

Environmental, Social, and Governance and Earnings Management Research: Current Trends and Future Research

Abstract:

Purpose

The study aims to identify and discuss how the literature on Environmental, Social, and Governance (ESG) and Earnings management (EM) has evolved, indicating key streams, keywords, authors, journals, countries, publication and citation trends, and thematic evolution. The study also constructs agendas for future research on ESG and EM.

Design/methodology/approach

This study uses the bibliometric review and content analysis approach on a corpus of 50 documents from Scopus until early 2024.

Findings

The study identifies distinct clusters based on bibliographic coupling: (1) ESG and EM in developed countries; (2) Institutional drivers in ESG-EM relationship; (3) ESG and EM in emerging countries; and (4) ESG integration in corporate practices. The research presents several key findings, including the most influential articles, top productive and impactful journals, and publication and citation trends. Additionally, we conduct network analysis encompassing author keyword co-occurrences and co-citation networks of journals. Furthermore, the present work explores bibliographic coupling among countries and documents. Finally, it proposes a framework for future research based on the research gaps identified in this review.

Research limitations/implications

This study assists practitioners, policymakers, and academics, including researchers and journal editors, in comprehensively understanding the relationship between ESG and EM and appropriately evaluating ESG performance and earnings quality.

Originality/value

The study contributes to the extant accounting literature by systematically exploring prior studies on the relationship between ESG and EM. It also constructs a future agenda for ESG and EM literature.

Keywords: *ESG, Earnings management, Corporate social responsibility, Bibliometric analysis, Systematic review*

1. Introduction

Despite the Earth's plentiful life-sustaining resources, humans' production and consumption have surpassed the planet's capacity by about 170% (IASE, 2024). This overuse has resulted in unparalleled global warming and notable environmental and social consequences. Previously localized concerns like climate change, pollution, social disparities, and governance issues are now global, underscoring the urgent call for sustainable development (IASE, 2024). Therefore, the emphasis on addressing climate change and transitioning to a sustainable development paradigm has grown significantly (Galletta et al., 2022).

Governments and businesses of varying scales are increasingly adopting a sustainable strategy to address these challenges, which prioritizes sustainable resource usage via a circular economy, emphasizing environmental concerns and highlighting societal welfare and effective governance (IASE, 2024). Adopting Environmental, Social, and Governance (ESG) principles is pivotal in achieving responsible and sustainable progress. Additionally, as investors increasingly favour companies that prioritize ESG factors, focusing on ESG can attract more investments and contribute to a more sustainable economy (Daugaard et al., 2024). Recently, credit rating agencies have endorsed the Principles of Responsible Investment (PRI), affirming their dedication to incorporating ESG factors into their credit rating methodologies (Ferguson et al., 2019; Khan, 2022).

ESG performance reflects the commitment to societal, environmental, and governance responsibilities that connect companies with the wider community (Del Gesso & Lodhi, 2024). A company's commitment to ESG and sustainability objectives shows that its management prioritizes making conscientious decisions that meet the stakeholders' needs and desires (Singhania & Chadha, 2023). Conversely, profit-centric management practices depart from achieving social responsibility, favouring purely business-oriented management approaches (Gavana et al., 2022). Moreover, the relationship between ESG and its funding has become increasingly significant within investment and corporate strategy development. Recently, companies have broadened their visions due to a shift from a traditional focus on profit maximization towards achieving a balance that encompasses sustainable development goals and ethical investments benefiting society (Chouaibi & Zouari, 2022). In this context, Kim et al. (2012) suggest that ESG practices do not significantly aid in managing actual profits. Similarly, Pyo and Lee (2013) demonstrate that companies investing in ESG do not actively partake in earnings management (EM). Moreover, Bozzolan et al. (2015) highlight that ESG

initiatives pose a primary obstacle to profit management. Accordingly, firms engage in ESG initiatives to gain legitimacy, defend their reputation, and build trust with all stakeholders, which interprets ESG performance ratings as a signal of future stock performance and risk mitigation (Broadstock et al., 2020; Dos Santos et al., 2022).

However, ESG engagement can occasionally serve as a cover for firm misconduct and a tool for managerial entrenchment, allowing them to evade accountability for unethical behavior (Boukattaya & Halaoua, 2022). It is worth noting that ESG performance and EM practices are influenced by managers, who may have different motivations to invest in ESG, either as a constraint or an incentive for EM behaviour (Boukattaya & Halaoua, 2022). Consequently, the relationship between ESG and EM has attracted significant interest in numerous empirical studies over the past decade. The evaluated studies have applied various theories to validate the association between ESG or CSR and EM. These theories include the Stakeholder theory (Cho & Chun, 2016; Chouaibi & Zouari, 2022; Kolsi & Attayah, 2018; Muttakin et al., 2015; Oh et al., 2020; Pathak & Gupta, 2022; Setiawan et al., 2019; Sial et al., 2019; Velte, 2019), Legitimacy theory (Bozzolan et al., 2015; Kim et al., 2012; Scholtens & Kang, 2013), Agency theory (Dimitropoulos, 2022; Oh et al., 2020; Sial et al., 2019), Resource-based theory (Scholtens & Kang, 2013), Signaling theory (Ben Amar & Chakroun, 2018; Sun et al., 2024), Financial Reporting theory (Li & Xia, 2018), Stakeholder-Agency theory (Shafai et al., 2022), Institutional theory (Setiawan et al., 2019), Myopia Avoidance theory (Dimitropoulos, 2022; Setiawan et al., 2019), Institutional Stakeholder theory (Scholtens & Kang, 2013), Socioemotional Wealth theory (Rahman & Zheng, 2023), and Stakeholder Salience theory (Rahman et al., 2020). The legitimacy theory is frequently cited in the literature to explain ESG disclosure. It posits that firm activities must comply with the prevailing norms and regulations of society, including activities related to ESG (Suchman, 1995), which is essential for organizational survival (Pasko et al., 2021). Thus, the company's operations should align with societal expectations to be legitimate. Meanwhile, stakeholder theory is predominantly examined to substantiate the relationship between ESG factors and EM.

However, amidst the ongoing debate about the extent to which ESG engagement influences EM practices, its precise role remains to be discovered. No review paper has specifically addressed the relationship between ESG factors and EM. Existing studies have examined the literature on CSR and EM (Kumar et al., 2023; Santos-Jaén et al., 2021; Sofian et al., 2022). Further, while Ali et al. (2024) provide insights into the influence of sustainability

reporting on EM, this study encompasses ESG and reviews studies on CSR that utilize proxies for ESG. Studies explicitly using only CSR have been excluded. For example, Kumar et al. (2023) conducted a bibliometric analysis to explore the existing literature on the CSR and EM relationship. The environmental context is missing in existing reviews due to their focus on CSR. Hence, this bibliometric analysis study comprehensively reviews existing literature, exploring the relationship between ESG activities and EM. Moreover, our research diverges in methodology and mainly focuses on the ESG aspect. Specifically, it exclusively examines literature from the Scopus database that specifically addresses ESG and EM relationships. Furthermore, we analyze network connections, keywords, and topics using bibliometric techniques as a focal point. This research utilizes the Scopus database to gather the study sample of 50 selected studies. The study aims to address the following research questions (RQs):

RQ1. What are the trends in the literature and citations discussing ESG and EM?

