

# A Bibliometric Analysis of The Evolution of ESG and Financial Disclosure

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## Abstract

This study investigates the differences in Environmental, Social, and Governance (ESG) disclosures and financial disclosures between developed and developing countries, with a focus on the integration of ESG elements into corporate reporting practices. Drawing on key theoretical perspectives—namely Corporate Social Responsibility (CSR), stakeholder theory, and corporate governance—the study also examines the underlying conceptual frameworks guiding ESG and financial reporting. A systematic literature review using the PRISMA method was conducted on publications indexed in the Web of Science and Scopus databases up to 2024. From an initial pool of 1,622 ESG-related and 1,423 financial disclosure publications, a final dataset comprising 72 FT50 articles (26 on ESG and 46 on financial disclosure) was analyzed using bibliometric and comparative methods. The findings reveal substantial differences in disclosure practices: developed countries commonly adopt standardized frameworks such as IFRS and EU CSRD, while developing nations rely on fragmented, voluntary reporting. Notably, 21% of reviewed studies lack explicit theoretical grounding. Journals such as *Journal of Business Ethics* and *Management Science* dominate financial disclosure discussions, while ESG topics are increasingly explored in *Review of Accounting Studies*. The analysis highlights dominant themes and evolving research trends through co-word and thematic mapping. This study provides a unique comparative and bibliometric perspective, identifying current practices, theoretical gaps, and areas for future research. It offers valuable insights for policymakers, investors, and scholars aiming to enhance ESG integration and disclosure quality across diverse economic contexts.

**Keywords:** ESG Disclosure; Financial Reporting Practices; Regulatory Frameworks; Comparative Analysis; Bibliometric Analysis; Thematic Analysis.

## 1. Introduction

The increasing relevance of ESG disclosure is reconfiguring global business practices and financial markets, indicating a higher need for transparency and corporate accountability (Admati and Pfleiderer, 2000; Christensen et al., 2021). ESG reporting not only provides useful information with regard to how organizations respond to questions of sustainability but also highlights their efforts in environmental risk mitigation, promotion of social responsibility, and maintenance of good governance standards. By providing clear and structured disclosure, companies signal their commitment to sustainable development and responsible business practices, building trust among investors, regulators, employees, and consumers (Gelb and Strawser, 2001). However, without comprehensive and credible reporting, organizations risk being accused of “greenwashing” (Dubbink et al., 2008), undermining confidence in their ESG initiatives and overall corporate integrity. Consequently, disclosure serves as a bridge between an organization's sustainability initiatives and the concrete, measurable outcomes that drive stakeholder decision-making (Christensen, 2022).

While advanced economies lead in ESG disclosure owing to comprehensive regulatory frameworks and developed sustainability ecosystems (Jackson et al., 2020; Christensen et al., 2021), emerging economies face critical challenges in implementing and aligning ESG reporting practices (Brahmana et al., 2016; Gualandris et al., 2021). Such challenges result from less effective regulatory systems, a lack of resources, and competing socio-economic priorities, often resulting in a focus on short-term economic growth at the expense of long-term sustainability goals. In both cases, ESG disclosure is intertwined with CSR disclosure (Brahmana et al., 2018), the disclosure of climate change initiatives (Ginglinger and Moreau, 2023), social engagement efforts, and governance practices, thus being a multicomponent part of corporate reporting (Haw et al., 2012; Maniora, 2017). With the increasing number of companies linking ESG performance to financial indicators, the integration of sustainability with financial reporting has turned out to be one of the most vital aspects for nurturing long-term sustainability and growth (He and Hu, 2014; Balvers et al., 2016).

Financial disclosure, traditionally recognized as the core element of corporate transparency, mainly focuses on an organization's financial performance, related risks, and operational soundness (Brahmana et al., 2018; Adams et al., 2021). However, with the rapid change in stakeholder expectations, the inclusion of ESG factors into financial disclosure is gaining momentum fast, pushing companies to report on non-financial dimensions affecting their long-term sustainability (Loughran and McDonald, 2014). One important driving force behind this transition is the development of financial technology and digital transformation, through which the disclosure mechanism is enhanced, the quality of data improves, and the reporting process becomes optimal (Bellamy et al., 2020; Liu et al., 2023). This digital evolution is particularly relevant in emerging markets, addressing data deficiencies and democratizing access to ESG reporting frameworks (Harp et al., 2014; Lee et al., 2023).

There is a need to examine the dynamic structure of ESG criteria and financial disclosure with a comparative focus on developed and developing countries. Bibliometric and thematic analysis was conducted to highlight major research contributions, frameworks, trends, and regulatory developments in different economic settings. This present study addresses the challenges related to ESG disclosure and financial disclosure, efforts toward regulatory harmonization, and how these elements trigger innovation in sustainable business practices.

The study addresses four core research questions: (1) What are the starring roles of ESG disclosure and financial disclosure in developed and developing countries? (2) What are the key research trends, influential works, and contributions by authors in ESG and financial disclosures? (3) What conceptual frameworks currently guide ESG disclosure and financial disclosure in developed and developing countries? (4) What are the underpinning theories guiding research on ESG disclosure and financial disclosure?

Comparative analysis of disclosure practices in developed and developing countries will provide valuable insights into the diverse factors shaping ESG disclosure, including regulatory policies, corporate strategies, and technological advancements. The study also seeks to highlight conceptual frameworks that guide ESG and financial disclosure, offering recommendations for enhancing standardization, improving reporting accuracy, and fostering cross-border harmonization.

This research contributes to the growing body of literature on corporate sustainability, shedding light on the role of fintech and digital transformation in promoting transparent and responsible business practices. By addressing disclosure disparities and exploring innovative solutions, the study aims to inform policymakers, investors, and corporate leaders seeking to navigate the evolving ESG landscape in both developed and developing economies.

## 2. Literature Review on Financial, ESG Frameworks, and Underpinning Theories

### 2.1. The starring role of financial disclosure and ESG disclosure

Both financial disclosure and ESG disclosure build transparency, trust, and accountability in corporate practices. Table 1 shows the different aspects of financial and ESG Disclosure. Richardson and Welker (2001) and Christensen et al. (2021) support the notion that, in developed countries, financial disclosure is well instituted through regulatory frameworks that ensure consistency, accuracy, and timeliness in the reporting of financial data (Adams et al., 2021; Admati and Pfleiderer, 2000). ESG disclosure, though evolving, is often seen as an integral part of corporate governance, especially with the rise of socially responsible investing, sustainability indices, and stakeholder-driven demands (Basu et al., 2022; Dubbink et al., 2008). In these regions, financial disclosures and ESG practices are often aligned, with companies increasingly integrating ESG factors into their financial reports (Maniora, 2017; Christensen, 2022). Instead, this one-way integrated reporting provides a single perspective on corporate performance with respect to both financial health and long-term sustainability efforts. Economically developed nations tend to have more significant regulatory requirements-for instance, the Non-Financial Reporting Directive of the EU-which drive organizations to report their environmental, social, and governance practices along with their financial reports to encourage investor confidence and ensure corporate responsibility (Grewal et al., 2019; Jackson et al., 2020).

On the other hand, developing countries have different challenges in financial and ESG disclosures. Financial disclosure practices in developing countries are often hampered by weaker regulatory frameworks, lower levels of transparency, and a lack of standardized reporting formats (Birnborg, 1980; Barrett, 1975). Companies in developing countries may prioritize immediate financial performance over long-term ESG concerns due to resource constraints and competing socio-economic needs (Brahmana et al., 2018; Harp et al., 2014). However, ESG disclosure in these countries has started to gain traction, particularly as global investors place increasing emphasis on sustainability (Ginglinger and Moreau, 2023; Li et al., 2023). Although some developing countries have started to adopt ESG guidelines, the actual enforcement is often incomplete, and companies may not feel obliged to disclose comprehensive ESG information unless compelled by external factors, such as international pressure or market access (Osuji, 2011; Ortiz et al., 2023). Despite this, an increasing number of firms in developing countries have realized the importance of ESG disclosures, since such disclosures can be a differentiator in the global market and a gateway to international capital. Table 2 summarizes the differences in the Comparison of Financial and ESG Disclosure in Developed and Developing Countries.

