Edelweiss Applied Science and Technology

ISSN: 2576-8484 Vol. 9, No. 9, 1223-1238 2025 Publisher: Learning Gate DOI: 10.55214/2576-8484.v9i9.10124 © 2025 by the author; licensee Learning Gate

Corporate social responsibility and sustainable development: A literature review and future research directions



¹School of Management, College of Business, University of Economics Ho Chi Minh City (UEH), Ho Chi Minh City 700000, Vietnam; khoatd@ueh.edu.vn (D.K.T.).

Abstract: This study aims to provide readers with a comprehensive literature review of studies that mention corporate social responsibility (CSR) and sustainable development. Given the broad scope of this topic and the large volume of related documents, bibliometric analysis was employed. Data were collected in January 2025 from the Web of Science database, comprising 4,823 documents. Performance analysis was conducted to illustrate publication trends over the years, as well as contributions by authors, countries, and research areas. The study utilized co-citation and bibliographic coupling analyses to explore foundational research and thematic developments from past to present. Additionally, co-keyword analysis was performed to identify emerging research directions for the future. The results indicated a need for increased research focus on the African context. Areas recommended for further investigation include energy fuels, agriculture, geography, transportation, and mineral processing in mining. Key issues requiring additional research attention encompass the relationship between CSR and corporate financial performance, characteristics of the board of directors, green supply chains, and strategic CSR initiatives. The study identified several future-oriented themes, such as ESG performance, green innovation, green finance, pro-environmental behavior, environmental sustainability, product innovation, and board diversity, which are expected to shape ongoing research in this field.

Keywords: Bibliometrics, Corporate social responsibility, CSR, Literature review, Sustainable development.

1. Introduction

In the beginning period, known as the Pre-Industrial Revolution (1600s-1700s), there was no formal concept of corporate social responsibility (CSR). Businesses engaged in philanthropic activities (Charitable actions) [1]. During the Industrial Revolution stage in the early 20th Century, entrepreneur focused on profit maximization [2].

However, forms of social responsibility (SR) have existed for a long time. Societies such as the ancient Chinese, Egyptians, and Sumerians all valued the principle that commerce must pay close attention to the interests of society. The success or failure of businesses from the 17th to the 18th centuries was also related to the influence of social interests. A notable example was the British consumer boycott in the 1790s against sugar products using slave labor. In the Theory of Moral Sentiments, Smith [3] argued that there are some principles about human nature that cause us to care for the happiness of others. Queen Victoria's principle of paying ship owners carrying criminals to Australia in the 1840s also shows the benefits of caring for others.

The first concept of CSR was introduced by Bowen [4] proposing that when entrepreneurs conduct business activities to seek profits, they cause losses to society (using up natural resources, polluting the environment, etc.). Therefore, businessmen have an obligation to care about the social welfares. There are two streams of opinion supporting and opposing this view. Leading the opposition was Freeman [5]. In an article published on New York Time magazine in 1970, Milton Friedman said that businesses have only one responsibility, which is to seek profits in addition to complying with the law. The

government collects taxes and fees from businesses, so the government must be responsible for social welfare. On the contrary, Handy [6] on Harvard Business Review argued that since businesses gain profits from society, they have an obligation to foster social benefits. That is the self-enlightenment of managers. Carroll [7] believed that, in addition to the defensive approach, businesses can use proactive approach CSR to create competitive advantages in the market. Since then, Carroll [8] has proposed a definition of CSR as including four dimensions of responsibilities: economic, legal, ethical and discretionary. Carroll [8] definition of CSR has been widely accepted for a long time.

Freeman [5] stakeholder perspective viewed CSR as the obligation of businesses to meet the expectations of stakeholders. Accordingly, businesses must identify the needs of important stakeholders based on three criteria: the level of evolution of the issue, the strategic relevance of the issue, and the motivation of the stakeholders. This is also an important research direction of CSR.

The Triple Bottom Line initiated by Elkington [9] is another research direction of CSR. At this time, CSR began to move towards sustainable development (SD). Businesses need to meet three goals (3Ps) at the same time: Profit, People, and Planet. Enterprises that perform CSR well must meet the desire for profits for shareholders while at the same time pay attention to environmental protection and create benefits for society. Besides, according to the United Nations Climate Change Conference (COP21) in 2015, the commitment of governments to reduce greenhouse gas emissions has also created a trend of CSR research based on environmental protection. United Nations [10] proposed 17 Sustainable Development Goals (SDGs). As a result, research on sustainable development according to the SDGs has gained more attention afterward.

As discussed above, CSR has gone through different stages of development. For each stage, research also has different perspectives. The starting point is the economic perspective. Next is the stakeholder perspective. Then there is the strategic perspective. Currently, it is sustainable development perspective. Corresponding to each perspective, the research levels on CSR also change. The first is research on CSR at the individual level (behavior of employees, customers, investors); Second is the organizational level (business, partner, government); Third is the national level; And the fourth is the regional and global level.

In conclusion, it can be seen that the evolution of CSR is very dynamic. From a very simple view of CSR in the early stages [4] to a view of CSR in the current context of sustainable development [11]. According to the author's search on the two databases SCOPUS and Web of Science, there has not been any literature review on the topic with both "corporate social responsibility" and "sustainable development" key words in the past 5 years, especially in the context of the post Covid-19 epidemic, where natural disasters and social issues are taking place in many regions of the world. Therefore, a literature review on CSR and SD, which will help us to find possible future research orientations in the current context, is very necessary. The next contents of the article will be presented in the following sections: Research process and methods, performance analysis, co-citation and bibliographic coupling analysis, co-occurrence analysis, conclusion, and future research directions.

2. Research Process and Methods

The analysis data were downloaded from the Web of Science database in January 2025 with keywords "corporate social responsibility" and "sustainable development". This database was chosen due to its extensive collection of reliable articles worldwide and its prestigious status in research area.

A total of 4823 documents were found, thus bibliometric analysis method was applied as recommended by Donthu, et al. [12] for dealing with a large topic. Data was then analyzed using VOSViewer version 1.6.15. The analysis sequence was as follows:

First, performance analysis was done using the "Analyze Results" function on Web of Science, of which the results were summarized in a chart creating by Excel. Descriptive statistics were organized by the number of publications by year to assess the research trend of the field over time. This was the basis for determining and selecting the periods for co-keyword analysis. In addition, the number of publications by areas was analyzed to assess the involvement of the keywords in each study area. The

number of publications and citations by authors and by countries was also inspected to identify the highly influential researchers and the regions of which the topic was mostly researched, respectively.

Second, co-citation and bibliographic coupling analysis was used to identify the foundations of the field. For each cluster, the author skimmed the titles, abstracts and contents of the most cited and most recent articles to identify the themes of the cluster. Then, the detail content of the cluster was identified through scanning these articles.

Third, co-occurrence analysis was performed to evaluate the research topics that should be of interest in this field. Based on the results of performance analysis, the two periods selected for comparative analysis were 2001-2017 and 2018-2024. The comparison of keywords in each cluster between the two periods revealed that some past research topics were no longer of interest while those with continued revelance to current time had witness a change in its original focus. Some novel topics only appeared in the later years of the periods. Based on these analyses, future research topics will be proposed.