RQ2. Which articles and journals are most influential among the extant ESG and EM literature?

RQ3. Which keywords encapsulate the primary topics covered in ESG and EM literature?

RQ4. How do the networks among journals, documents and countries emerge in the ESG and EM literature?

RQ5. What themes would emerge when analyzing the ESG and EM literature?

RQ6. How can future research cover gaps in previous literature?

To address these research questions, we have thoroughly examined network analysis, including keyword co-occurrence, co-citation analysis across journals, and bibliographic coupling of countries and documents. Our approach involved conducting a bibliometric analysis using content analysis of articles on ESG and EM published in journals sourced from the Scopus database from January 1, 2011 to January 31, 2024. To the best of our knowledge, this study contributes to the literature as the first study to employ bibliometric analysis in investigating ESG and EM, advancing insights into the factors that connect ESG and EM. Additionally, given the varying outcomes of prior studies, this study elucidates the rationales behind such discrepancies in the literature, offering a blueprint for prospective research endeavors.

The subsequent sections are structured as follows. Section 2 explains the data and methodology employed, section 3 delineates the findings, section 4 outlines the thematic clusters, and section 5 highlights some key research gaps and suggests future research avenues. The last section summarizes the key insights drawn from the study.

2. Data and methodology

2.1 Data and sources

Prior studies suggest that many databases can be used to retrieve data for bibliometric analysis. However, Scopus contains a large number of peer-reviewed journals and ensures that bias in the results is reduced (Arslan et al., 2022; Bartol et al., 2014; Falagas et al., 2008) and prior researchers in business and management domain recommend its use (Arslan et al., 2023; Bartol et al., 2014; Norris & Oppenheim, 2007; Pandey, 2025a). Falagas et al. (2008) confirm that Scopus is considered one of the most suitable databases for conducting bibliometric studies and analyzing research performance and citations. Therefore, this study has relied on Scopus to investigate the literature discussing EM and ESG performance. The graphical representation of the data extraction process from the Scopus database is illustrated in **Figure 1**. The data was collected on January 31, 2024, and no specific annual time was specified to ensure complete study access. The analysis is limited to literature that discusses CSR as measured by ESG. Therefore, literature that uses CSR measured by other measures besides ESG was not considered. The literature search using TITLE-ABS-KEY¹ led to 332 documents in the Scopus database. The initial sample was then refined using a filter to ensure access to the authentic sample, ensuring our results' reliability. First, we filtered the documents to possess the following properties: Source type was limited to journals; Subject area was limited to "Business, Management, and Accounting", "Economics, Econometrics and Finance", and "Social Sciences"; Document type was limited to articles and reviews; and the language was limited to English. These filters excluded 52 documents, resulting in 280 documents. Thereafter, based on the title and abstract screening, articles unrelated to ESG and EM relationship dimensions were excluded (103 documents), yielding only 177 documents. Since

¹ The search string "TITLE-ABS-KEY ("Environmental, social and governance (ESG) disclosure" OR "ESG disclosure" OR "ESG Performance" OR "ESG Index" OR "corporate social responsibility" OR "corporate social responsibility reporting" OR "corporate social responsibility disclosure" OR "CSR" OR "environmental reporting*" OR "environmental disclosure*" OR "social disclosure*" OR "Corporate sustainability reporting*") AND TITLE-ABS-KEY ("earnings management" OR "earnings manipulation" OR "real earnings management" OR "earnings quality" OR "discretionary accrual" OR "total accrual" OR "financial reporting quality" OR "accrual earnings management"))" was used.

our focus is on the ESG-EM relationship, a careful reading of the title with the abstract conveyed the idea of whether the document is related or unrelated. For example, the abstract of Toukabri and Kateb (2023) mentions, “*to analyze the bidirectional effects between Corporate Social Responsibility (CSR) and financial reporting quality proxied by earnings management (EM).*” Also, “*The study confirms that gender diversity increases board effectiveness by reducing the level of earnings management, ensuring high quality of financial reporting, and developing CSR activities.*” The two quotes indicate that the environment component is missing, and hence, the study was excluded. Similarly, full papers were read in other instances, and papers that did not measure CSR in terms of ESG were excluded. This led to the exclusion of 127 documents, and the resultant 50 papers were used in the analysis.

[Figure 1 is here]

2.2 Methodology

Bibliometric analysis has emerged as a robust complementary method to traditional literature review approaches, such as narrative reviews, systematic reviews, and meta-analyses, each serving distinct purposes in synthesizing scholarly knowledge (Arslan et al., 2022; Donthu et al., 2021; Lal et al., 2022; Mubeen et al., 2024; Mukherjee et al., 2022; Pandey, 2025b). While narrative reviews provide qualitative insights through expert interpretation (Green et al., 2006), systematic reviews employ structured protocols to minimize bias and aggregate evidence (Liberati et al., 2009), and meta-analyses statistically quantify effects across studies (Borenstein et al., 2009; Orlitzky et al., 2003). However, these methods do not provide insights from bibliographical data. Bibliometric analysis addresses this gap by leveraging quantitative data—such as citation patterns, co-authorship networks, and keyword co-occurrences—to systematically analyze publication trends, identify influential works, and visualize knowledge domains (Arslan et al., 2022; Goyal & Kumar, 2021; Zupic & Čater, 2015). Unlike narrative reviews, which may reflect subjective biases, bibliometrics offers reproducible, data-driven insights into research evolution, interdisciplinary linkages, and emerging themes (Ellegaard & Wallin, 2015; Lal et al., 2023; Mukherjee et al., 2022). By integrating computational rigor with scientometric theory, bibliometrics complements traditional reviews, offering a macro-level perspective essential for navigating today’s complex, data-rich academic ecosystems (Donthu et al., 2021). Additionally, bibliometric analysis has emerged as a widely used method for

examining and analyzing business and management literature (Öztürk et al., 2024)². Hence, we use the bibliometric approach coupled with a systematic literature review.