**Table 1:** Distinctions Between Financial and ESG Disclosure Practices

Aspect	Financial Disclosure	ESG Disclosure
Definition	Reporting on a company's financial performance, position, and risks (Admati & Pfleiderer, 2000; Baber et al., 2006).	Reporting on environmental, social, and governance (ESG) initiatives and impacts (Christensen et al., 2021; Basu et al., 2022).
Focus	Economic and financial metrics (e.g., revenue, profits, liabilities) (Barrett, 1975; Loughran & McDonald, 2014).	Non-financial performance related to sustainability, ethics, and social impact (Christensen, 2022; Maniora, 2017).
Purpose	Provide transparency on financial health; Guide investors in financial decision-making (Adams et al., 2021; Boone et al., 2024).	Demonstrate commitment to sustainability, ethical governance, and social responsibility (Christensen et al., 2021).
Content	Income statements, balance sheets, cash flows; Risk factors affecting financial performance (Bond & Zeng, 2022).	Carbon emissions, diversity data, community engagement, board diversity; Climate risk and supply chain responsibility (Bellamy et al., 2020).
Regulation	Strictly regulated (e.g., SEC filings, IFRS, GAAP) (Admati & Pfleiderer, 2000; Barrett, 1975).	Varies by region; can be voluntary or mandatory (e.g., EU CSRD, GRI, SASB) (Christensen et al., 2021; Gipper et al., 2024).
Audience	Investors, regulators, and creditors (Birnborg, 1980; Lipe, 2018).	Investors, employees, communities, NGOs, regulators (Moss et al., 2024; Jackson et al., 2020).
Reporting Frequency	Quarterly and annually (Adams et al., 2021).	Often annual but sometimes integrated with financial reports (Christensen et al., 2021).
Quantitative vs. Qualitative	Primarily quantitative (Adams et al., 2021; Gaa & Krinsky, 1988).	Mix of quantitative (e.g., emissions data) and qualitative (e.g., governance policies) (Christensen, 2022; Cai et al., 2024).

Risk Management	Financial risks (market, credit, operational) (Bond & Zeng, 2022; Pevzner et al., 2015).	ESG-related risks (climate, reputational, regulatory) (Ginglinger & Moreau, 2023; Basu et al., 2022).
Example Metrics	Net income, EPS, and debt-to-equity ratio (Admati & Pfleiderer, 2000; Baber et al., 2006).	Carbon footprint, gender diversity, employee well-being, and governance transparency (Bellamy et al., 2020; Basu et al., 2022).

**Table 2:** Comparison of Financial and ESG Disclosure in Developed and Developing Countries

Aspect	Developed Countries	Developing Countries
Regulatory Framework	Stringent, well-established; Mandatory ESG and financial disclosure for public firms; Growing obligations for private firms (e.g., EU CSRD, SEC) (Christensen et al., 2021; Adams et al., 2021).	Fragmented, evolving; ESG disclosure often voluntary; Financial disclosure varies by sector and firm size (Jackson et al., 2020; Brahmana et al., 2016).
Reporting Standards	Aligned with global frameworks (GRI, SASB, TCFD, IFRS); High standardization and uniformity (Christensen et al., 2021; Bonsall & Miller, 2017).	Partial adoption of global frameworks; Reliance on local standards; Lack of uniformity (Brahmana et al., 2016; Barrett, 1975).
Investor Expectations	Strong demand for transparent, detailed disclosures; ESG performance linked to investment decisions (Grewal et al., 2019; Baber et al., 2006).	Moderate but increasing investor focus on ESG; Financial disclosures prioritized over ESG (Brahmana et al., 2018; Adams et al., 2021).
Market Awareness	High ESG awareness across public and private sectors; ESG integrated into business strategies (Cade, 2018; Lee, 2017).	Limited ESG integration; Public firms show more engagement, while SMEs lag in awareness (Brahmana et al., 2016; Patten, 2002).
Focus Areas	Climate action, governance reforms, DEI initiatives, and long-term sustainability (Christensen, 2022; Ginglinger & Moreau, 2023).	Community development, pollution control, and local resource management (Brahmana et al., 2016; Osuji, 2011).
Data Availability & Quality	Robust data collection and reporting infrastructure; Frequent independent audits and verification (Bond & Zeng, 2022; Gaa & Krinsky, 1988).	Inconsistent data quality; Limited access to reliable information and auditing services (Brahmana et al., 2016; Livnat & Zhang, 2012).
Transparency & Accountability	High levels of transparency; Frequent public disclosures and annual sustainability reports (Maniora, 2017; Gipper et al., 2024).	Lower transparency; Disclosures are less frequent and often lack depth (Brahmana et al., 2018; Bellamy et al., 2020).
Challenges	High compliance costs; Pressure for continuous innovation in ESG practices (Cai et al., 2024; He & Hu, 2014).	Resource limitations; High reporting costs; Lack of regulatory enforcement capacity (Brahmana et al., 2016; Lipe, 2018).
Examples of Companies	Public: Apple, Unilever, Microsoft (detailed disclosures) (Christensen et al., 2021; Grewal et al., 2019).	Public: Petronas, Tata, Vale (adopting ESG frameworks) (Brahmana et al., 2016; Gualandris et al., 2021). Private: IKEA, Mars (voluntary but comprehensive) (Maniora, 2017; Cade, 2018).
Regional Practices	EU, US, Japan – Strong ESG mandates; Financial reporting heavily regulated (Christensen et al., 2021; Jackson et al., 2020).	Malaysia, India, South Africa, China – Emerging ESG frameworks; Sector-specific guidelines (Li et al., 2023; Brahmana et al., 2016; Dubbink et al., 2008).

## 2.2. Potential conflicts and gaps

Although ESG and financial disclosures are imperative for the facilitation of corporate transparency and accountability, there are large disparities and conflicts when considering developed versus developing nations. One major conflict arises within the regulatory structures that oversee these disclosures. Developed countries typically have strict, legally binding rules that demand extensive and standardized reporting (Christensen et al., 2021; Jackson et al., 2020). In contrast, many emerging markets lack the necessary regulatory systems and political will to adopt such practices, leading to inconsistencies or, in certain instances, a total absence of mandatory ESG reporting requirements. This divergence further widens the global disparity in corporate transparency.

The issue of technological infrastructure and the integration of fintech is another major area of divergence. In developed markets, fintech platforms enhance the accuracy of reporting through the facilitation of real-time gathering of financial and ESG information (Haw et al., 2012; Lipe, 2018). However, in developing countries, a lack of digital infrastructure, weak cybersecurity measures, and low adoption of financial technologies impede similar development (Bond & Zeng, 2022). The technological gap widens the disparity in disclosure quality, making it hard for companies in developing nations to catch up with the reporting practices of those in developed nations. Besides, the problem of data quality and access further deepens the issue. Although advanced nations enjoy the advantages of comprehensive data systems and highly skilled personnel (Gipper et al., 2024; Livnat & Zhang, 2012), nations in the developing category frequently encounter issues with unreliable or inadequate data stemming from systemic inefficiencies and limited technological resources (Haw et al., 2012).