Finally, based on the results of co-occurrence analysis, the keywords were presented in a two-dimensional scatter plot: "average publication year" and "average citation". The keywords which have high value in both dimensions would be highlighted and used for future research themes development the above analysis had been designed to provide a comprehensive picture of the field, including the research status, the pillars, and the future research directions.

3. Performance Analysis

Studies combining "corporate social responsibility" and "sustainable development" started in 2001 with three publications and gained more attention in 2005 with 16 publications. From 2010 to 2017, the number of articles reached nearly 200 per year. Since 2018, there has been a remarkable increase in interest from researchers to both keywords with 314 articles published each year. The research development process of this field thus can be divided into two stages: the period 2001-2017, which marked the beginning of the topic of interest, and the period from 2018 to present, which showed an increased popularity in articles combining CSR and sustainable development. This can be understood as a result of the emergence of commitments to sustainable development that have been promoted since 2015 with the proposal of 17 SDGs by the United Nations and the pressure of COP21 in Paris. This trend is shown in Figure 1.

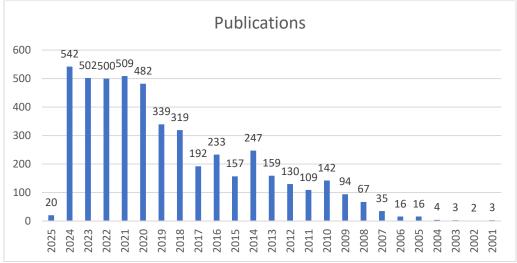


Figure 1.
Publication by years.
Source: Web of Science (2025).

According to Figure 2, the author with the most publications is García-sánchez IM with 23 articles. This may be the most influential author in this field. The subsequent authors with fewer articles are Liu Y and Muñoz-Torres MJ (14 published articles), Wang H, Wang L, and Zhang YL (12 articles), Leal W, Rivera-lirio JM, and Santos G (11 articles). Five authors with 10 published articles are Amran A, Kemp D, Venturelli A, Zhang H, and Zhang Q. The remaining authors in the TOP 25 shown in Figure 2 are also potentially influent in the field.

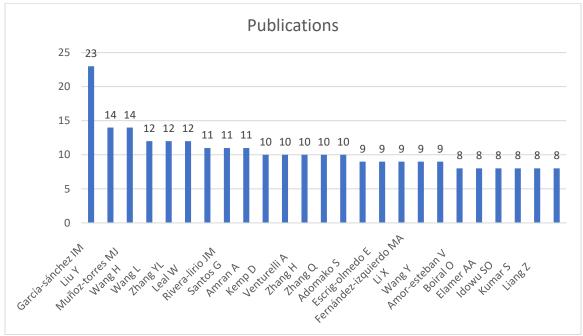


Figure 2. Publications by authors. **Source:** Web of Science (2025).

The results of citation analysis by authors from VOSViewer software show that the TOP 25 most cited authors all have a minimum number of citations of over 350 times. Among these, the author with the highest number of citations is Stefan Schaltegger with 1244 citations, followed by Ans Kolk and Lazaro Rodrigguez-Ariza with 1219 citations and 984 citations, respectively (Table 1). Notably, Garcia-Sanchez - the author with the highest number of published articles – was ranked 4th with 859 citations, while the remaining authors in the TOP 25 most published articles are not listed in Table 1. This shows that the number of published articles in this field is not the strongest factor contributing to the influence of the authors.

DOI: 10.55214/2576-8484.v9i9.10124 © 2025 by the author; licensee Learning Gate

Table 1. TOP 25 highest citation authors

| No. | Authors | Citations | No. | Authors | Citations |
|-----|------------------------------|-----------|-----|------------------------------------|-----------|
| 1 | Achaltegger, Stefan | 1244 | 14 | Abbas, Jawad | 492 |
| 2 | Kolk, Ans | 1219 | 15 | Zuo, Jian | 474 |
| 3 | Rodriguez-Ariza, Lazaro | 984 | 16 | Baumgartner, Rupert J. | 463 |
| 4 | Garcia-Sanchez, Isabel-Maria | 859 | 17 | Pizzi, Simone | 448 |
| 5 | Van Tulder, Rob | 756 | 18 | Jesus Munoz-Torres, Maria | 441 |
| 6 | Amran, Azlan | 672 | 19 | Angeles Fernandez-Izquierdo, Maria | 428 |
| 7 | Elamer, Ahmed a. | 659 | 20 | Lai Kee-Hung | 418 |
| 8 | Montiel, Ivan | 635 | 21 | Searcy Cory | 408 |
| 9 | Managi, Shunsuke | 603 | 22 | Miller Van V. | 382 |
| 10 | Scholtens, Bert | 597 | 23 | Ferrero-Ferrero Idoya | 369 |
| 11 | Shahzad, Mohsin | 552 | 24 | Kemp, Deanna | 364 |
| 12 | Orazalin, Nurlan | 526 | 25 | Perez-Batres Luis A. | 356 |
| 13 | Venturelli, Andrea | 523 | | | |

Source: Citation analysis form Web of Science (2025).

In addition, considering the clusters of citation analysis (Figure 3), the three most influential authors of each cluster are as follows: Cluster 1: Montiel Ivan (635 citations), Shahzad Mohsin (552 citations), Abbas Jawad (492 citations); Cluster 2: Schaltegger Stefan (1244 citations), Kolk Ans (1219 citations), Van Tulder Rob (756 citations); Cluster 3: Rodriguez-Ariza Lazaro (984 citations) Garcia-Sanchez, Isabel-Maria (859 citations), Scholtens Bert (597 citations); Cluster 4: Kemp Deanna (364 citations), Owen John r. (324 citations), Boiral Olivier (303 citations); Cluster 5: Amran Azlan (672 citations), Managi Shunsuke (603 citations), Orazalin Nurlan (526 citations); Cluster 6: Venturelli Andrea (523 citations), Pizzi Simone (448 citations), Skouloudis Antonis (232 citations); Cluster 7: Jesus Munoz-Torres Maria (441 citations), Angeles Fernandez-Izquierdo Maria (428 citations), Ferrero-Ferrero Idoya (369 citations).

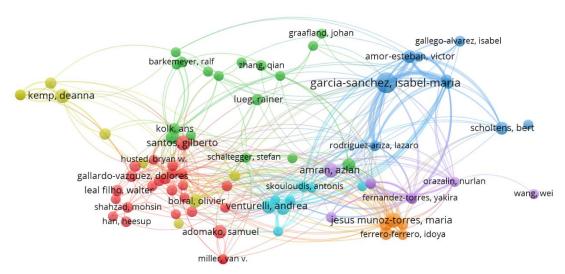


Figure 3. Citation analysis by authors Source: Citation analysis from Web of Science (2025).

People R China is the highest publications country with 1069 papers about the topic. The following ranked countries in publication numbers are Spain (426 papers), England (401 papers), the USA (314 papers), Italy (283 papers), Australia (234 papers), India (185 papers), Poland (177 papers), Canada (158

© 2025 by the author; licensee Learning Gate

papers). Germany (149 papers), Malaysia (149 papers). Table 2 also reveals that research in this field has been done in both developed countries and countries with emerging economies. By region, Asia stands out with research from China, India, Malaysia, Taiwan, Pakistan, Vietnam, and South Korea. Europe is the region with the most countries in the TOP 25 publications, including Spain, UK, Italy, Poland, Germany, France, Romania, Netherlands, Russia, Portugal, Finland, Czech Republic, and Slovakia. The Americas have the USA, Canada, and Brazil, while Africa only has South Africa as countries belonged to the TOP 25 publications.