We analyzed the authors, countries, and journals that have contributed most to the topic. We also performed network analysis, including keyword frequency, the bibliographic association of countries and documents, and co-citation to explore research topics and provide a roadmap for future studies. Following Flores-Sosa et al. (2022) and Martinho (2021), we used VosViewer and Gephi Software to analyze the literature. VOSviewer was used to perform network analysis by constructing bibliometric networks that captured relationships between keywords, documents, authors, and countries. Specifically, it helped identify co-occurrence patterns of keywords, bibliographic coupling between documents, and co-citation networks, providing insights into the thematic structure and collaboration patterns in the research field. To enhance the visual exploration of these networks, we used Gephi to customize and refine the graphical representation of these relationships. Gephi allowed for more flexible control over layout, node sizes, colours, and network structure, enabling us to better visualize clusters and detect communities within the data.

3. Results

3.1. Descriptive analysis

The descriptive analysis identifies the significant studies published in Scopus and the most influential documents with productive and influential journals, authors, organizations, and countries. The 50 documents received 1040 citations until January 31, 2024.

3.1.1. Publication and citation trend

To address **RQ1**, we examined the publication and citation trends of ESG and EM publications using a graphical representation. **Figure 2** illustrates the yearly publication and citation trends from January 1, 2011 to January 31, 2024. Of the 50 publications, one document was published in each of the years 2011, 2013, 2014, and 2015, 2 documents were published in each of the years 2016 and 2017, 6 documents each in 2018 and 2019, 3 documents each in 2020 and 2021, 13 in 2022, 8 in 2023, and 4 in January 2024. In 2011, one publication received the highest proportion of citations from others, at 18.36%. In 2022, the highest number of

² This approach relies on statistical and mathematical models to facilitate the quantitative analysis of the literature, ensuring that indicators of research performance and scientific activities are determined reliably (Zyoud et al., 2015).

publications was recorded, accounting for 10.45% of the total citations. Additionally, in 2011, 2013, 2014, and 2015, there was one publication each, receiving 18.36% (188 citations), 16.02% (164 citations), 8.79% (90 citations), and 9.77% (100 citations), respectively.

[Figure 2 is here]

3.1.2. The most influential documents

To partly address **RQ2**, we have compiled a list of the most cited documents published in Scopus from 2011 to 2024 (see **Table 1**). The influence is assessed through the total and average number of citations (Tsay, 2009; Yazit & Zainab, 2017). Significantly, the top 5 documents were sourced from the *Journal of Business Ethics (JBE)*, *Corporate Social Responsibility and Environmental Management (CSREM)*, *Managerial Auditing Journal*, *Accounting Forum (AF)*, and *Asia-Pacific Journal of Accounting and Economics*. Hong and Andersen (2011) is the most influential article, with 188 citations and an average of 14.46 citations per publication. Following this, Scholtens and Kang (2013) ranked second in citation count with 164 citations and an average citation of 14.91. Additionally, Muttakin et al. (2015) came in the third position with total citations of 100 alongside average citations of 11.11.

[Table 1 is here]

3.1.3. The most productive and influential journals

The **RQ2** is partly addressed in **Table 2** which presents the total number of publications on ESG and EM, their respective total citations, and the average citation matrix for all journals indexed in Scopus. The journal *Sustainability* leads in productivity, boasting three publications with 30 citations. While *CSREM* ranks third in publications with two articles; it emerges as the most influential journal with 192 total citations. Similarly, *AF* has a total of 2 publications with 99 citations. Following closely behind, *JBE* holds the second position as the most influential journal, with a total citation count of 188.

[Table 2 is here]

3.2 Network analysis

We used network analysis to visually represent data from Scopus publications. In our graphical presentations, the size of nodes corresponds to the frequency of occurrence, document weight, or citation weight, while their PageRank score determines the size of labels³.

³ PageRank provides insights into the relative significance of countries, documents, keywords, and citations within the analyzed dataset.

The emergence of contemporary analytics software like VOSviewer, equipped with visual representations, now facilitates bibliometric analysis (Donthu et al., 2021; Sofian et al., 2022; Srivastava & Sivaramakrishnan, 2021).

3.2.1 Keyword analysis of at least two co-occurrences

Analyzing the co-occurrence of author keywords reveals the theoretical framework in literature (Sofian et al., 2022). This method operates under the assumption that when keywords appear together within articles, they suggest a meaningful relationship between the concepts represented by those keywords (Callon et al., 1983; Donthu et al., 2021; Schiuma et al., 2023; Sofian et al., 2022). To answer **RQ3**, a criterion was set for keyword occurrence to enhance the analysis, stipulating that keywords must appear in at least two documents, as presented in **Figure 3**. This resulted in the identification of 22 keywords. The keywords "Earnings management," "Real Earnings Management," "Ethics," "Discretionary Accruals," "Sustainability," "Social," "ESG," "ESG Score," "ESG Disclosure," and "ESG Performance" frequently appear together, indicating a strong thematic connection. Additionally, "CSR," "Accruals," "Corporate Governance," "Discretionary Accruals," "Investor Protection," "Indonesia," "ESG Score," "Real Activities Earnings Management," "ESG Disclosure," and "ESG" emerge as the most prominent author keywords across sample documents. These keywords encapsulate the primary topics covered in the journals within this timeframe.

[Figure 3 is here]

3.2.3. Co-citation analysis of journals

To answer **RQ4**, we conducted a co-citation analysis on academic journals to explore the connections between scholarly publications through citations from other journals⁴. **Figure 4** illustrates the co-citation patterns among 28 cited journals with at least 15 citations. The *JBE* exhibits the most vital connections, followed by the *Journal of Accounting and Economics* (*JAC*) and *The Accounting Review* (*AR*). *JBE* is frequently co-cited with the *Academy of Management Review* (*AMR*), *Review of Accounting Studies* (*RAS*), *Academy of Management Journal* (*AMJ*), and *Journal of Financial Reporting and Accounting* (*JFRA*). At the same time, *AR* is closely associated with the *Managerial Auditing Journal*, *AMJ*, and *Business Strategy and the Environment*.

⁴ Co-citation refers to simultaneously referencing two sources in a third document, signifying a mutual conceptual link and shared intellectual context (Backhaus et al., 2011; Small, 1973).

[Figure 4 is here]

3.2.4. Bibliographic coupling of countries and documents

Kessler introduced the concept of bibliographic coupling to the scientific community through multiple reports and research articles (Jarneving, 2007). In a subsequent publication, bibliographic coupling was described as follows: "...each shared reference between two documents is regarded as a measure of coupling between them" (Jarneving, 2007; Kessler, 1963). Hence, to answer **RQ4**, we performed a bibliographic coupling analysis on countries and documents.

Figure 5 displays a network visualization illustrating the bibliographic coupling among 32 countries. This analysis reveals the intellectual affinity in their publications. Many countries show bibliographic coupling with China, the United States, the United Kingdom, Vietnam, and the United Arab Emirates.