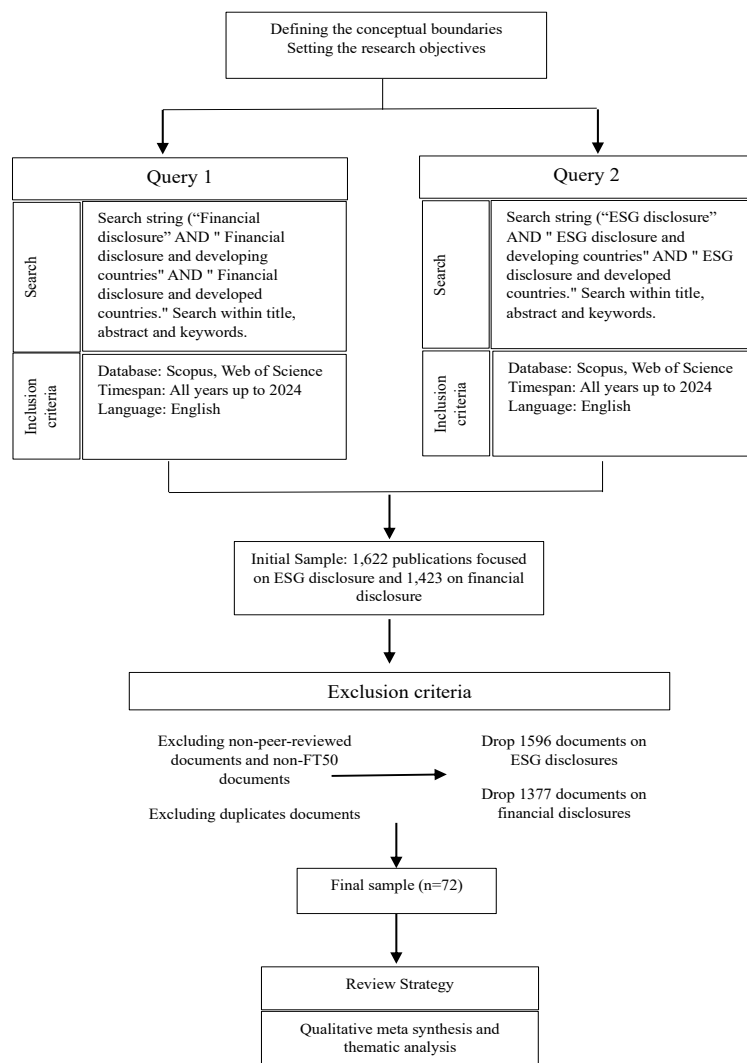
Cultural and socio-economic differences also influence ESG and financial disclosure practices. In developed countries, environmental sustainability, ethical governance, and social responsibility are prioritized, driven by consumer demand and global agreements (Brahmana et al., 2018). Conversely, developing countries focus more on addressing immediate socio-economic challenges such as poverty, unemployment, and healthcare (Lee, 2017), often sidelining broader ESG concerns. This divergence in priorities leads to inconsistent practices in ESG disclosures, where developing countries tend to have less detailed reports. Further exacerbating this challenge is the prevalence of greenwashing—something that occurs worldwide but is more pronounced in areas with weak regulatory oversight. Unlike in developed countries, where independent audits and regulatory control give assurance of corporate accountability, developing countries often lack such protective mechanisms, making them more susceptible to flimsy ESG claims (Bellamy et al., 2020; Maniora, 2017).

Investors' demand for information brings out these inconsistencies in ESG disclosures. Advanced economies' investors are increasingly demanding detailed information on ESG. These investors connect information relating to ESG disclosures with funding and investment decisions (Grewal et al., 2019; Garel et al., 2023). In developing economies, however, investors mostly focus on short-term financial outcomes; this diminishes pressure from companies to disclose detailed ESG information. This divergence results in limited and superficial disclosures by enterprises from developing countries compared to their counterparts in developed economies. Again, the theoretical frameworks for ESG and studies on financial disclosure reveal a huge gap. Developed nations usually rely on established frameworks such as CSR Report Theory and Stakeholder Theory (Christensen, 2022; Khan, 2022); however, these frameworks often fail to give enough consideration to the socio-economic conditions found in developing countries, where financial constraints strongly weigh on corporate decisions. The lack of context-specific theoretical models limits a holistic understanding of the global role of ESG reporting.

The aforementioned conflicts and discrepancies underline the inequalities within ESG and financial disclosure practices between developed and developing nations. Overcoming such challenges will require coordinated efforts by policymakers, business leaders, and scholars to institute just and transparent rules of corporate reporting at the global level.

**Table 3:** Overview of the SLR Method

Items	Description
Research Objectives and Target	(1) Examine the consequences and roles of ESG and financial disclosures on corporate transparency, decision-making, and investor confidence in different national contexts. (2) Identify the most impactful trends, scholarly contributions, and contributions made by authors to the fields of ESG and financial disclosures with a bearing on corporate governance and financial performance. (3) Examine the theoretical frameworks underlying ESG and financial reporting and assess their applicability and flexibility in both developed and developing countries. (4) Examine the most significant theories underlying ESG and financial reporting and offer an improved understanding of the theoretical foundations underlying existing research in these areas.
Research Questions	(1) What are the starring roles of ESG disclosure and financial disclosure in developed and developing countries? (2) What are the key research trends, influential works, and contributions by authors on ESG and financial disclosures? (3) What conceptual frameworks currently guide ESG disclosure and financial disclosure in developed and developing countries? (4) What are the underpinning theories guiding research on ESG disclosure and financial disclosure?
Search Strategy	Databases: Scopus and Web of Science Search Terms: Examples include "ESG disclosure", "Environmental, social and governance disclosure" Financial disclosure", as well as terms like "CSR disclosure", "sustainability", "ESG disclosure and developed countries", " Environmental, social and governance disclosure and developed countries", "ESG disclosure and developing countries", " Environmental, social and governance disclosure and developing countries", " Financial disclosure and developing countries" and " Financial disclosure and developed countries." Timeline: All articles published till 2024.
Inclusion and Exclusion Criteria	Inclusion Criteria: Peer-reviewed journal articles, theoretical frameworks, book chapters, and conference proceedings published in English focusing on ESG models. Exclusion Criteria: Non-English publications, irrelevant studies, and works published post-2025. Screening Process: Titles, keywords, abstracts, and conclusions were systematically screened to ensure relevance and alignment with research objectives.
Screening Eligibility	Relevant articles were identified and filtered according to the inclusion/exclusion criteria.



**Fig. 1:** Steps in Systematic Literature Review.

Search Terms include "ESG disclosure", "Environmental, social and governance disclosure" Financial disclosure", as well as terms like "CSR disclosure", "sustainability", "ESG disclosure and developed countries", " Environmental, social and governance disclosure and developed countries", "ESG disclosure and developing countries", " Environmental, social and governance disclosure and developing countries", " Financial disclosure and developing countries" and " Financial disclosure and developed countries."

The initial dataset included studies that addressed 1,622 publications focused on ESG disclosure and 1,423 on financial disclosure. This collection included only peer-reviewed journal articles, conference papers, and book chapters from FT50 journals. The accuracy, precision, and relevance of keyword extraction from titles, abstracts, author-assigned keywords, and source journals were improved by tools such as VOSviewer, NVivo, and BibExcel. Non-English publications, irrelevant studies on disclosure, works published beyond 2025, and research not directly addressing disclosure were systematically excluded. The final dataset consisted of 72 articles, of which 26 focused on ESG disclosures and 46 focused on financial disclosures (refer to Figure 1).

### 3. Bibliometric and Co-Word Analysis

In recent years, the bibliometric approach has been widely used by researchers to evaluate trends of publications of a particular discipline and assess research collaboration among scholars, institutions, and countries.

Co-word analysis was carried out for detecting patterns and mapping the relationships between themes (Mochkabadi and Volkmann, 2020; Khan, 2022). Unlike other bibliometric techniques, such as co-citation analysis, which emphasizes connections between cited references, co-word analysis enables the examination of thematic analysis (Clarke and Braun, 2017) and conceptual progressions directly within the literature (Mazzocchi and Lucarelli, 2022). This methodological strength allows co-word analysis to track and forecast the development of knowledge related to research topics, detect emerging trends, and uncover innovative strategies linked to interdisciplinary disclosure development models.

The reason for co-word analysis will be further enforced by the fact that this method enables the visualization of complex networks of concepts, which may reveal valuable insights in less explored areas, such as different models of disclosure. This approach will gain a deeper understanding of the thematic and theoretical framework by highlighting the connections between key terms and ideas, more than what was possible through other bibliometric methods. This visualization underlines not only the prominent research trajectories but also the gaps and opportunities of the existing literature, thus enabling more comprehensive mapping of the field.

