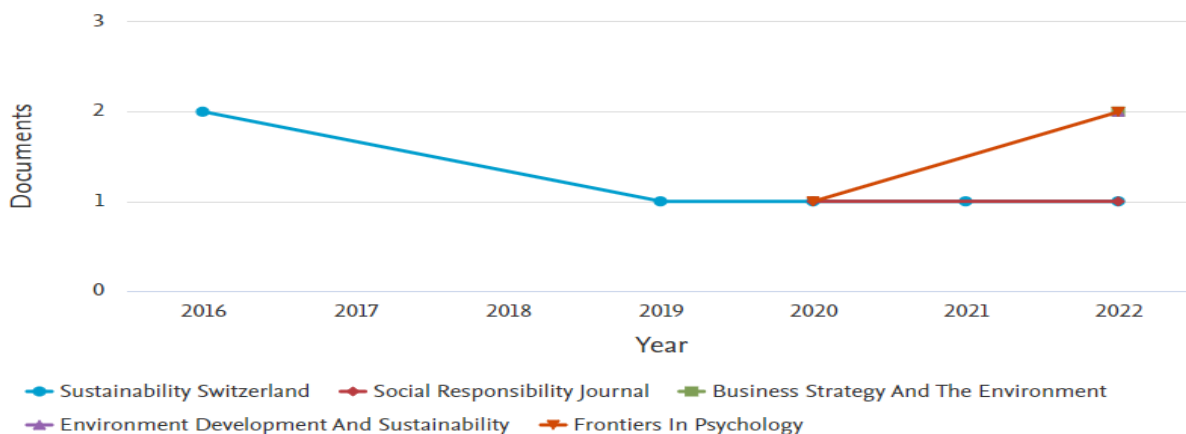

Figure 2. The top ten journals have most papers published in the area of ESG and competitive advantage research

5.3 Most Productive Authors (RQ3)
Figure 3 indicates the top ten contributing authors with published articles in peer-reviewed journals in ESG and competitive advantage field. All authors produce a single article.
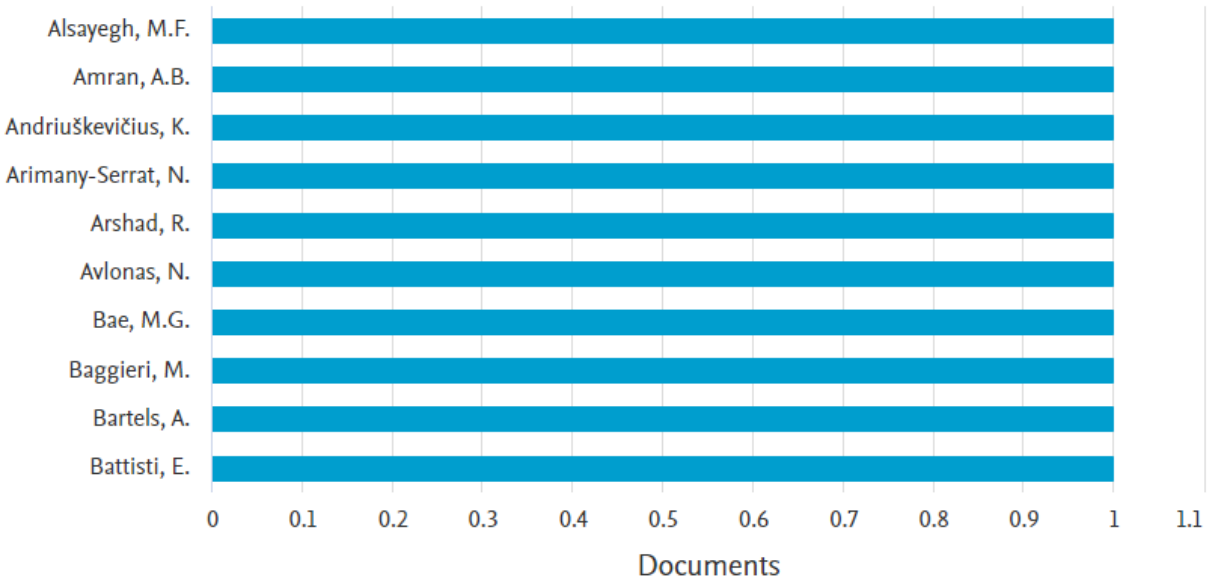