Table 2. TOP 25 publications by countries

| No. | Countries/Regions | Publications | No. | Countries/Regions | Publications |
|-----|-------------------|--------------|-----|-------------------|--------------|
| 1 | PEOPLES R CHINA | 1069 | 14 | TAIWAN | 128 |
| 2 | SPAIN | 426 | 15 | NETHERLANDS | 119 |
| 3 | ENGLAND | 401 | 16 | RUSSIA | 118 |
| 4 | USA | 314 | 17 | BRAZIL | 115 |
| 5 | ITALY | 283 | 18 | PAKISTAN | 103 |
| 6 | AUSTRALIA | 234 | 19 | PORTUGAL | 94 |
| 7 | INDIA | 185 | 20 | SOUTH AFRICA | 83 |
| 8 | POLAND | 177 | 21 | VIETNAM | 81 |
| 9 | CANADA | 158 | 22 | FINLAND | 77 |
| 10 | GERMANY | 149 | 23 | SOUTH KOREA | 71 |
| 11 | MALAYSIA | 149 | 24 | CZECH REPUBLIC | 69 |
| 12 | FRANCE | 143 | 25 | SLOVAKIA | 63 |
| 13 | ROMANIA | 143 | | | |

Source: Web of Science (2025).

By areas, Table 3 shows that Business Economics, Environmental Sciences Ecology and Science Technology Other Topics are the three areas with the most research articles on this field, followed by Social Sciences Other Topics, Engineering, Public Administration, Development Studies, and Education Educational Research. The remaining areas have a much lower proportion of published articles.

Table 3. TOP 25 publications by areas.

| No. | Research Areas | Publications | No. | Research Areas | Publications |
|-----|-------------------------------------------|--------------|-----|------------------------------------------|--------------|
| 1 | Business Economics | 2610 | 14 | Sociology | 42 |
| 2 | Environmental Sciences Ecology | 2019 | 15 | Agriculture | 40 |
| 3 | Science Technology Other Topics | 1128 | 16 | Communication | 35 |
| 4 | Social Sciences Other Topics | 494 | 17 | Public Environmental Occupational Health | 33 |
| 5 | Engineering | 331 | 18 | Social Issues | 33 |
| 6 | Public Administration | 262 | 19 | Psychology | 29 |
| 7 | Development Studies | 219 | 20 | Geography | 25 |
| 8 | Education Educational Research | 114 | 21 | Transportation | 25 |
| 9 | Government Law | 84 | 22 | Construction Building Technology | 22 |
| 10 | Computer Science | 83 | 23 | Information Science Library Science | 22 |
| 11 | Operations Research Management Science | 60 | 24 | Mining Mineral Processing | 22 |
| 12 | Energy Fuels | 48 | 25 | Area Studies | 20 |
| 13 | International Relations | 42 | | | |

Source: Web of Science (2025).

Edelweiss Applied Science and Technology

ISSN: 2576-8484

 $Vol.\ 9,\ No.\ 9:\ 1223\text{--}1238,\ 2025$

DOI: 10.55214/2576-8484.v9i9.10124 © 2025 by the author; licensee Learning Gate

4. Co-Citation and Bibliographic Coupling Analysis

Before the first industrial revolution, the concept of CSR did not exist. Businesses were only interested in charitable activities for the community. The concept of CSR was first mentioned by Bowen [4] according to which, businessmen have a responsibility to care about their impact on society. According to Freeman [5] businesses have only one responsibility: to seek profits in addition to complying with the law. On the contrary, many researchers believe that businesses must have responsibilities beyond the scope of profits and laws, which is to voluntarily contribute to society [13]. Carroll's pyramid of CSR in 1991 proposed four types of CSR including: economic, legal, ethical, and philanthropic responsibility. Elkington [11] added environmental issues to CSR by proposing the "triple bottom line": economic, social, and environmental. On the other hand, Freeman [5] approached CSR from the aspect of stakeholders, saying that CSR is to meet the desires of stakeholders. Sustainable Development Goals (SDGs) introduced a framework for CSR efforts [10]. Based on the evolution of CSR, the co-citation analysis results show that the field is developed based on the following five foundations (5 clusters): (1) CSR and corporate sustainability, (2) CSR, green innovation, and firm performance, (3) CSR and corporate financial performance, (4) CSR disclosure, and (5) Characteristics of BOD and CSR. Figure 4 shows the graphics of these clusters.

```
gilberthorpe @2012, resour p
                      jenkins h, 2006, j clean prod,
                   frynas jg, 2005, int aff, v81,
                                                       guthrie j., 1989, account bus
                            scherer ag, 2007, acad manage
                                                             bebbington j, 2018, account au
                              no title captured]
                              [anonymous], 2010, iso 26000:2deegan c., 2002, accounting au
                                                                  chauvey jn, 2015, j bus ethics
            [anonymous], 1999, business so
                                                           ali w, 2017, corp soc resp env fernandez-feijoo b, 2014, corp
                                                             clarkson pm, 2008, account org
                                                                                              liao I, 2015, brit account rev
                                                                                           post c, 2011, bus soc, v50, p1
                          mcwilliams a, 2006, j manage s connelly bl, 2011, j manage, v
                                                                                          mcguinness pb, 2017, j corp fi
                                 orlitzky m, 2003, organ stud,
 mohr la, 2001, j consum aff, v
                                                                                hussain n, 2018, j bus ethics,
                                                                                   li yw, 2018, brit account rev,
                                                                       friede g., 2015, j. sustain, f
                     hair i.f., 2010, multivariate
                               hart sl, 2011, I manage, v37, albuquerque r, 2019, manage sc
        fornell c, 1981, j marketing r
                            shahzad m, 2020, j clean prod,
                                   abbas j, 2019, i clean prod, v
VOSviewer
Figure 4.
Co-citation analysis map.
Source: Citation analysis form Web of Science (2025).
```

Cluster 1 - CSR and corporate sustainability: Corporate sustainability was first mentioned by Barrier [14] stated that, companies must balance maximizing economic, ecological and social goals. After that, there were many different definitions of corporate sustainability (e.g. [11, 15, 16]). However, the view of sustainable development based on the triple-bottom line was still the most widely accepted, as most agreed that implementing CSR will help businesses achieve sustainable goals. The triple-bottom line is considered a tool for companies to respond to pressures from the macro environment Baumgartner and Ebner [15] and Ashrafi, et al. [16]. Hart and Milstein [17] believed that CSR helps corporates meet the needs of stakeholders, thus ensuring the sustainable development of the business. Institutional

Edelweiss Applied Science and Technology ISSN: 2576-8484 Vol. 9, No. 9: 1223-1238, 2025 DOI: 10.55214/2576-8484.v9i9.10124 © 2025 by the author; licensee Learning Gate

theory emphasizes the social context within which firms are operated. Although firms have discretion to operate within institutional constraints, failure to conform to critical and institutionalized norms of acceptability can threaten the firm's legitimacy, its resources, and, ultimately, its survival [18-20]. From a strategic perspective, Baumgartner and Ebner [15] argued that integrating CSR with strategy would help businesses develop a new strategic mindset, which promotes creating sustainable competitive advantages for businesses. In summary, previous studies have shown that CSR would positively affect corporate sustainability.