To discern meaningful relationships and thematic structures, a co-occurrence matrix was generated, applying a minimum threshold of three co-occurrences per keyword pair. The dataset was subsequently normalized to mitigate inconsistencies and variability in keyword usage. This normalization process ensured uniformity across the data, carried out for the elimination of redundant articles, with a view to reducing errors from the modification of articles, by improving the integrity, which would also raise reliability in the analysis with relative simplicity. The resulting network visualization represented keywords as nodes and co-occurrence relationships as edges, hence facilitating the identification of thematic clusters. These clusters were grouped into motor themes, niche themes, basic themes, and emerging or declining themes that reflect different centrality and density within the research landscape.

These thematic clusters were then clustered in order to allow the structured observation of prevailing trends and theoretical frameworks that provide further detail on the evolution of the field of the disclosure model. This structured approach gives further detail on how disclosure research has evolved over time, and at the same time identifies and denoises dynamic areas for further scholarly exploration (refer to Figure 2).

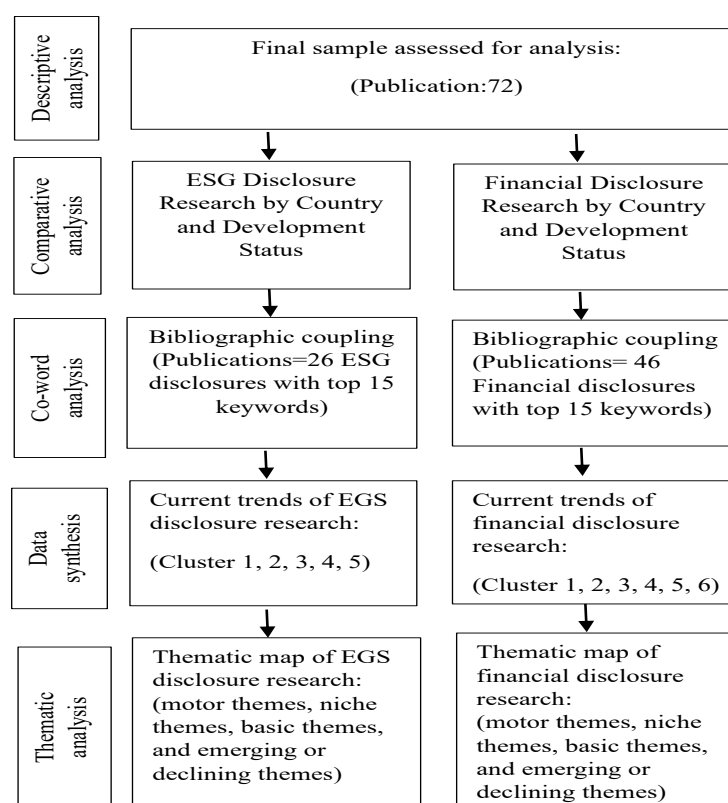


Fig. 2: Bibliometric Analysis Process.

## 4. Results

### 4.1. Descriptive analysis

Figure 3 presents the publication trends in ESG and financial disclosure articles published in FT50-ranked journals from 1975 to 2024. Analysis of the trend shows a growing interest in ESG issues, while financial disclosure research is quite consistent. During the years from 1975 to 2018, financial disclosure topped with 29 articles, reflecting the high level of transparency and reporting issues. The most active years are 2017 (six articles) and 2018 (four articles). ESG-related publications first appeared in 2008 but remained sporadic until 2019. From 2019 to 2024, ESG publications increased exponentially to reflect global changes in sustainability, corporate responsibility, and changing regulatory environments. The most prolific year was 2022, with eight publications on ESG and three on financial disclosure. This increase reflects increased awareness after the COVID-19 pandemic, where organizations and researchers focused on sustainability and resilience.

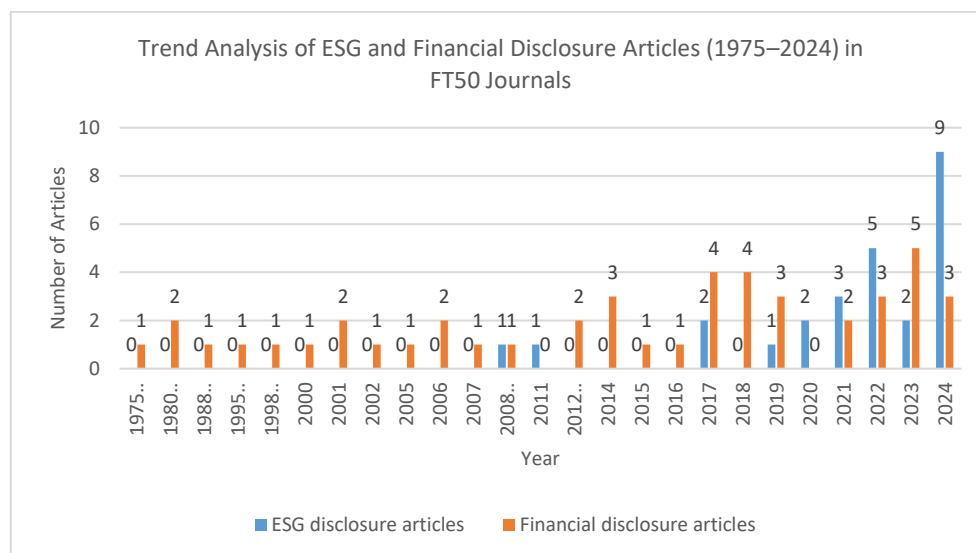


Fig. 3: Trend analysis of ESG and Financial Disclosure Articles in FT50 Journals (1975 -2024).

Outpacing the ESG financial disclosure articles were published between 2021 and 2024, a high of nine ESG-related articles were released in 2024, almost a tripling from that same period. This is accounted for in the dataset to contain 20 out of 26 ESG publications, for the focus on ESG. Despite increased ESG discussions, financial disclosure research remained constant at 46 publications. However, the growing number of ESG-related articles after 2020 shows how the academic interest has shifted to bring sustainability into corporate performance frameworks. These changing landscapes demonstrate how ESG has moved from a niche interest to a mainstream area of research and how the pandemic acted as a catalyst in embedding ESG into governance, transparency, and value creation for sustainability.

### 4.2. Comparative analysis

Table 4 provides insights into the geographic focus of research on Environmental, Social, and Governance (ESG) disclosures and financial disclosures, drawing from 72 FT50 articles published between 1975 and 2024. The analysis is categorized by the development status of countries (developed, developing, global, and unspecified) and specific country-level studies. Research is heavily concentrated on developed countries, with 16 articles addressing ESG and 36 articles on financial disclosures, totaling 52 articles. This dominance reflects the established corporate governance practices and regulatory frameworks in these regions, which drive academic interest. In contrast, global studies, encompassing both developed and developing nations, account for only 17 articles, suggesting relatively limited efforts to explore the interplay of ESG and financial disclosures across diverse economic contexts. Research focusing solely on developing countries is notably sparse, with just one financial disclosure article and no ESG-specific studies.

Table 4: Geographic Distribution of ESG and Financial Disclosure Research by Country and Development Status

Development Status	ESG	Financial	Total number of articles	Countries	ESG	Financial	Total number of articles
Developed	16	36	52	Mixed-Countries	15	26	41
Developed & Developing (Global)	10	7	17	U.S.	10	15	25
Not specified	0	1	2	Italy	1	1	2
Developing	0	1	1	UK	0	1	1
				China	0	1	1
				Not Specified	0	2	2

Country-level analysis reveals the United States as the most extensively researched nation, contributing 10 ESG-related articles and 15 on financial disclosures, for a total of 25 articles. This highlights the U.S.'s significance in ESG and financial reporting, likely due to its advanced financial markets and regulatory environment. Other countries, including Italy, the UK, and China, are minimally represented, with each contributing only one financial disclosure article, and Italy also featuring in one ESG-related study. Studies with no specific geographic focus are rare, further emphasizing the concentration of research on developed nations and globally significant economies like the U.S.