[Figure 5 is here]

Figure 6 presents a network visualization depicting the bibliographic coupling of documents with shared intellectual similarities. Forty-two publications were clustered into four distinct groups based on this intellectual affinity. Hong and Andersen (2011), García-Sánchez and García-Meca (2017), Cho and Chun (2016), and Kim et al. (2019) have the highest number of citations among the published references.

[Figure 6 is here]

4. Clustering based on bibliographic coupling

To answer **RQ5**, we performed bibliographic coupling⁵ on 50 documents from Scopus-indexed journals, revealing that 42, with at least one citation, are bibliographically coupled. The provided clusters delineate four distinct groups based on their focus, primary topics, and citations, with each cluster named according to the content coverage of its publications, which might involve subjective biases, as Baker et al. (2020) acknowledged. The following sections delve into a detailed discussion of these four main clusters (see **Table 3**).

[Table 3 is here]

⁵ Bibliographic coupling involves analyzing recently published citing documents to assess their content's similarity, as Pattnaik et al. (2020) discussed.

4.1. Cluster 1: ESG and EM in emerging countries

This cluster is ranked first with 14 documents and fourth in terms of citations, with 107 citations. This cluster addresses many significant topics, including earnings quality, earnings management, CSR, environmental concerns, social and governance disclosure, family ownership, and corporate governance. Yoon et al. (2019) lead in terms of citation count with 20 citations, followed by Kim et al. (2019) with 19 citations, Saraireh et al. (2022) with 10 citations, Chouaibi and Zouari (2022) with nine citations, and Faisal et al. (2018) also with nine citations. Socially responsible companies are thought to act responsibly to curb earnings manipulation, thereby providing investors with more trustworthy and transparent financial information (Yoon et al., 2019). Managers in these companies tend to selectively adopt CSR practices based on the firm's institutional context (Chouaibi & Zouari, 2022; Kim et al., 2019). Furthermore, Alia and Barham (2022) suggest that Palestinian firms prioritize their social responsibility and related disclosures. Additionally, they propose enhancing corporate governance practices within Palestinian companies, as these practices positively influence both company value and the extent of CSR (Alia & Barham, 2022).

4.2. Cluster 2: Institutional Drivers in ESG-EM Relationship

This cluster is placed second with 13 publications and second in citations, totalling 187. It encompasses themes like CSR involvement, Earnings Quality, Mandatory CSR, ESG reporting, Earnings Manipulation, Financial Troubles, and Financial Data. García-Sánchez & García-Meca (2017) lead the second cluster with the highest number of citations at 59, followed by Cheng & Kung (2016) with 29, Ellili (2022) with 28, Sial et al. (2019) with 25, and Dimitropoulos (2022) with 12 citations. Government-imposed CSR mandates could lead to more cautious financial reporting, serving as alternatives to traditional governance mechanisms to reduce information imbalances. However, the effectiveness of this influence may differ across company types, with state-owned enterprises displaying less pronounced effects than their non-state-owned counterparts (Cheng & Kung, 2016). Companies that allocate insufficient resources to CSR resort to higher levels of EM, adversely affecting the quality of their earnings (Ellili, 2022). Conversely, the impact of excessive investment in CSR initiatives on EM is less straightforward, suggesting diverse motivations among firms (Sial et al., 2019). In times of financial strain, companies may resort to greater EM, particularly when there is extensive disclosure of ESG practices. This highlights a potential conflict between ESG efforts and EM, with financial distress exacerbating this relationship.

4.3. Cluster 3: ESG and EM in developed countries

This cluster holds the third position with 10 publications but is ranked first in terms of citations with a total of 614. Hong and Andersen (2011) is the top-cited paper in the third cluster, boasting 188 citations, trailed by Scholtens and Kang (2013) with 164 citations, Muttakin et al. (2015) with 100 citations, Grougiou et al. (2014) with 90 citations, and Ben Amar and Chakroun, (2018) with 32 citations. The cluster covers Corporate Social Responsibility, Earnings Management, Earnings Quality, COVID-19, and Corporate Social and Environmental Disclosure. In developed countries, when firms invest in CSR, their financial reporting improves, indicating more transparent and ethical financial practices (Hong & Andersen, 2011). The link between CSR and EM is intricate and influenced by factors like stakeholders and regulatory frameworks. Generally, firms are less likely to manipulate their earnings in environments valuing CSR or under strong stakeholder oversight (Scholtens & Kang, 2013). While some studies confirm the positive impact of CSR on financial practices, others offer less conclusive evidence, suggesting the potential misuse of CSR for self-interest. Firms prioritizing CSR tend to have more reliable financial records and perform better over time, possibly reducing deceptive EM tactics, especially in operational aspects. Thus, understanding how CSR impacts financial transparency in developed economies requires considering financial reporting practices and operational behaviour.

4.4. Cluster 4: ESG integration in corporate practices

Cluster 4 is ranked fourth, with five publications and 131 citations. Cho & Chun (2016) lead this cluster with 60 citations, followed by Velte (2019) with 41 citations, Choi et al. (2018) with 16 citations, Pathak and Gupta (2022) with eight citations, and Sungbin & Cho (2017) with six citations. The topics covered under this cluster are ESG performance, Corporate Social Responsibility, Law Code, Creditor's Rights, and Real Activities Earnings Management. Companies with more robust ESG performance tend to engage less in EM activities. Furthermore, legal frameworks and credit rights play a negative role in the relationship between ESG and EM, emphasizing the importance of institutional factors (Pathak & Gupta, 2022). ESG performance, particularly in governance, negatively affects accruals-based EM (AEM). However, it does not significantly impact real EM (REM), suggesting a two-way relationship between ESG performance and EM practice (Velte, 2019). Firms implementing a differentiation strategy are less likely to engage in real activities such as REM. Additionally, when combining CSR activities with a differentiation strategy, the negative association with

REM becomes even stronger, indicating that firms using both strategies are more inclined to avoid REM practices (Sungbin & Cho, 2017).

5. Future research agenda and implications

This section answers **RQ6**. The analysis indicates a growing interest in studying the connection between ESG practices and EM across various countries and industries. Many studies have uncovered significant links between ESG activities and EM practices (Chouaibi & Zouari, 2022; Faisal et al., 2018; Kim et al., 2019; Saraireh et al., 2022; Setiawan et al., 2019; Yoon et al., 2019), yet there are still inconsistencies and gaps in the literature. One such gap is the need for more thorough examinations of the factors that moderate the relationship between ESG and EM. Several studies suggest that firm characteristics like ownership structure, industry type, and institutional environment play a role in shaping this relationship (Sial et al., 2019). However, there is no consensus on how these factors interact with ESG and EM. For example, the influence of family ownership on the ESG-EM relationship compared to non-family firms remains unclear (Rahman & Zheng, 2023). Investigating this further could involve exploring how family-owned businesses balance social responsibility initiatives with financial goals, and how this affects their inclination towards EM. Additionally, there are calls for more cross-country comparative studies to understand how cultural, regulatory, and economic differences affect the ESG-EM relationship (Saraireh et al., 2022). Despite existing research focusing on specific regions, comparing findings across diverse contexts could shed light on the universality of these relationships and their susceptibility to local influences.