Cluster 2 - CSR, green innovation, and firm performance: CSR does not directly affect firm performance but through an intermediate variable, green innovation. CSR pushes businesses to innovate. More innovation will increase efficiency and effectiveness [21]. Performances of green product and green process innovation have positive impacts on firm performance [22] as it will increase firm growth [23, 24] and economic performance of business [25]. Investment in green IT capital will enhance environmental performance, thereby increasing business competitiveness [26]. In summary, the findings on the profitability of CSR suggest that managers should not ignore the potential pitfalls and risks of CSR. When firms fail to innovate, studies have indicated that CSR actually reduced their market returns [27].

Cluster 3 - CSR and corporate financial performance: Up to now, there has been an inconsistency in the results of studies on the impact of CSR on corporate financial performance. Many have shown that CSR has a positive impact on financial performance, while others have shown the opposite. Notably, some studies found no link between CSR and financial performance. Waddock and Graves [28] indicated that corporate social performance (CSP) positively affects both prior and future financial performance. According to Cheng, et al. [29] superior strategic CSR performance can help firms gain better access to finance, which will lead to (1) reduced agency costs due to improved stakeholder engagement and (2) reduced information asymmetry due to increased transparency. Both stakeholder engagement and transparency in CSR performance are important in reducing capital constraints. Excess or abnormal ESG performance is positively relevant, collaterally revisiting the notion of competitive advantage in sustainability terms [30]. Positive ESG information can influence corporate finance performance. Friede, et al. [31] as it help increase environmental awareness, which in turn is strongly related to professionalism in banking [32]. For instance, one study has proven that investors will improve a company's E&S performance when they come from countries with strong beliefs in the importance of E&S issues [33]. According to Surroca, et al. [34] CSR does not impact directly on CFP but through the mediator intangible assets (innovation, human capital, reputation, culture) and then increases CFP.

In contrast, Sen and Bhattacharya [35] showed that CSR influences on consumers' purchase intentions are more complex than the direct positive effects based on their evaluations of the company. Specifically, the research results showed that a company's CSR activities can guide consumers' purchase intentions both indirectly (through mediators and moderators) and directly. Furthermore, the indirect effects are sometimes negative under certain conditions. For example, CSR initiatives can reduce consumers' purchase intentions of the company due to cognitive dissonance under certain conditions. According to Luo and Bhattacharya [27] good CSR practice does not always lead to high profits. Managers need to avoid inherent CSR traps and pitfalls. Research showed that CSR implementation can reduce business profits and corporate market return if businesses do not innovate concurrently.

However, one study suggested the possibility of no correlation between CSR and financial performance. McWilliams and Siegel [36] when considered investment in R&D as a control variable, theorized that the inconsistency in the results of the previous studies (CSR had positive/negative/no impact on CFP) could be due to them not including this control variable. Thus, any conclusions about CSR effects on financial performance from these studies could be imprecise.

Cluster 4 - CSR disclosure: Studies in this cluster have indicated the factors affecting CSR disclosure. Izzo, et al. [37] showed that companies that were highly traded, liquid, and highly capitalized had a high level of SDGs disclosure. Besides, Rosati and Faria [38] demonstrated that countries that are vulnerable to climate change, high investment on CSR training, liberalism and individualism, low

market intervention, negligence on employment protection, short-term orientation, and low power distance have a positive effect on SDGs disclosure. Independent directors on the board, expertise with non-financial reporting, and the length of the report can also have a positive impact on SDG Reporting Score (SRS) [39]. Strengths of the private sector (innovation, responsiveness, efficiency and provision of specific skills and resources) also have a positive impact on the SDGs [40]. NMCs are more likely to adopt CSR [41]. As such, corporates with larger size, higher level of intangible assets, higher commitment of sustainable framework and external assurance, higher share female of director, and younger board of director have early adopted of SDGs Reporting Rosati and Faria [38]. Additionally, García-Sánchez, et al. [42] showed that companies with ownership by foreign investors and pension funds tend to be more successful in performing strategies established by the UN and the Global Reporting Initiative (GRI) — GRI-SDG Compass. Research by Ali, et al. [43] also confirmed that CSR reporting agenda is positively influenced by company size, industry sector, profitability, corporate governance mechanisms, political, social, and cultural factors. Firms in developed countries put more pressure on CSR reporting agenda than those in developing countries Ali, et al. [43]. However, governments, financial institutions, and cross holdings posed NO IMPACT on GRI-SDG [42].

Cluster 5 - Characteristics of BOD and CSR: Studies have shown that there are many factors belonging to BOD characteristics that can influence CSR practices. One of such factors is the percentage of female BOD, which has shown to positively related to disclosure of environment and CSR, [44, 45] as well as to the increased voluntary climate change disclosure [46]. However, the study by Cucari, et al. [47] argued that the percentage of female BOD has a negative impact on the firm's CSR disclosure, presenting the heterogeneity in the observations of the impact of this factor on CSR. Another factor, gender diversity, also improves the firm's environment performance [48] environment sustainability in banking [49] and sustainable development. On the other hand, Orazalin and Baydauletov [50] showed that a positive relationship between CSR strategy and environmental performance is negatively moderated by the board's gender diversity. Post, et al. [44] pointed out that boards whose directors average closer to 56 years in age are more likely to implement environmental governance structures or processes, while Cucari, et al. [47] found that board age has no impact on CSR. A higher proportion of Western European directors are also more likely to implement environmental governance structures or processes [44]. In addition, according to Harjoto, et al. [51] tenure has an impact on CSR activities of the enterprise. However, the study of Khan, et al. [52] showed that CEO duality has no impact on CSR. Expertise diversities affect firms' CSR activities and increases CSR performance by increasing CSR strengths and reducing CSR concerns for companies that manufacture consumer goods or operate in highly competitive industries [51, 53]. Multiple factors were also studied closely for its relation to CSR. Board size affects environmental concern [53]. Managerial ownership has no impact on CSR [52] while public ownership, foreign ownership, and presence of audit committee positively affect CSR [52]. Independent director affects firm's CSR disclosure [47, 53]. Besides co-citation, bibliographic coupling analysis was also used. The results found five clusters with the following themes: (1) CSR and sustainable supplier in the international business, (2) CSR management for sustainable development and competitive advantage, (3) Sustainable development and financial performance, (4) Characteristics of BOD influence sustainability performance, and (5) The theory evolution of CSR and sustainable development. Only cluster 1 is distinct from the themes of the co-citation analysis. Therefore, only the content of cluster 1 (of bibliographic coupling analysis) is presented in this study as the title "Cluster 6".