Figure 3. Top ten contributing authors in the area of ESG and competitive advantage research

5.4 Most Productive Countries (RQ4)
Figure 4 indicates the top ten countries of authors based on publication numbers. Malaysia has the most with 7 authors and followed by China. Other productive countries include Italy, South Korea, United States of America, India, Greece, Indonesia, Spain, and Taiwan.
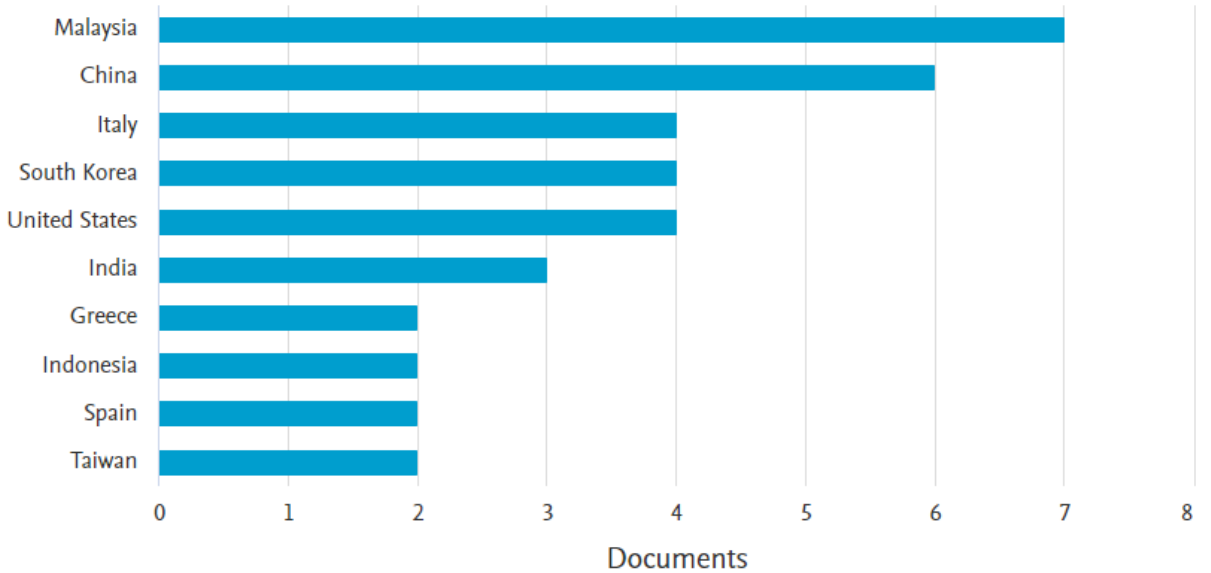