Furthermore, there is a notable gap in comprehensively examining the interplay between ESG, EM, and corporate governance mechanisms. Although some studies have looked into the impact of ESG on earnings quality (García-Sánchez & García-Meca, 2017; Song & Rimmel, 2021), few have explicitly delved into how corporate governance practices moderate this relationship (Abdelfattah & Elfeky, 2021; Adeneye et al., 2024; Sial et al., 2019). Understanding how governance mechanisms like board independence or shareholder activism influence the ESG-EM relationship could offer insights into the effectiveness of regulatory frameworks in promoting transparency and accountability.

Moreover, there is significant interest in exploring the mechanisms through which ESG influences EM practices and financial reporting quality. While some studies have found a negative association between ESG and EM (Ben Amar & Chakroun, 2018; Gaio et al., 2022;

Scholtens & Kang, 2013), others have shown mixed or even positive results (Asrori et al., 2019; Grougiou et al., 2014; Hong & Andersen, 2011; Khanchel & Lassoued, 2024; Kolsi & Attayah, 2018; Li & Xia, 2018; Muttakin et al., 2015). Understanding the underlying reasons for these divergent findings could enhance the understanding of the complexities of ESG-EM dynamics.

In this context future research could investigate how the relationship between ESG activities and EM evolves, considering changes in regulatory environments, societal expectations, and firm strategies. Moreover, sector-specific analyses could explore whether the impact of ESG activities on EM differs across industries while adopting a cross-cultural perspective could elucidate how cultural differences shape the effectiveness of ESG initiatives in mitigating EM practices. Longitudinal studies tracking firms over time could provide insights into the long-term effects of ESG initiatives on EM behaviour. Future research topics are proposed based on the identified gap, as outlined in **Table 4**.

[Table 4 is here]

This study has several implications. First, bibliometric analysis maps the main theories (e.g., Stakeholder, Legitimacy), shaping ESG and EM research and clarifying why different studies reach varying conclusions about ESG's impact on EM. This provides for future research on suitable theoretical frameworks. Second, the study identifies influential works, journals, and key authors in ESG-EM research, aiding policymakers and managers in understanding ESG's influence on EM. The study suggests that tailored ESG policies can foster transparent management practices. Third, using bibliometric techniques establishes a replicable approach to exploring ESG-EM literature trends, offering a valuable foundation for future research to address underexplored areas, such as industry-specific ESG impact on EM.

6. Conclusion

The study analyzed 50 published documents in the Scopus database, focusing on ESG and EM, accumulating 1040 citations. Among these publications, a small fraction, approximately 3.92%, has over 150 citations. The article titled "*The Relationship Between Corporate Social Responsibility and Earnings Management: An Exploratory Study*" by Hong and Andersen in 2011, published in the *JBE*, stands out as the most influential, accruing 188 citations. The journal *Sustainability* boasts the highest productivity with three publications, while *CSREM* emerged as the most influential journal, amassing 192 citations. Moreover,

network analysis was performed using VOSviewer software and then visualized using Gephi software. Regarding keyword analysis, the study found that terms such as *"Earnings Management," "Real Earnings Management," "Ethics," "Discretionary Accruals," "Sustainability," "Social," "ESG," "ESG Score," "ESG Disclosure,"* and *"ESG Performance"* frequently occur together, suggesting a robust thematic association. Furthermore, in the co-citation analysis of journals, the *JBE* is frequently cited alongside the *AMR*, *RAS*, *AMJ*, and *JFRA*. Also, a content analysis was conducted using bibliometric coupling of documents published in Scopus, resulting in four distinct clusters, viz. *"ESG and EM in emerging countries," "Institutional Drivers in ESG-EM relationship," "ESG and EM in developed countries,"* and *"ESG integration in corporate practices"*.

The articles reviewed in this study highlight a complex relationship between ESG factors and EM, yielding mixed results. Some studies indicate a positive relationship (Almubarak et al., 2023; Nagy et al., 2022; Saraireh et al., 2022), others report negative associations (Adeneye et al., 2024; Cao et al., 2023; Dimitropoulos, 2022), and some present mixed findings (Rahman & Zheng, 2023; Tohang et al., 2024), depending on the indicators used. This inconsistency suggests the presence of moderating or mediating factors influencing the relationship between these variables. Previous research (Kim et al., 2019; Shafai et al., 2022; Sial et al., 2019) has incorporated various moderators and mediators, such as industry sensitivity, regional differences, and the roles of female and independent directors. However, these factors may not be exhaustive, indicating a need for further exploration of additional aspects influencing this relationship. This is suggested by the limitations identified in prior studies presented in Appendix 1, which provides a comprehensive overview of previous research, detailing the context, sample data, methodology, findings, and limitations to clarify the research focus.

This bibliographic examination of the available literature on the ESG-EM relationship is methodologically sound and delivers insights into how the ESG-EM relationship literature emerges and provides scope for future research. However, one limitation of this study is that it considered papers published in Scopus-indexed journals, indicating possible sample bias. However, this limitation could be overcome by future studies conducting a meta-analysis which considers published and unpublished papers from any source.

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Table 1: Top ten most influential (cited) papers

Authors	Title	Source Title	TC	AC
Hong and Andersen (2011)	"The Relationship Between Corporate Social Responsibility and Earnings Management: An Exploratory Study"	<i>Journal of Business Ethics</i>	188	14.46
Scholtens and Kang (2013)	"Corporate Social Responsibility and Earnings Management: Evidence from Asian Economies"	<i>Corporate Social Responsibility and Environmental Management</i>	164	14.91
Muttakin, Khan and Azim (2015)	"Corporate social responsibility disclosures and earnings quality: Are they a reflection of managers' opportunistic behavior?"	<i>Managerial Auditing Journal</i>	100	11.11
Grougiou et al. (2014)	"Corporate social responsibility and earnings management in U.S. banks"	<i>Accounting Forum</i>	90	9.00
Cho and Chun (2016)	"Corporate social responsibility, real activities earnings management, and corporate governance: evidence from Korea"	<i>Asia-Pacific Journal of Accounting and Economics</i>	60	7.50
García-Sánchez and García-Meca (2017)	"CSR Engagement and Earnings Quality in Banks. The Moderating Role of Institutional Factors"	<i>Corporate Social Responsibility and Environmental Management</i>	59	8.43
Velte (2019)	"The bidirectional relationship between ESG performance and earnings management – empirical evidence from Germany"	<i>Journal of Global Responsibility</i>	41	8.20
Ben Amar and Chakroun (2018)	"Do dimensions of corporate social responsibility affect earnings management?: Evidence from France"	<i>Journal of Financial Reporting and Accounting</i>	32	5.33
Cheng and Kung (2016)	"The effects of mandatory corporate social responsibility policy on accounting conservatism"	<i>Review of Accounting and Finance</i>	29	3.63
Ellili (2022)	"Impact of ESG disclosure and financial reporting quality on investment efficiency"	<i>Corporate Governance (Bingley)</i>	28	14.00

Notes: This table presents the top ten cited papers. TC and AC indicate total citations and average citations, respectively.