### 4.3. Bibliometric analysis

Table 5 outlines the distribution of Environmental, Social, and Governance (ESG) and financial disclosure publications across leading FT50 journals from 1975 to 2024. The table highlights the relative contributions of different journals to this research area, presenting both the number of articles and their percentage share within each category. Out of the 72 FT50 articles analyzed, 26 (36%) focus on ESG disclosures, while 46 (64%) address financial disclosures, reflecting a stronger emphasis on financial reporting in academic literature.

**Table 5:** FT50 Articles Per Source Distribution of ESG and Financial Disclosure Publications Across Leading Journals (1975–2024)

Source title	ESG Disclosure	%	Financial Disclosure	%	No. of articles	%
Academy of Management Annual Meeting Proceedings	1	4%	1	2%	2	3%
Accounting, Organizations and Society	1	4%	6	13%	7	10%
Administrative Sciences	3	12%	1	2%	4	6%
Journal of Accounting and Economics	1	4%	0	0%	1	1%
Journal of Business Ethics	5	19%	7	15%	12	17%
Journal of Finance	0	0%	2	4%	2	3%
Journal of Financial and Quantitative Analysis	0	0%	2	4%	2	3%
Journal of Financial Economics	1	4%	4	9%	5	7%
Journal of International Business Studies	0	0%	3	7%	3	4%
Journal of Management	0	0%	1	2%	1	1%
Journal of Operations Management	2	8%	0	0%	2	3%
Management Science	3	12%	7	15%	10	14%
Production and Operations Management	0	0%	2	4%	2	3%
Review of Accounting Studies	8	31%	6	13%	14	19%
Review of Finance	0	0%	1	2%	1	1%
Review of Financial Studies	0	0%	2	4%	2	3%
Strategic Management Journal	1	4%	1	2%	2	3%
Total articles	26	100%	46	100%	72	100%

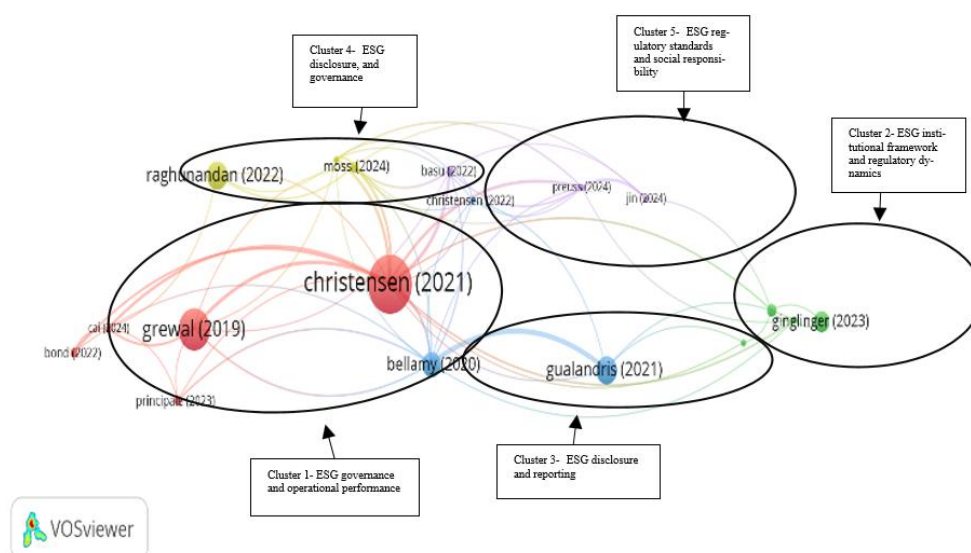
The Review of Accounting Studies emerges as the leading contributor, publishing the highest number of articles (14, or 19% of the total), with a notable emphasis on ESG disclosures (31% of all ESG articles). The Journal of Business Ethics follows closely, contributing 12 articles (17%), with a balanced focus on ESG (19%) and financial disclosures (15%). Other journals with significant contributions include Management Science (10 articles, 14%) and Accounting, Organizations and Society (7 articles, 10%), with the latter particularly strong in financial disclosure research. However, some prominent finance-focused journals, such as the Journal of Finance, Journal of Financial and Quantitative Analysis, and Review of Financial Studies, show limited involvement, each contributing only two articles (3%) overall.

Interestingly, several journals, including the Journal of Operations Management and Administrative Sciences, show a higher focus on ESG disclosures relative to financial disclosures. These findings indicate a growing yet uneven scholarly interest in integrating ESG and financial reporting across disciplines, with a few key journals leading this field.

### 4.4. Data synthesizing

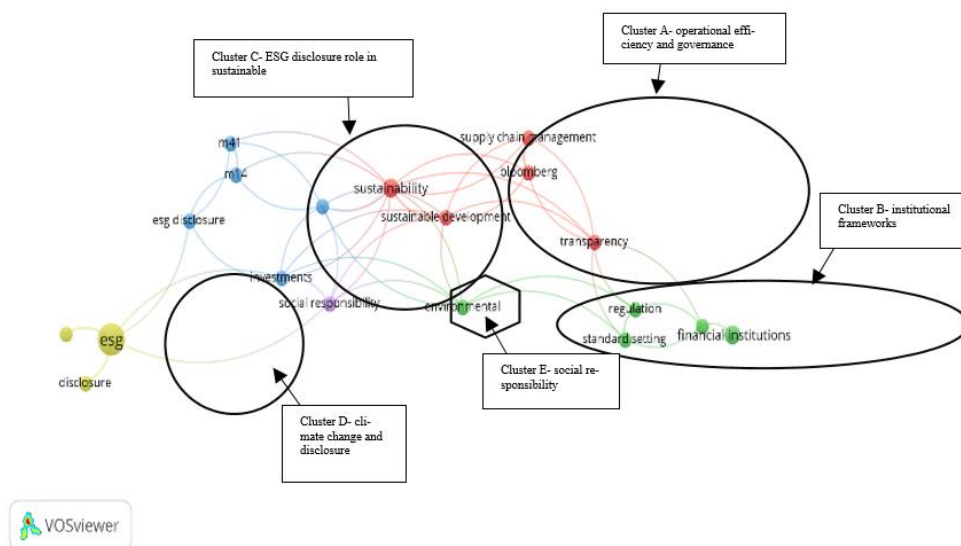
Following the analysis, we synthesized and interpreted the findings of the co-occurrence analyses and bibliometric coupling in order to identify the underlying research themes and academic relationships of the field of ESG disclosure research. Figures 4 and 5 depict the categorization of research themes via bibliometric coupling and co-occurrence analyses, respectively, that divided the field into five principal clusters.

Bibliometric coupling: Figure 4 illustrates the identified themes, including governance and operational performance (Cluster 1), to which Christensen (2021) and Bond (2022) contributed most. Institutional frameworks and regulatory dynamics (Cluster 2) featured works by Boone (2024) and Ginglinger (2023). The nexus of ESG disclosure and reporting with strategic operations and investments (Cluster 3) was highlighted in research such as Basu (2022) and Jin (2024). Climate change, disclosure, and governance (Cluster 4) included innovative approaches by Moss (2024) and Gipper (2024), while regulatory standards and corporate social responsibility (Cluster 5) focused on ethical and sustainability perspectives, as seen in Christensen (2022).