Cluster 6 - CSR and sustainable supplier in the international business: According to Awaysheh and Klassen [54] the four dimensions of supplier CSR practices are supplier human rights, supplier labour practices, supplier codes of conduct, and supplier social audits. Research by Schaltegger, et al. [55] had shown that CSR (economic, social, environmental) has an impact on performance factors such as supply chain costs, service levels, human rights, product responsibility, greenhouse gas emissions, water use, and energy consumption. According to Yang, et al. [56] manufacturers with high levels of environmental responsibility will face obstacles due to green costs. From a more optimistic perspective, high green levels combined with uncertainty in consumer demand will encourage manufacturers to open

online channels. However, managing dual channels (due to high green levels) may not be beneficial for the environment. On the contrary, when green costs are low, retailers will benefit from accessing direct channels to manufacturers. In conclusion, the results of co-citation and bibliometric analyses have shown that so far, the field of "corporate social responsibility" and "sustainable development" has six research directions with the following themes: (1) CSR and corporate sustainability, (2) CSR, green innovation, and firm performance, (3) CSR and corporate financial performance, (4) CSR disclosure, and (5) Characteristics of BOD and CSR, and (6) CSR and sustainable supplier in the international business. Among these, the first five themes are the foundation, while theme six is the current new research direction of this field.

Table 4.
Themes of co-keywords analysis

| | Keywords(occurrence) | |
|---------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Theme | 2001 - 2017 | 2018 - 2025 |
| The evolution of CSR | Corporate social-responsibility(283), financial performance(66), environmental management(61) framework(49), impact(48), green(44), innovation(44), strategies(40), corporate sustainability(38), supply chain management(22), environmental performance(20) | Corporate social-responsibility(1153), governance(392), disclosure(234), determinants(162), stakeholder engagement(144), environmental performance(143), companies(136), quality(120), legitimacy(101), firm(98), ownership(82), corporate governance(80), sustainability reporting(76), information(74), gender diversity(73), environmental policy(61), SDGs(60), climate-change(55), accountability(52), institutional theory(51), diversity(48), firm value(48), ESG performance(44), women(42), directors(40) |
| Stakeholder perspectives on CSR | Companies(47), organizations(36), stakeholder theory(32) | Stakeholder theory(100), models(35), philanthropy(26), stakeholder(23), power(21), issues(20) |
| Sustainable development perspective on CSR | Sustainable development(678), corporate social responsibility(621), CSR(185), business(83), governance(60), stakeholders(58), industry(35), mining(30), perspective(24), citizenship(22), community(21), indicator(21), policy(20) | Sustainable development(1162), CSR(672) sustainable development goals(246), business(201), corporate social responsibility(152), industry(119), responsibility(105), stakeholders(87), SDGs(79), social responsibility(78), engagement(75), ethics(68), challenges(62), bibliometric analysis(58), policy(48) |
| The relationship between CSR and firm performance | Performance(165), strategy(52), social-responsibility(42), disclosure(37), stakeholder engagement(35), legitimacy(27), firrm(26), determinants(23), stakeholder (22), SMEs(21), stakeholder management(21) | Financial performance(387), firm performance(193), ESG(95), china(90), firms(88), green innovation(71), empirical-evidence(70), risk(66), investment(64), competitive advantage(61), environment(52), market(52), eco-innovation(50), resource-based view(49), efficiency(37) |
| Antecedents and consequences of CSR | | Corporate social responsibility(836), performance(628), impact(490), model(143), green(114), social-responsibility(104), reputation(93), behavior(92), perspective(92), mediating role(70), moderating role(63), perceptions(62), organizations(55), antecedents(54), satisfaction(52), trust(52), values(52), orientation(50), leadership(46), environmental-management(44), consumption(42), tourism(40), loyalty(33), attitudes(32), identification(31), employees(29) |
| Strategic management and CSR | | Management (461), innovation (227), framework (163), strategy (143), strategies (109), corporate sustainability (94), supply chain management (86), SMEs (82), circular economy (75), entrepreneurship (61), implementation (61), drivers (55), indicators (53), supply chain (53), adoption (46), dynamic capabilities (36) |

Edelweiss Applied Science and Technology

ISSN: 2576-8484

Vol. 9, No. 9: 1223-1238, 2025 DOI: 10.55214/2576-8484.v9i9.10124

© 2025 by the author; licensee Learning Gate

5. Co-Keywords Analysis

Based on the statistical graph showing the number of articles published by year, it can be seen that the research development process for the two keywords "corporate social responsibility" and "sustainable development" is divided into two periods, 2001 - 2017 and 2018 - 2025. These are also the two periods used for comparative co-keywords analysis, of which the results demonstrated 6 themes: (1) The evolution of CSR, (2) Stakeholder perspectives on CSR, (3) Sustainable development perspective on CSR, (4) The relationship between CSR and firm performance, (5) Antecedents and consequences of CSR, and (6) Strategic management and CSR.

The evolution of CSR: During the period 2001–2017, CSR research initially focused on financial performance [2, 34, 57] then shifted to environmental issues and green innovation [22, 27]. However, CSR research changed in the period 2018 - 2025 with more attention to corporate governance [48-50] and CSR reporting [58-60].

Stakeholder perspectives on CSR: CSR is considered as the responsibility of enterprises to meet the needs/expectations of stakeholders [61]. Enterprises need to set priorities based on the Attributions of stakeholders, including power, legitimacy, and urgency. In summary, initially, studies were based on the conventional stakeholder management model. But in the period 2018 - 2025, they paid more attention to setting priorities in stakeholder issue management.

Sustainable development perspective on CSR: The sustainable development perspective in CSR began to be mentioned in the early 2000s, when CSR was considered a strategy to manage the relationship between local people and mining companies in natural resource exploration negotiations [62, 63]. In the period 2018 - 2025, studies on sustainable development in CSR focused on the United Nations' sustainable development goals.

The relationship between CSR and firm performance: The relationship between CSR and firm performance is an endless topic in CSR. During the period 2001 - 2017, research was conducted on the impact of CSR reporting, stakeholder management on corporate financial performance [29, 57, 64]. The scope of research on this topic expanded in the period 2018 - 2025. Accordingly, the impact of ESG [30, 65] green innovation [21, 25] on financial performance had been mentioned. In addition, corporate performance was also improved through CSR helping businesses to create competitive advantages [30, 34].

Antecedents and consequences of CSR: The antecedents that affect CSR are: leadership, BOD characteristics, corporate governance, government regulations, and culture [48, 49]. The consequences of CSR include financial performance, reputation, loyalty, satisfaction, and trust [30, 65]. In addition, the mediating factors in the impact of CSR on corporate performance are innovation, green innovation, and competitive advantage [21, 25]. Some typical moderating variables in CSR research are culture, industry, country, and attitude [50]. Research is being conducted at both the individual and organizational levels.

Strategic management and CSR: From 2018 onwards, the strategic approach to CSR research has been implemented more and more. Sustainable strategies, especially sustainable supply chains, are of great interest to researchers. The key point of these approaches is to view CSR as a mean to create and maintain dynamic capabilities of enterprises, thereby helping enterprises create sustainable competitive advantages [56].

Keywords from the co-occurrence analysis period 2018 – 2025 results are presented in a scatter plot (Figure 5) according to average publication year and average citation. Keywords with both high average publication year and high average citation are considered as emerging research topics. According to Figure 4, new and popular topics that can be further researched are ESG performance, green innovation, green finance, ESG, pro-environmental behavior, environmental sustainability, product innovation, and board diversity.