Table 2: Most productive and influential journals

Source title (Productive)	TP	TC	AC	Source title (Influential)	TP	TC	AC
<i>Sustainability (Switzerland)</i>	3	30	10.00	<i>Corporate Social Responsibility and Environmental Management</i>	2	192	96.00
<i>Finance Research Letters</i>	3	16	5.33	<i>Journal of Business Ethics</i>	1	188	188.00
<i>Corporate Social Responsibility and Environmental Management</i>	2	192	96.00	<i>Managerial Auditing Journal</i>	1	100	100.00
<i>Accounting Forum</i>	2	99	49.50	<i>Accounting Forum</i>	2	99	49.50
<i>International Journal of Disclosure and Governance</i>	2	12	6.00	<i>Asia-Pacific Journal of Accounting and Economics</i>	1	60	60.00
<i>Journal of Family Business Management</i>	2	8	4.00	<i>Journal of Global Responsibility</i>	1	41	41.00
<i>Review of Quantitative Finance and Accounting</i>	2	0	0.00	<i>Journal of Financial Reporting and Accounting</i>	1	32	32.00
				<i>Sustainability (Switzerland)</i>	3	30	10.00
				<i>Review of Accounting and Finance</i>	1	29	29.00
				<i>Corporate Governance (Bingley)</i>	1	28	28.00

Notes: This table presents the most productive and influential journals. TP, TC, and AC indicate total publications, total citations, and average citations, respectively. Too productive journals include only those with more than one publication.

Table 3: Cluster-wise documents

Authors	Title	Source Title	TC
Cluster 1. ESG and EM in developing countries			
Yoon, Kim, and Lee (2019)	<i>“Is earnings quality associated with corporate social responsibility? Evidence from the Korean market”</i>	<i>Sustainability</i> (Switzerland)	20
Kim, Udawatte, Yin (2019)	<i>“The Effects of Corporate Social Responsibility on Real and Accrual-based Earnings Management: Evidence from China”</i>	<i>Australian Accounting Review</i>	19
Saraireh et al. (2022)	<i>“The effect of corporate social responsibility and board diversity on earnings management: Evidence from Jordanian listed firms”</i>	<i>Uncertain Supply Chain Management</i>	10
Chouaibi and Zouari (2022)	<i>“The effect of corporate social responsibility practices on real earnings management: evidence from a European ESG data”</i>	<i>International Journal of Disclosure and Governance</i>	9
Faisal et al. (2018)	<i>“The relationship between corporate social responsibility disclosure and earnings management: Is it a complement mechanism or a substitute mechanism?”</i>	<i>International Journal of Business Governance and Ethics</i>	9
Setiawan et al. (2019)	<i>“Does corporate social responsibility affect earnings management? Evidence from the Indonesian banking industry”</i>	<i>Business: Theory and Practice</i>	9
Cluster 2. Institutional Drivers in ESG-EM Relationship			
García-Sánchez and García-Meca (2017)	<i>“CSR Engagement and Earnings Quality in Banks. The Moderating Role of Institutional Factors”</i>	<i>Corporate Social Responsibility and Environmental Management</i>	59
Cheng and Kung (2016)	<i>“The effects of mandatory corporate social responsibility policy on accounting conservatism”</i>	<i>Review of Accounting and Finance</i>	29
Ellili (2022)	<i>“Impact of ESG disclosure and financial reporting quality on investment efficiency”</i>	<i>Corporate Governance (Bingley)</i>	28
Sial, Chunmei, and Khuong (2019)	<i>“Do female and independent directors explain the two-way relationship between corporate social responsibility and earnings management of Chinese listed firms?”</i>	<i>International Journal of Accounting and Information Management</i>	25
Dimitropoulos (2022)	<i>“Corporate social responsibility and earnings management in the EU: a panel data analysis approach”</i>	<i>Social Responsibility Journal</i>	12
Cluster 3. ESG and EM in developed countries			
Hong and Andersen (2011)	<i>“The Relationship Between Corporate Social Responsibility and Earnings Management: An Exploratory Study”</i>	<i>Journal of Business Ethics</i>	188
Scholtens and Kang (2013)	<i>“Corporate Social Responsibility and Earnings Management: Evidence from Asian Economies”</i>	<i>Corporate Social Responsibility and Environmental Management</i>	164
Muttakin, Khan, and Azim (2015).	<i>“Corporate social responsibility disclosures and earnings quality: Are they a reflection of managers' opportunistic behavior?”</i>	<i>Managerial Auditing Journal</i>	100
Grougiou et al. (2014)	<i>“Corporate social responsibility and earnings management in U.S. banks”</i>	<i>Accounting Forum</i>	90
Ben Amar and Chakroun (2018)	<i>“Do dimensions of corporate social responsibility affect earnings management?: Evidence from France”</i>	<i>Journal of Financial Reporting and Accounting</i>	32

Cluster 4. ESG integration in corporate practices			
Cho and Chun (2016)	<i>“Corporate social responsibility, real activities earnings management, and corporate governance: evidence from Korea”</i>	<i>Asia-Pacific Journal of Accounting and Economics</i>	60
Velte (2019)	<i>“The bidirectional relationship between ESG performance and earnings management – empirical evidence from Germany”</i>	<i>Journal of Global Responsibility</i>	41
Choi, Choi and Byun (2018)	<i>“The relationship between corporate social responsibility and earnings management: Accounting for endogeneity”</i>	<i>Investment Management and Financial Innovations</i>	16
Pathak and Gupta (2022)	<i>“Environmental, social and governance performance and earnings management - The moderating role of law code and creditor's rights”</i>	<i>Finance Research Letters</i>	8
Sungbin and Cho (2017)	<i>“Differentiation strategy, CSR, and real activities earnings management: Evidence from Korea”</i>	<i>Journal of Applied Business Research</i>	6

Notes: This table presents top cited papers of the four clusters based on bibliographic clusters. TC indicates total citations.