**Fig. 4:** Bibliographic Coupling of ESG Disclosures.



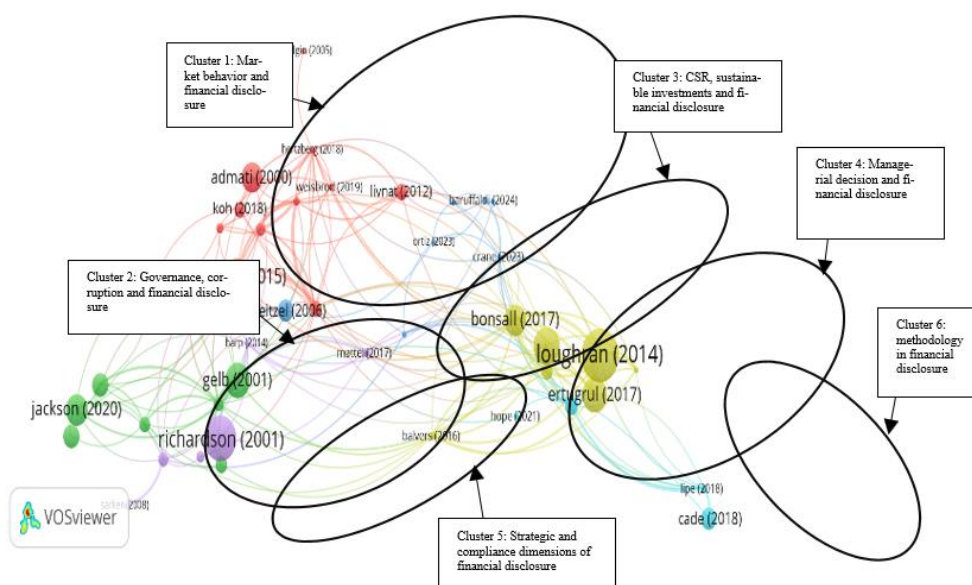


**Fig. 5:** Co-Occurrence-Keywords of ESG Disclosures.

Similarly, the co-occurrence analysis (Figure 5) revealed thematic clusters aligned with these scholarly contributions. Operational efficiency and governance (Cluster A) identified practical dimensions of ESG disclosure, while institutional frameworks (Cluster B) highlighted environmental and regulatory aspects. ESG's role in sustainable supply chain management (Cluster C) reflected contributions from Bellamy (2020) and Gualandris (2021). Climate change and disclosure (Cluster D) and social responsibility (Cluster E) aligned closely with the ethical considerations and innovative governance practices.

Three independent reviewers examined and discussed the results from both analyses to ensure coherence in cluster identification. The integration of these results suggests a coherent and evolving research landscape, linking thematic clusters with prominent scholarly contributions in the domain of ESG disclosure research.

Figures 6 and 7 present the clustering of research themes in financial disclosure through bibliographic coupling and co-occurrence analyses, which put the field into six major clusters. These analyses bring to light the foundational themes, scholarly interconnections, and emerging dimensions in financial disclosure research.



**Fig. 6:** Bibliographic Coupling of Financial Disclosures.



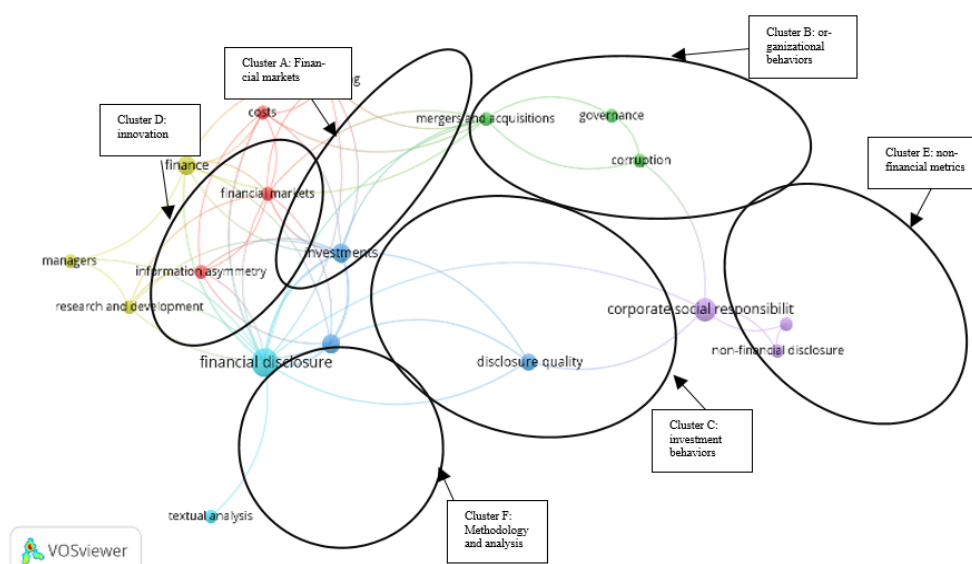


Fig. 7: Co-Occurrence-Keywords of Financial Disclosures.

Figure 6 indicates how themes and authors interconnect to shape the discourse on financial transparency and corporate governance. Cluster 1 develops a market-based behavioral dynamics on financial reporting, as well as transparency, via the works developed by Admati (2000), Baber (2005), Chang (2022), Haw (2012), He (2014), Hertzberg (2018), Maniora (2017), Koh (2018), Livnat (2012), Jackson (2020), Lohwasser (2024), Dubbink (2008), Ozbilgin (2005) and Basu (2022). Cluster 2 focuses on governance, corruption, and transparency. It includes works by Dubbink (2008), Gelb (2001), Jackson (2020), Lee (2017), Maniora (2017), Osuji (2011), Patten (2002), and Principale (2023), which link corporate governance with mitigating corruption. Cluster 3 relates to corporate social responsibility (CSR), sustainable investments, and disclosure practices, with contributions from authors including Adams (2021), Baruffaldi (2024), Cheng (2023), Crane (2023), Ortiz (2023), Tsolmon (2024), and Weitzel (2006), that have raised the profile of sustainability within reporting frameworks. Cluster 4 explores managerial decision-making processes and innovations, through research by Balvers (2016), Bonsall (2017), Ertugrul (2017), Hwang (2017), Jiang (2019), Liu (2023), and Loughran (2014), all of which have implications for the accuracy of reporting outputs. Cluster 5 discusses the strategic and compliance aspects of disclosure, underpinning technical and regulatory considerations, featuring works by Donohoe (2007), Harp (2014), Mattei (2017), Richardson (2001), Sarker (2008), and Toms (1998). Cluster 6 addresses the methodology of textual analysis and the examination of corporate disclosures through sentiment and content analysis (Lipe, 2018; Cade, 2018). Figure 7 aids bibliographic coupling in introducing a theme-based structure supported through co-occurrence keyword examination. Cluster A focuses on the financial markets, asset pricing, and information asymmetry that jointly build the rationale for disclosures. Cluster B addresses organizational behaviors, governance, and corporate strategies related to transparency, corruption, and mergers. Cluster C highlights commerce, disclosure quality, and investment behaviors, demonstrating how reporting informs and affects investor decisions. Cluster D explores managerial decisions and innovations in R&D, shaping new trends in financial reporting. Cluster E emphasizes CSR, sustainability, and non-financial disclosures, reflecting the growing importance of non-financial factors. Finally, Cluster F discusses textual analysis methodologies, including sentiment and content analysis, which are very important in the interpretation of corporate disclosures. Thus, the Keywords in Financial Disclosure and Bibliographic Coupling in Financial Disclosure are indeed interconnected. The keywords offer a thematic map of financial disclosure practices, while the bibliographic clusters reflect academic literature that explores these themes in depth. The authors referenced in the bibliographic clusters help deepen the understanding of the key topics highlighted in the keyword clusters, illustrating how these concepts have evolved in academic discourse.

Table 6: Total Frequency of Top 15 Keywords in Disclosure Research from 1975 to 2024

ESG disclosure	Counts	Financial disclosure keywords	Counts
esg	8	financial disclosure	9
financial institutions	3	corporate social responsibility	6
sustainability	3	commerce	4
climate change	2	finance	4
disclosure	2	investments	4
environmental	2	disclosure quality	3
esg disclosure	2	asset pricing	2
esg reporting	2	financial markets	2
gri	2	governance	2
investments	2	information asymmetry	2
regulation	2	managers	2
social responsibility	2	mergers and acquisitions	2
supply chain management	2	research and development	2
sustainable development	2	sustainability reporting	2
transparency	2	textual analysis	2



Fig. 8: Word Clouds of Frequently Used Author Keywords for ESG Disclosure.



Fig. 9: Word Clouds of Frequently Used Author Keywords for Financial Disclosure.