Figure 4. Top ten countries of authors based on publication numbers

5.5. Main Research Topic in ESG Performance (RQ5)

In the Figure 5, the network visualization was described through Co-Occurrence analysis especially based on the author keywords. Using Vosviewer, we set a minimum occurrence number is 5 then we obtain about 7 keywords that represent the current topic of research in the area of ESG Performance. After analyzing the result, there are a total of 2 clusters as research topic trend in ESG and competitive advantage which is indicated by a different color (red and green). Furthermore, the network visualization indicated a topic with a circle and label. The size of the circle shows the extent of a topic has been studied. In other words, the bigger the circle shows that a keyword or topic gets more attention in the literature. We can see that ESG and competitive advantage in the red cluster (the first cluster) becomes the central of this study because it is the biggest circle on the map. Moreover, the mainstream research topic can be shown from each cluster. For example, the second cluster (green) shows the main research topic is related to social, environmental, and sustainability issue since they are the biggest circle in the cluster.
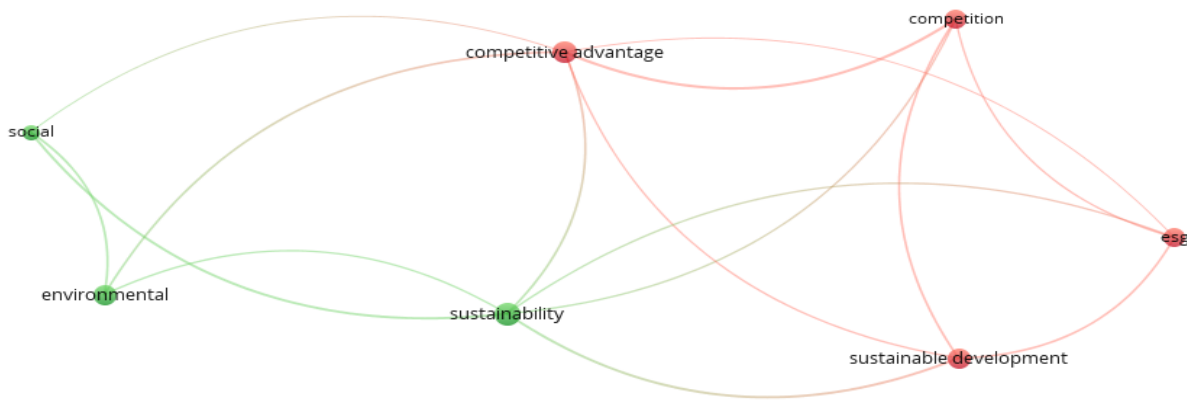

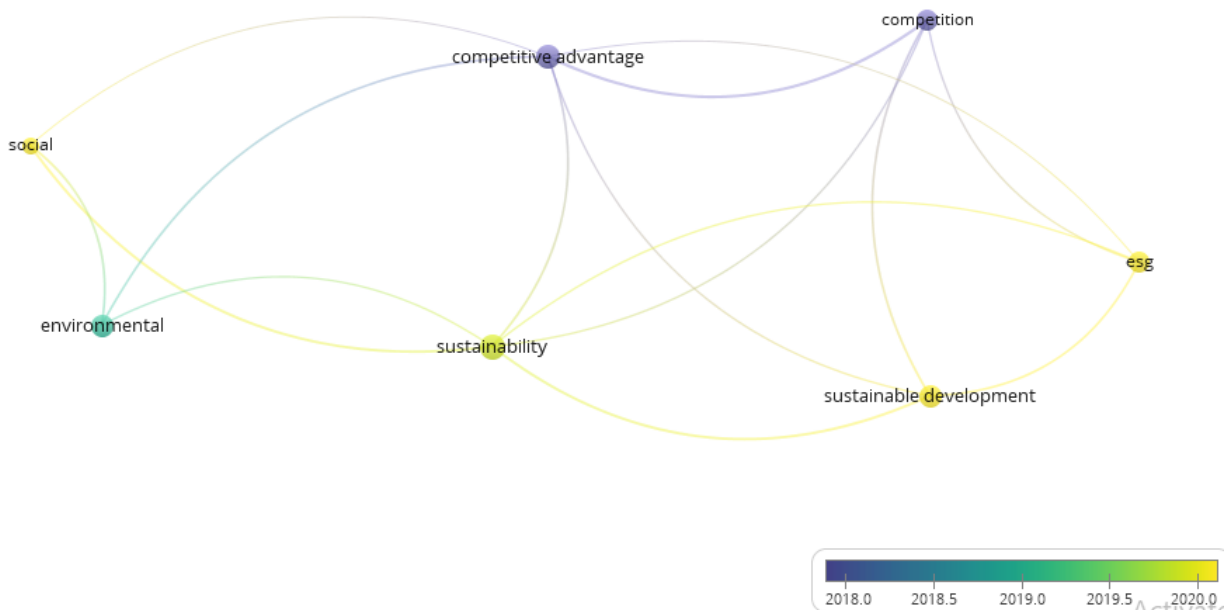Figure 5. Network visualizations of Scopus database using Vosviewer

Figure 6. Overlay visualizations of Scopus database using Vosviewer

Figure 6 represents the period of the research topic which was conducted over the range of years. It can be seen that the most occurrence keywords appear from 2018 until 2020. For example, the research topic of ESG, sustainability, and sustainable development were relatively new (2020) compared to other research topics such as competitive advantage which appeared in 2018