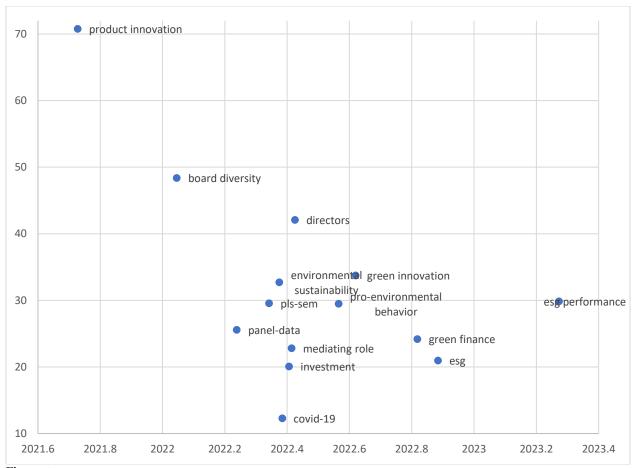


Figure 5. Scatter plot of keywords.

6. Conclusion and Future Research Directions

The following conclusions can be drawn from the literature review results: First, research on "corporate social responsibility" and "sustainable development" began in 2001 and can be divided into two development periods: 2001 - 2017 and 2018 - 2025. The author with the most published articles is García-sánchez IM. The most influential people in this field in terms of citations are Schaltegger Stefan, Kolk Ans, and García-sánchez. China is the country with the highest number of publications related to the topic - more than double compared to second place, Spain. The regions of Asia, Europe, and America have relatively moderate publications, while Africa has the fewest. Business Economics, Environmental Sciences Ecology, and Science Technology Other Topics are the three areas with much more research than the other areas.

Second, in the field of "corporate social responsibility" and "sustainable development", there are six research directions with the topics (1) CSR and corporate sustainability, (2) CSR, green innovation, and firm performance, (3) CSR and corporate financial performance, (4) CSR disclosure, and (5) Characteristics of BOD and CSR, and (6) CSR and sustainable supplier in the international business. Of which, the first five themes are considered the pillars of this field, while theme six is the current popular research direction.

Third, the co-keywords analysis shows that five themes: "The evolution of CSR", "stakeholder perspectives on CSR", "sustainable development perspective on CSR", and "the relationship between CSR and firm performance", have been studied from 2001 to present. However, the research content of

these themes in the period 2018 - 2025 had changed compared to the period 2001 - 2017. Two new themes that have only been studied in the period 2018 - 2025 are "antecedents and consequences of CSR" and "strategic management and CSR".

Finally, the research topics that need further attention, as shown by the scatter plot analysis, are "ESG performance", "green innovation", "green finance", "ESG", "pro-environmental behavior", "environmental sustainability", "product innovation", and "board diversity".

From this study, research gaps that future studies on "corporate social responsibility" and "sustainable development" might consider addressing include:

- (1) Studies conducted in Asia, Europe, America, Australia, in both developed and emerging economies. Additionally, the number of studies in Africa is also few. Research in the context of African countries should also be given attention.
- (2) Some areas that are closely related to sustainable development but have few studies, including energy fuels, agriculture, geography, transportation, and mining mineral processing. Researchers should focus on these areas to make sustainable development research more comprehensive.
- (3) The relationship between CSR and corporate financial performance, of which is still unclear despite being studied for a long time due to the inconsistency in the findings of previous research. Therefore, this topic needs to be further studied. Besides, identifying the mediating and moderating factors of this relationship is extremely necessary.
- (4) The influence of BOD characteristics on CSR has not been consistently confirmed by previous studies. Although the results of many previous studies show that BOD characteristics have a positive impact on CSR activities, some show that this factor has no or negative impact (e.g.: percentage of female in BOD; gender diversity of BOD). Future studies can continue to study to provide more empirical and uniform evidence for this topic.
- (5) Green supply chain has many impacts on business operations. One of its impacts is increasing green costs, which hinders the implementation of CSR by businesses, and dual channel management, which also increases negative impacts on the environment. These negative impacts make it difficult to determine the relationship between CSR and green supply chain. In the future, this topic needs to be further researched to clarify this relationship.
- (6) The integration of strategic management and CSR has only recently been studied. Therefore, this topic should be further conducted to help strategic managers have a solid theoretical foundation for corporate governance in the context of high demands for sustainable development.
- (7) The hot keywords "ESG performance", "green innovation", "green finance", "ESG", "proenvironmental behavior", "environmental sustainability", "product innovation", and "board diversity" on CSR and sustainable development, which are topics that researchers can continue to exploit for their future studies.

Despite being limited to only reviewing articles from the Web of Science database, the results from this literature review are reliable and credible, as the evidence used in this article were reviewed and published on a prestigious database. Additionally, quantitative analysis techniques of the bibliometrics method were used to collect key points from a large number of documents of a broad topic, making the findings of this review more concrete. Further literature review of articles on this topic in other databases is encouraged to confirm the observations made in this study.

Funding:

This research is funded by University of Economics Ho Chi Minh City, Vietnam (UEH).

Transparency:

The author confirms that the manuscript is an honest, accurate, and transparent account of the study; that no vital features of the study have been omitted; and that any discrepancies from the study as planned have been explained. This study followed all ethical practices during writing.

Copyright:

© 2025 by the author. This open-access article is distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (https://creativecommons.org/licenses/by/4.0/).