Table 6, Figure 8, and Figure 9 highlight the total frequency of the top 15 keywords in disclosure research from 1975 to 2024, complementing the trends illustrated in the chart, reflecting various aspects of corporate reporting practices. Each keyword listed indicates a critical area of focus in financial disclosure research, providing insight into how scholars and practitioners have explored the relationship between financial performance, corporate governance, sustainability, and transparency.

The keywords under "Financial Disclosure" highlight themes around the financial aspects of corporate reporting, such as financial disclosure, corporate social responsibility, disclosure quality, asset pricing, and governance. It is aligned with Figure 9. These topics correspond with the clusters found in Figures 6 and 7, which analyze the evolution of financial disclosure concepts over time. For example, Cluster 1 in Figure 6, which focuses on asset pricing and information asymmetry, ties directly to the frequency of these terms in the table, as these concepts lay the foundation for understanding how financial imbalances affect reporting practices. Cluster 2, which emphasizes governance issues, resonates with the frequent mention of governance and corporate social responsibility in the table, aligning the role of corporate behavior and accountability in financial transparency.

Proceeding with ESG disclosure, as apparent from Table 6, some prominent words are: ESG, sustainability, and climate change. As shown in the word cloud Figure 8, presenting the academic attention for the new factors of corporate reporting has increased more and more over the years. In cluster 5, Figure 6 deals with aspects regarding CSR and sustainability reporting. Indeed, such a subject has evolved from being less represented into an integral part of ESG disclosure. This focus in Figure 5 on sustainability and climate-related disclosures, together with emerging issues around greenwashing and the developing call for consistent reporting practices under the guidance of schemes such as the Task Force on Climate-related Financial Disclosures, matches the prominence of terms such as sustainability and environmental in the table.

The word clouds reinforce the growing significance of ESG and disclosure quality. The increasing use of textual analysis and the focus on readability reflect the research trend toward improving the clarity and accessibility of corporate reports, a theme that is closely related to the growing body of literature on disclosure quality and the technical aspects of financial reporting.

The keywords presented in Table 6 align with the thematic clusters in Figures 6 and 7, illustrating the interconnected nature of financial and ESG disclosure. The frequency of these keywords reflects ongoing shifts in research, where financial transparency, corporate governance, sustainability, and the methodology of disclosure analysis are central to understanding and improving corporate reporting practices. The rising importance of ESG factors in financial disclosure, alongside the need for reliable and accessible reporting, underscores the broader trends in both academic research and practical applications.

#### 4.5. Thematic analysis

Figure 10 categorizes topics into four quadrants based on their density and relevance. Motor themes in the upper-right quadrant, such as "financial disclosure," "finance," and "investments," are well-developed and central to the field, driving discussions. Basic themes in the upper-left quadrant, including "corporate social responsibility," "commerce," and "sustainability reporting," are foundational and specialized topics that may evolve further. Niche themes in the lower-right quadrant, like "disclosure quality," "asset pricing," and "financial markets," are relevant but underdeveloped, offering promising avenues for future research. Lastly, emerging/declining themes in the lower-left quadrant, such as "governance," "information asymmetry," "managers," "mergers and acquisitions," "research and development," and "textual analysis," are peripheral and underexplored but may gain prominence with increased focus and development. This map highlights the current state of research and potential areas for deeper exploration in financial disclosure.

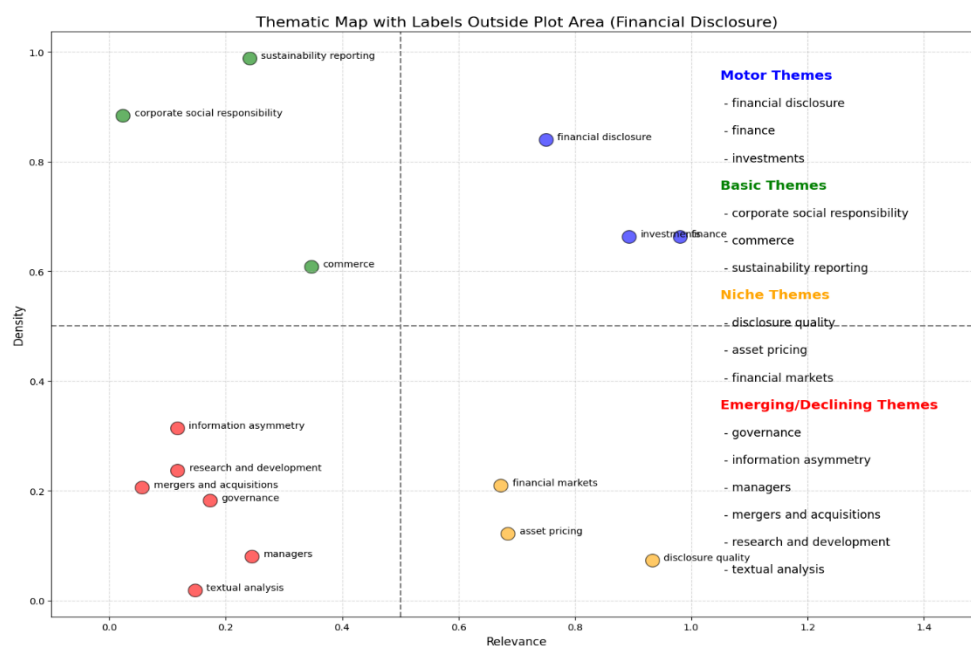


Fig. 10: Thematic Map of Financial Disclosures.

Figure 11 shows a thematic map explaining motor, basic, niche, and emerging/declining themes. Motor themes in the upper-right quadrant, such as "ESG," "ESG disclosure," and "ESG reporting," represent well-developed and highly relevant topics driving the discourse in ESG research. Basic themes in the upper-left quadrant include "financial institutions," "sustainability," and "investments," which are foundational and specialized topics that may evolve further to influence broader ESG discussions. Niche themes in the lower-right quadrant, such as "climate change," "regulation," and "social responsibility," are relevant but underdeveloped, offering promising opportunities for deeper exploration and integration into mainstream ESG research. Lastly, emerging/declining themes in the lower-left quadrant, including "disclosure," "environmental," "GRI (Global Reporting Initiative)," "supply chain management," "sustainable development," and "transparency," are peripheral and underexplored but have the potential to gain prominence as they develop further. This map highlights the current state of ESG disclosure research and provides insights into key areas for future focus and development.

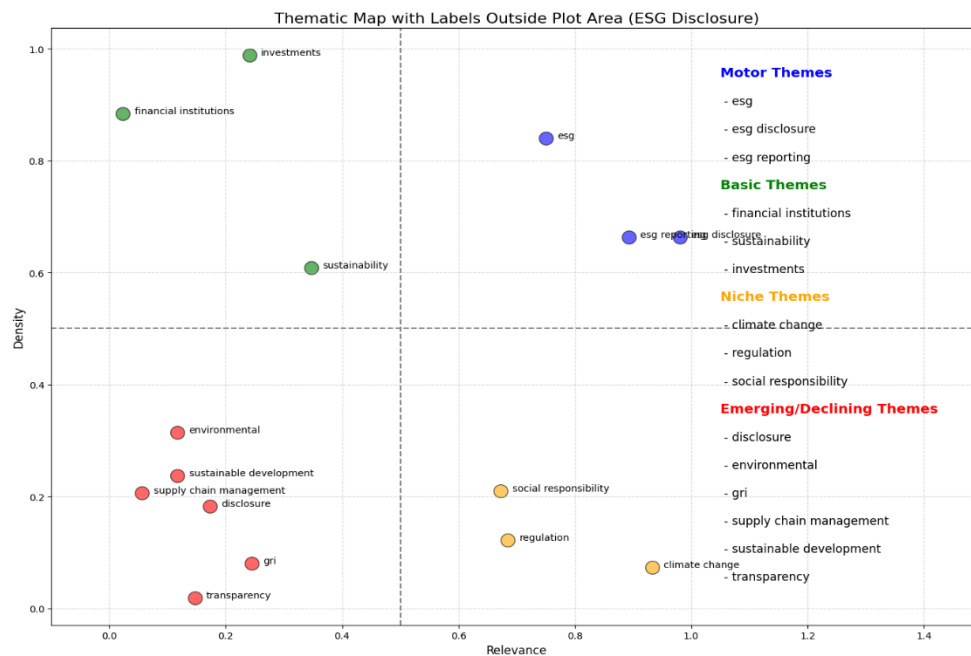


Fig. 11: Thematic Map of ESG Disclosures.