5.6 The Potential Topic in ESG Performance (RQ6)

Figure 7 shows density visualization using Vos viewer, which indicates the depth of research studied in certain areas of ESG and competitive advantage. The density of items determines the appearance of keywords in the number represented by the color. The more concentrated colors indicate the research has grown in high numbers. Thus, we could notice the keyword with less frequent occurrence represented by un-concentrated color, which means the research topic is still limited that need more investigation for future study (potential topic). Some sample of these keywords such as social, esg, and sustainable development. Thus, these research topics provide opportunities for researchers to identify the potential topic as a novel contribution to work in ESG performance research.
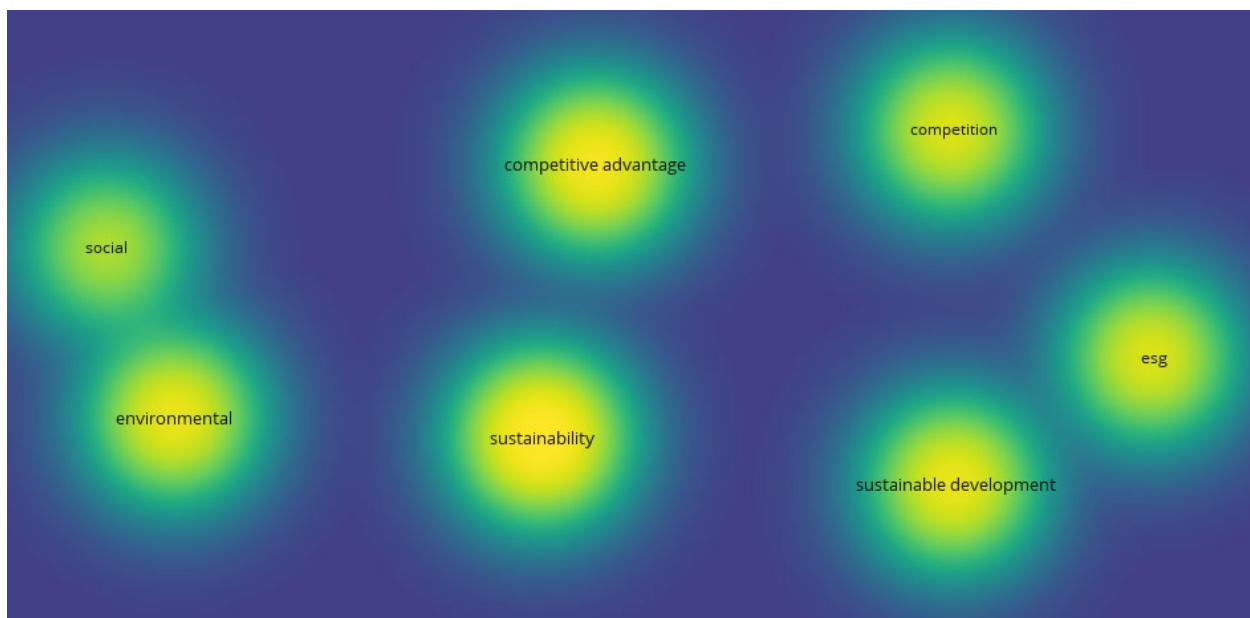

Figure 7. Density visualizations of Scopus database using Vosviewer

6. Conclusion

This study employs bibliometric analysis to review all literatures from the Scopus database in ESG and competitive advantage. The literature has increasingly raised each year which was marked by the number of publications in recent years. According to the result, at the initial result stage, obtained as much as 40 datasets from Scopus database. The result of this study shows the trends of ESG and competitive advantage research, publication outlets (peer-reviewed journals), contributing authors, and productive countries. The analysis of keywords with less frequent occurrence indicates the potential topics for future study as contribution of this study. Thus, this study also intended to notice research development and predict potential advancement in future research through bibliometric analysis because there has been a significant increase in ESG performance research. The Vos viewer application had been successfully demonstrated in mapping and visualizing the bibliometric data. The limitation of this study is datasets only taken from Scopus database especially peer-reviewed journals as resources. Thus, we recommend that further research should use various electronic databases such as Web of Science (WoS), Springer, IEEE Xplore et cetera in order to get better scientific contributions.

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