References

- S. Menon and B. E. Kahn, "Corporate sponsorships of philanthropic activities: Do they help the sponsor?," Social [1]Marketing Quarterly, vol. 7, no. 3, pp. 76-79, 2001. https://doi.org/10.1080/15245004.2001.9961169
- W. Visser, The age of responsibility: CSR 2.0 and the new DNA of business. Hoboken, NJ: John Wiley & Sons, 2011.
- A. Smith, The theory of moral sentiments. London, United Kingdom: Penguin Publishing Group, 2010.
- H. R. Bowen, Social responsibilities of the businessman. Iowa City, IA: University of Iowa Press, 2013.
- [3] [4] [5] R. E. Freeman, Strategic management: A stakeholder approach. Cambridge, United Kingdom: Cambridge University Press. https://doi.org/10.1017/cbo9781139192675, 2010.
- [6] C. Handy, "What's a business for?," Harvard Business Review, vol. 80, no. 12, pp. 49-55, 2002.
- [7] A. B. Carroll, "A three-dimensional conceptual model of corporate performance," Academy of Management Review, vol. 4, no. 4, pp. 497-505, 1979. https://doi.org/10.5465/amr.1979.4498296
- A. B. Carroll, "The pyramid of corporate social responsibility: Toward the moral management of organizational [8] stakeholders," Business Horizons, vol. 34, no. 4, pp. 39–48, 1991. https://doi.org/10.1016/0007-6813(91)90005-G
- J. Elkington, "Towards the sustainable corporation: Win-win-win business strategies for sustainable development," [9]California Management Review, vol. 36, no. 2, pp. 90-100, 1994. https://doi.org/10.2307/41165746
- [10] United Nations, Transforming our world: The 2030 Agenda for sustainable development. New York: United Nations, 2015.
- J. Elkington, "Accounting for the triple bottom line," Measuring Business Excellence, vol. 2, no. 3, pp. 18-22, 1998. [11] https://doi.org/10.1108/eb025539
- [12] N. Donthu, S. Kumar, D. Mukherjee, N. Pandey, and W. M. Lim, "How to conduct a bibliometric analysis: An guidelines," JournalBusiness and of Research, vol. 133, https://doi.org/10.1016/j.jbusres.2021.04.070
- C. M. Steiner, "The stroke economy," Transactional Analysis Journal, vol. 1, no. 3, pp. 9-15, 1971. [13] https://doi.org/10.1177/036215377100100305
- E. B. Barrier, "The concept of sustainable economic development," Environmental Conservation, vol. 14, no. 2, pp. 101-[14] 110, 1987. https://doi.org/10.1017/S0376892900011449
- [15]R. J. Baumgartner and D. Ebner, "Corporate sustainability strategies: Sustainability profiles and maturity levels," Sustainable Development, vol. 18, no. 2, pp. 76-89, 2010. https://doi.org/10.1002/sd.447
- M. Ashrafi, M. Adams, T. R. Walker, and G. Magnan, "How corporate social responsibility can be integrated into [16] corporate sustainability: A theoretical review of their relationships," International Journal of Sustainable Development & World Ecology, vol. 25, no. 8, pp. 672-682, 2018. https://doi.org/10.1080/13504509.2018.1471628
- S. L. Hart and M. B. Milstein, "Creating sustainable value," Academy of Management Perspectives, vol. 17, no. 2, pp. 56-[17] 67, 2003. https://doi.org/10.5465/ame.2003.10025194
- [18] P. J. DiMaggio and W. W. Powell, "The iron cage revisited: Institutional isomorphism and collective rationality in fields," organizational American Sociological Review, vol. 48, no. 2, https://doi.org/10.2307/2095101
- C. Oliver, "Strategic responses to institutional processes," Academy of Management Review, vol. 16, no. 1, pp. 145-179, [19] 1991. https://doi.org/10.5465/amr.1991.4279002
- W. R. Scott, "The adolescence of institutional theory," Administrative Science Quarterly, vol. 32, no. 1, pp. 493-511, [20] 1987. https://doi.org/10.2307/2392880
- S. Kraus, S. U. Rehman, and F. J. S. García, "Corporate social responsibility and environmental performance: The [21] mediating role of environmental strategy and green innovation," Technological Forecasting and Social Change, vol. 160, p. 120262, 2020. https://doi.org/10.1016/j.techfore.2020.120262
- [22] Y.-S. Chen, S.-B. Lai, and C.-T. Wen, "The influence of green innovation performance on corporate advantage in Taiwan," Journal of Business Ethics, vol. 67, no. 4, pp. 331-339, 2006.
- [23] R. Bocquet, C. Le Bas, C. Mothe, and N. Poussing, "CSR, innovation, and firm performance in sluggish growth contexts: A firm-level empirical analysis," Journal of Business Ethics, vol. 146, no. 1, pp. 241-254, 2017. https://doi.org/10.1007/s10551-015-2959-8
- J. Guerrero-Villegas, L. Sierra-García, and B. Palacios-Florencio, "The role of sustainable development and [24] innovation on firm performance," Corporate Social Responsibility and Environmental Management, vol. 25, no. 6, pp.
- W. Cai and G. Li, "The drivers of eco-innovation and its impact on performance: Evidence from China," Journal of [25]Cleaner Production, vol. 176, pp. 110-118, 2018. https://doi.org/10.1016/j.jclepro.2017.12.109
- S.-P. Chuang and S.-J. Huang, "The effect of environmental corporate social responsibility on environmental [26] performance and business competitiveness: The mediation of green information technology capital," Journal of Business Ethics, vol. 150, no. 4, pp. 991-1009, 2018. https://doi.org/10.1007/s10551-016-3167-x

- [27] X. Luo and C. B. Bhattacharya, "Corporate social responsibility, customer satisfaction, and market value," *Journal of Marketing*, vol. 70, no. 4, pp. 1-18, 2006. https://doi.org/10.1509/jmkg.70.4.001
- [28] S. A. Waddock and S. B. Graves, "The corporate social performance-financial performance link," *Strategic Management Journal*, vol. 18, no. 4, pp. 303-319, 1997.
- [29] B. Cheng, I. Ioannou, and G. Serafeim, "Corporate social responsibility and access to finance," *Strategic Management Journal*, vol. 35, no. 1, pp. 1-23, 2014. https://doi.org/10.2139/ssrn.1847085
- [30] M. Taliento, C. Favino, and A. Netti, "Impact of environmental, social, and governance information on economic performance: Evidence of a corporate 'sustainability advantage' from Europe," *Sustainability*, vol. 11, no. 6, p. 1738, 2019. https://doi.org/10.3390/su11061738
- [31] G. Friede, T. Busch, and A. Bassen, "ESG and financial performance: Aggregated evidence from more than 2000 empirical studies," Journal of Sustainable Finance & Investment, vol. 5, no. 4, pp. 210-233, 2015. https://doi.org/10.1080/20430795.2015.1118917
- [32] M. Brogi and S. Lagacio, "The role of investors' beliefs in enhancing corporate environmental and social performance," *Corporate Social Responsibility and Environmental Management*, vol. 25, no. 5, pp. 1020–1034, 2018.
- [33] A. Dyck, K. V. Lins, L. Roth, and H. F. Wagner, "Do institutional investors drive corporate social responsibility? International evidence," *Journal of Financial Economics*, vol. 131, no. 3, pp. 693-714, 2019. https://doi.org/10.1016/j.jfineco.2018.08.013
- [34] J. Surroca, J. A. Tribó, and S. Waddock, "Corporate responsibility and financial performance: The role of intangible resources," *Strategic Management Journal*, vol. 31, no. 5, pp. 463-490, 2010. https://doi.org/10.1002/smj.820
- S. Sen and C. B. Bhattacharya, "Does doing good always lead to doing better? Consumer reactions to corporate social responsibility," *Journal of Marketing Research*, vol. 38, no. 2, pp. 225-243, 2001. https://doi.org/10.1509/jmkr.38.2.225.18838
- [36] A. McWilliams and D. Siegel, "Corporate social responsibility and financial performance: Correlation or misspecification?," *Strategic Management Journal*, vol. 21, no. 5, pp. 603-609, 2000.
- [37] M. F. Izzo, M. Ciaburri, and R. Tiscini, "The challenge of sustainable development goal reporting: The first evidence from Italian listed companies," *Sustainability*, vol. 12, no. 8, p. 3494, 2020. https://doi.org/10.3390/su12083494
- [38] F. Rosati and L. G. Faria, "Addressing the SDGs in sustainability reports: The relationship with institutional factors," *Journal of Cleaner Production*, vol. 215, pp. 1312-1326, 2019. https://doi.org/10.1016/j.jclepro.2018.12.107
- [39] S. Pizzi, F. Rosati, and A. Venturelli, "The determinants of business contribution to the 2030 Agenda: Introducing the SDG Reporting Score," *Business Strategy and the Environment*, vol. 30, no. 1, pp. 404-421, 2021. https://doi.org/10.1002/bse.2628
- [40] R. Scheyvens, G. Banks, and E. Hughes, "The private sector and the SDGs: The need to move beyond 'business as usual'," Sustainable Development, vol. 24, no. 6, pp. 371-382, 2016. https://doi.org/10.1002/sd.1623
- [41] W. Chapple and J. Moon, "Corporate social responsibility (CSR) in Asia: A seven-country study of CSR web site reporting," Business & Society, vol. 44, no. 4, pp. 415-441, 2005. https://doi.org/10.1177/0007650305281658
- [42] I. M. García-Sánchez, L. Rodríguez-Ariza, B. Aibar-Guzmán, and C. Aibar-Guzmán, "Do institutional investors drive corporate transparency regarding business contribution to the sustainable development goals?," *Business Strategy and the Environment*, vol. 29, no. 5, pp. 2019-2036, 2020. https://doi.org/10.1002/bse.2485
- [43] W. Ali, J. G. Frynas, and Z. Mahmood, "Determinants of corporate social responsibility (CSR) disclosure in developed and developing countries: A literature review," *Corporate social Responsibility and Environmental Management*, vol. 24, no. 4, pp. 273-294, 2017. https://doi.org/10.1002/csr.1410
- [44] C. Post, N. Rahman, and E. Rubow, "Green governance: Boards of directors' composition and environmental corporate social responsibility," Business & Society, vol. 50, no. 1, pp. 189-223, 2011. https://doi.org/10.1177/0007650310394642
- [45] L. Liao, L. Luo, and Q. Tang, "Gender diversity, board independence, environmental committee and greenhouse gas disclosure," *The British Accounting Review*, vol. 47, no. 4, pp. 409-424, 2015. https://doi.org/10.1016/j.bar.2014.01.002
- W. Ben-Amar, M. Chang, and P. McIlkenny, "Board gender diversity and corporate response to sustainability initiatives: Evidence from the carbon disclosure project," *Journal of Business Ethics*, vol. 142, no. 2, pp. 369-383, 2017. https://doi.org/10.1007/s10551-015-2759-1
- N. Cucari, S. Esposito De Falco, and B. Orlando, "Diversity of board of directors and environmental social governance: Evidence from Italian listed companies," *Corporate social Responsibility and Environmental Management*, vol. 25, no. 3, pp. 250-266, 2018. https://doi.org/10.1002/csr.1452
- [48] J. Lu and I. M. Herremans, "Board gender diversity and environmental performance: An industries perspective," Business Strategy and the Environment, vol. 28, no. 7, pp. 1449-1464, 2019. https://doi.org/10.1002/bse.2326
- G. Birindelli, S. Dell'Atti, A. P. Iannuzzi, and M. Savioli, "Composition and activity of the board of directors: Impact on ESG performance in the banking system," *Sustainability*, vol. 10, no. 12, p. 4699, 2018. https://doi.org/10.3390/su10124699