Table 4: Future Research Directions

Sr. no.	Future Research Topics	Sources
1	How do industry-specific factors moderate the relationship between corporate social responsibility (CSR) activities and the quality of financial reporting across different sectors, and what are the implications for understanding CSR's impact on earnings management behaviours?	(Yoon et al., 2019)
2	How do different institutional environments, corporate governance structures, and market orientations moderate the relationship between corporate social responsibility (CSR) activities and earnings management practices among Chinese firms, and how does this vary between listed and non-listed firms?	(Kim et al., 2019)
3	How does the spatial and temporal variation in corporate social responsibility (CSR) parameters (including environmental, social, and governance aspects) influence earnings management techniques and the quality of financial reporting across different regions and periods?	(Nagy et al., 2022)
4	How does family ownership influence the relationship between corporate social responsibility (CSR) initiatives and the management of earnings among Chinese-listed financial firms?	(Sial et al., 2019)
5	How do national cultural dimensions and corporate governance characteristics influence the relationship between specific components of CSR engagement (such as environment, social, and ethical issues) and earnings quality within the banking industry?	(García-Sánchez & García-Meca, 2017)
6	Examining the Influence of Environmental Responsibility and Governance Efficiency on the Relationship between CSR Initiatives and Financial Reporting Quality in Developed and Developing Economies, with a Focus on Small- and Medium Enterprises or Family Firms	(Dimitropoulos, 2022)
7	The mediating effect of corporate governance on the relationship between Corporate Sustainability Management and firm value	(Oh et al., 2020)
8	The moderating role of a behavioural and organizational framework on the relationship between CSR and earnings management.	(Grougiou et al., 2014)
9	Investigating the causal relationship pattern between CSR and earnings management over an extended timeframe.	(Ben Amar & Chakroun, 2018)
10	How do the ownership structure (e.g., family vs. non-family), and institutional factors (e.g., regulatory environment, cultural norms) influence the relationship between ESG earnings management practices across different countries or regions?	Author suggestion
11	What are the underlying mechanisms through which ESG influences EM practices, and how do contextual factors such as industry characteristics, legal systems, and corporate governance mechanisms moderate this relationship?	Author suggestion
12	How do cultural differences influence the relationship between ESG initiatives and earnings management (EM) practices, and what implications does this have for financial reporting quality?	Author suggestion

Notes: This table presents future research directions

Environmental, social and governance (ESG) disclosure" OR "ESG disclosure" OR "ESG Performance" OR "ESG Index" OR "corporate social responsibility" OR "corporate social responsibility reporting" OR "corporate social responsibility disclosure" OR "CSR" OR "environmental reporting*" OR "environmental disclosure*" OR "social disclosure*" OR "Corporate sustainability reporting*" AND ("earnings management" OR "earnings manipulation" OR "real earnings management" OR "earnings quality" OR "discretionary accrual" OR "total accrual" OR "financial reporting quality" OR "accrual earnings management"