- [50] N. Orazalin and M. Baydauletov, "Corporate social responsibility strategy and corporate environmental and social performance: The moderating role of board gender diversity," *Corporate social Responsibility and Environmental Management*, vol. 27, no. 4, pp. 1664-1676, 2020. https://doi.org/10.1002/csr.1915
- [51] M. Harjoto, I. Laksmana, and R. Lee, "Board diversity and corporate social responsibility," *Journal of Business Ethics*, vol. 132, no. 4, pp. 641-660, 2015. https://doi.org/10.1007/s10551-014-2343-0
- A. Khan, M. B. Muttakin, and J. Siddiqui, "Corporate governance and corporate social responsibility disclosures: Evidence from an emerging economy," *Journal of Business Ethics*, vol. 114, no. 2, pp. 207-223, 2013. https://doi.org/10.1007/s10551-012-1336-0
- [53] J. L. Walls, P. Berrone, and P. H. Phan, "Corporate governance and environmental performance: Is there really a link?," *Strategic Management Journal*, vol. 33, no. 8, pp. 885-913, 2012. https://doi.org/10.1002/smj.1952
- [54] A. Awaysheh and R. D. Klassen, "The impact of supply chain structure on the use of supplier socially responsible practices," *International Journal of Operations & Production Management*, vol. 30, no. 12, pp. 1246-1268, 2010. https://doi.org/10.1108/01443571011094253
- [55] S. Schaltegger, D. Roger Burritt, M. Varsei, C. Soosay, B. Fahimnia, and J. Sarkis, "Framing sustainability performance of supply chains with multidimensional indicators," *Supply chain Management: An International Journal*, vol. 19, no. 3, pp. 242-257, 2014. https://doi.org/10.1108/SCM-12-2013-0436
- D. Yang, T. Xiao, and J. Huang, "Dual-channel structure choice of an environmental responsibility supply chain with green investment," *Journal of Cleaner Production*, vol. 210, pp. 134-145, 2019. https://doi.org/10.1016/j.jclepro.2018.11.014
- [57] J. Martínez-Ferrero and J. V. Frias-Aceituno, "Relationship between sustainable development and financial performance: international empirical research," *Business Strategy and the Environment*, vol. 24, no. 1, pp. 20-39, 2015. https://doi.org/10.1002/bse.1803
- [58] I. M. García-Sánchez and J. Martínez-Ferrero, "How do independent directors behave with respect to sustainability disclosure?," *Corporate Social Responsibility and Environmental Management*, vol. 25, no. 4, pp. 609-627, 2018. https://doi.org/10.1002/csr.1481
- [59] M. H. Elmagrhi, C. G. Ntim, A. A. Elamer, and Q. Zhang, "A study of environmental policies and regulations, governance structures, and environmental performance: The role of female directors," *Business Strategy and the Environment*, vol. 28, no. 1, pp. 206-220, 2019. https://doi.org/10.1002/bse.2250
- [60] M. d. C. Valls Martinez, S. Cruz Rambaud, and I. M. Parra Oller, "Gender policies on board of directors and sustainable development," *Corporate Social Responsibility and Environmental Management*, vol. 26, no. 6, pp. 1539-1553, 2019. https://doi.org/10.1002/csr.1825
- [61] D. Chandler, Sustainable value creation. New York: Routledge, 2020.
- N. Pelosi and R. Adamson, "Managing the "S" in ESG: The case of indigenous peoples and extractive industries,"

 Journal of Applied Corporate Finance, vol. 28, no. 2, pp. 87-95, 2016. https://doi.org/10.1111/jacf.12180
- D. Ruwhiu and L. Carter, "Negotiating "meaningful participation" for Indigenous peoples in the context of mining," Corporate Governance, vol. 16, no. 4, pp. 641-654, 2016. https://doi.org/10.1108/CG-10-2015-0138
- Y.-C. Chen, M. Hung, and Y. Wang, "The effect of mandatory CSR disclosure on firm profitability and social externalities: Evidence from China," *Journal of Accounting and Economics*, vol. 65, no. 1, pp. 169-190, 2018. https://doi.org/10.1016/j.jacceco.2017.11.009
- D. C. Broadstock, K. Chan, L. T. Cheng, and X. Wang, "The role of ESG performance during times of financial crisis: Evidence from COVID-19 in China," Finance Research Letters, vol. 38, p. 101716, 2021. https://doi.org/10.1016/j.frl.2020.101716