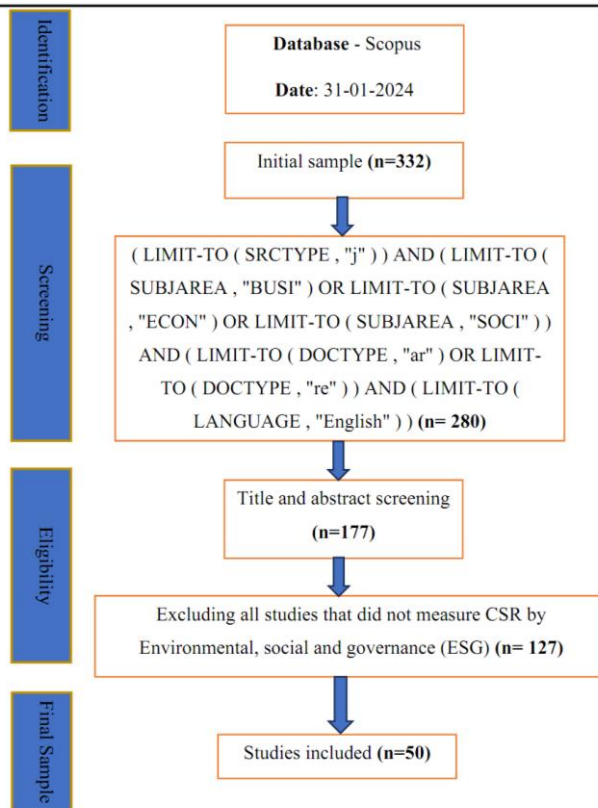


Figure 1. The graphical view of extracting the data from the Scopus database

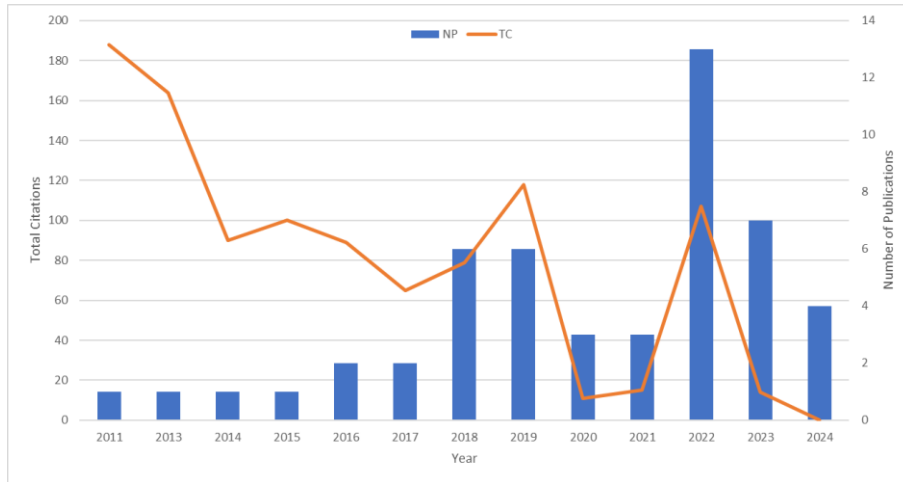


Figure 2: Publications and Citations Trend

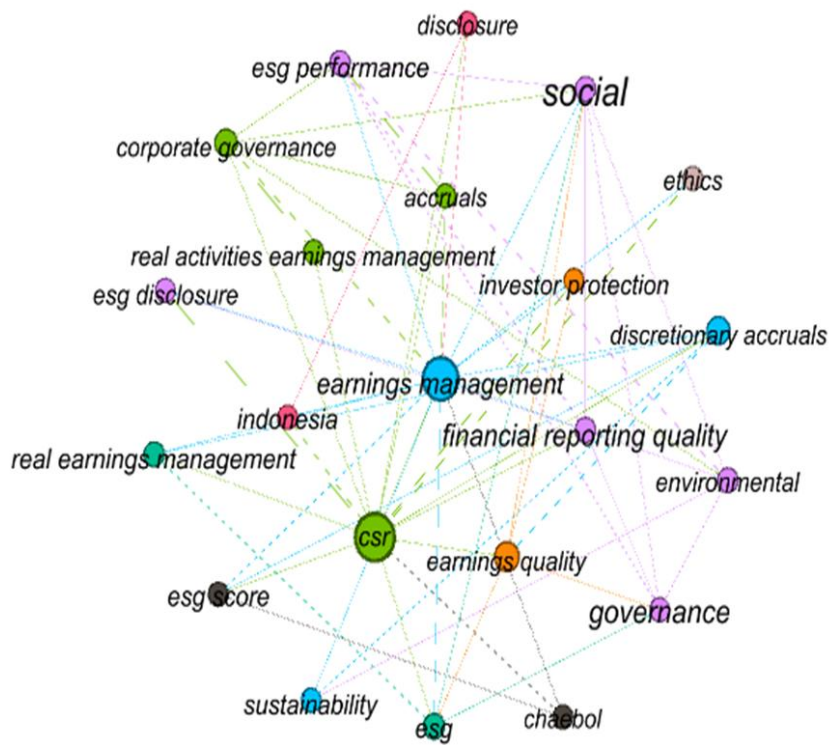


Figure 3: Co-occurrences of author keywords in at least 2 documents. Notes: The node size indicates the weight occurrence, and the size of the label is based on PageRank. Colors indicate the cluster, wherein those with the same color belong to one cluster.



Figure 4: Co-citation network of journals cited in the sample documents

Notes: The node size indicates the weight citation, and the size of the label is based on PageRank. Colors indicate the cluster, wherein those with the same color belong to one cluster. Purple color indicates Cluster 1 and Green color indicates Cluster 2.

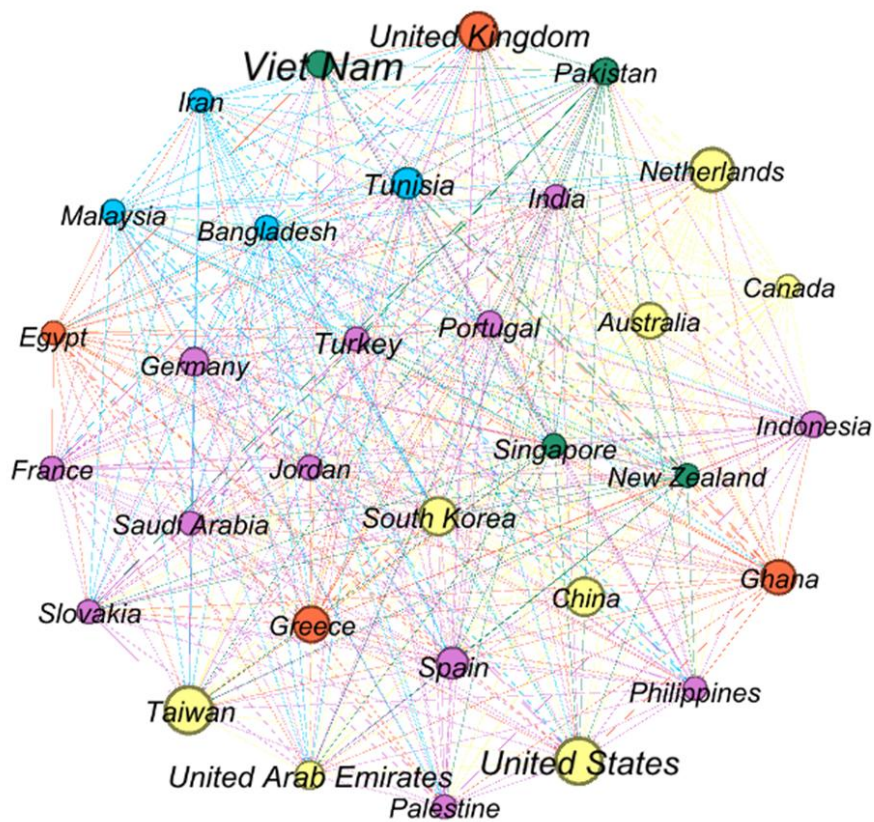


Figure 5: Bibliographic coupling of country of authors' affiliation.

Notes: The values indicate the total link strength, the node size indicates the weight citation, and the size of the label is based on PageRank. Colors indicate the cluster, wherein those with the same color belong to one cluster. Purple, Yellow, Blue, Orange, and Green represent Cluster 1, Cluster 2, Cluster 3, Cluster 4, and Cluster 5, respectively.

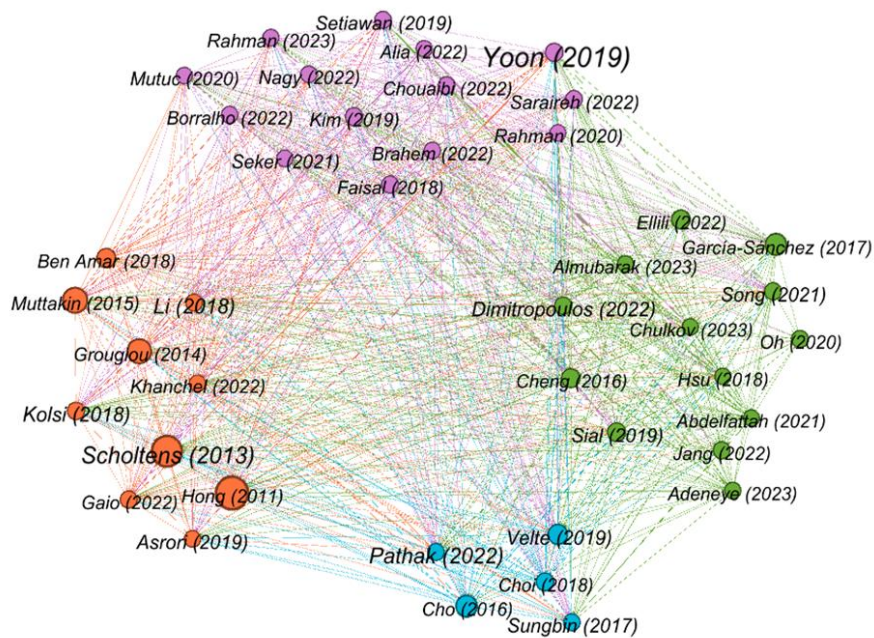


Figure 6. Bibliographic coupling of sample documents with atleast one citation.

Notes: The node size indicates the score citation, and the size of the label is based on PageRank. Colors indicate the cluster, wherein those with the same color belong to one cluster. Purple = Cluster 1, Green = Cluster 2, Orange = Cluster 3, Blue = Cluster 4.