An overview of the top 15 theories underpinning articles published between 1975 and 2024 on ESG disclosures and financial disclosures is provided in Table 7. It shows that the most common theory mentioned is the CSR Report Theory, constituting a solitary 13% of the articles to point out its importance in corporate reporting practices with regard to ESG and financial disclosure. These are followed by Stakeholder Theory and Corporate Governance at 7% each, representing the importance of stakeholders' interest and governance structures in corporate transparency and decision-making. Notably, Stakeholder Theory is closely aligned with the work of Khan (2022), which underscores its relevance in addressing stakeholder relationships in corporate disclosure contexts. Other prominent theories include Investor Behavior Theory, Game Theory, and Institutional Theory, each representing about 4% of the total counts. Institutional Theory, as aligned with Khan (2022), provides a valuable lens to analyze how institutional norms and frameworks shape ESG and financial disclosure

practices. In addition, Communication Theory is used in analyzing how companies communicate their ESG and financial data to stakeholders. These theories, therefore, indicate the growing emphasis on stakeholder relationships, governance, and strategic decision-making in corporate disclosures.

**Table 7:** Top 15 Theories Underpinning 1975 to 2024 Period Articles

Theories	ESG disclosures	Financial disclosures	counts	%
Not specified	1	14	15	21%
CSR report theory	8	1	9	13%
Stakeholder theory	4	1	5	7%
Corporate governance	2	3	5	7%
Investor behaviour theory	2	2	4	6%
Game theory	0	3	3	4%
Institutional Theory	3	0	3	4%
Communication theory	0	3	3	4%
Prospect Theory	0	2	2	3%
Social function theory	1	0	1	1%
Social exchange theory	1	0	1	1%
Social constructivism theory	1	0	1	1%
Earnings predictability theory	0	1	1	1%
Information Signaling Theory	1	0	1	1%
Upper Echelons Theory	0	1	1	1%

The other articles make use of more specialized theories, such as Prospect Theory, Social Function Theory, and Social Exchange Theory, but each appears in no more than 1-3 articles. These have narrower focuses, respectively: areas of decision-making, corporate behavior, and social interaction in disclosure contexts. A few other articles mention Earnings Predictability Theory, Information Signaling Theory, and Upper Echelons Theory, but only in terms of financial disclosures. The table also shows that a large group of the articles, 21%, did not indicate any theoretical framework, which points to a continuing gap in the explicit application of theoretical models in the research.

Overall, the table allows for valuable insight into the theoretical underpinnings of research on ESG and financial disclosures. The theories underpinning corporate responsibility and transparency revolve around CSR Report Theory, Stakeholder Theory, and Corporate Governance. As for the more specialized theories that provide specific concentrations on financial decisions and earnings predictability, Game Theory and Earnings Predictability Theory have proved to be milestones in these respective financial areas. These trends reveal that both broad and narrow theoretical frameworks have equal relevance when explaining the various facets of corporate disclosures.

#### 4.6. Discussion

The findings reveal significant differences between ESG and Financial models. In response to RQ1, in developed countries, financial disclosures provide standardized, transparent information about a company's financial health, governed by strict regulations such as SEC filings and IFRS standards, while ESG disclosures demonstrate a company's commitment to sustainability and ethical governance, following established frameworks like EU CSRD and GRI. These disclosures are integrated and often influence investment decisions. In contrast, developing countries have more fragmented and evolving disclosure practices. Financial disclosures vary by sector and firm size, with fewer regulatory obligations, and ESG disclosures are often voluntary and less standardized, focusing on local issues such as community development and pollution control. Although investor interest in ESG is growing, financial disclosures remain prioritized, with challenges such as inconsistent data quality, high reporting costs, and limited regulatory enforcement. Overall, developed countries have more robust, mandatory disclosure systems, while developing countries are still evolving, with ESG disclosures being less integrated and secondary to financial reporting.

For RQ2, our analysis of key research trends in ESG and financial disclosures shows a growing scholarly focus on incorporating non-financial factors into traditional financial reporting, particularly around sustainability, governance, and social responsibility. While financial disclosures dominate the literature, representing 64% of articles, ESG disclosures account for 36%. Leading journals like *Review of Accounting Studies* and *Journal of Business Ethics* contribute significantly to both areas. Influential works on ESG emphasize operational efficiency, institutional frameworks, and governance, with authors like Bellamy (2020) and Gualandris (2021) examining ESG's role in supply chain management and regulatory dynamics. In financial disclosure, key research focuses on asset pricing, information asymmetry, governance, and CSR, with foundational works by Admati (2000) and Baber (2005). Thematic clusters in the analysis of keywords and bibliographic coupling link ESG to sustainable supply chain management, regulation, and investments, while financial disclosure research highlights market forces, governance, and CSR. These trends represent the growing integration of ESG into corporate reporting and reflect a shift toward the inclusion of social responsibility and environmental impact within financial practices. The regulatory regimes increasingly require the development of the role of ESG and financial disclosure to contribute to the sculpting of corporate transparency, investment decision-making, and responsible business.

Addressing RQ3, it is expected that the conceptual structures of ESG and financial disclosures will differ between developed and developing countries due to economic, regulatory, and institutional contexts. In developed economies, ESG disclosures are conceptualized within frameworks such as the Global Reporting Initiative (GRI) and the Sustainability Accounting Standards Board (SASB) that provide standardized metrics for companies to report on ESG factors. Other similar countries are also putting immense pressure on the reporting system in financial disclosure frameworks like IFRS or GAAP. On the other hand, the concepts of ESG disclosure in developing countries are pretty unwritten as compared to developed countries. Most of these countries also have a high inclination toward the E of ESG while keeping the S and G elements of the ESG disclosures to a minimum. The basic nature of financial disclosure in developing countries is usually shaped by domestic regulatory environments and less by international reporting standards. This incongruence in conceptual frameworks speaks loudly for a global framework that would further harmonize ESG and financial disclosures in the various regions.

In the preparation of this paper in response to RQ4, several theoretical frameworks underpin studies that look into ESG and financial disclosures. The most relevant are the CSR Report Theory at 13%, the Stakeholder Theory, and Corporate Governance at 7% each, showing that stakeholder interests and governance are important in transparency. Specific theories of Investor Behavior, Game, and Institutional Theory at 4% each provide specific contributions. Other theories used to provide a different perspective include the Communication, Prospect, and Social Exchange theories. Surprisingly, 21% of the articles did not identify any theoretical framework. Overall, CSR Reports, Stakeholder Theory, and Corporate Governance are dominant, to which specialized theories add nuanced views of disclosure practices.

Various recommendations are made to help bridge the research gap. The research gap in ESG and financial disclosures calls for further exploration in light of the disparities between developed and developing countries. One of the gaps involves the lack of a unified global framework for ESG and financial disclosures. While the disclosures are governed by standardized regulations in developed countries, such as IFRS or EU CSRD, those in developing countries remain fragmented, with practices dominated by local regulations and voluntary reporting. Such inconsistency restricts cross-border comparisons and integration at the global level in terms of sustainability. Besides, inconsistent ESG data quality in developing countries undermines disclosure credibility and hampers investment decisions. The development and harmonization of standards, improving the quality of data, and standardizing metrics can be realized only through more research in the area.

Theoretical gaps are also apparent, as 21% of these studies have no defined framework. Earnings Predictability and Information Signaling are some of the theories on financial disclosure rarely applied in ESG contexts and need further integration. In developing countries, the focus of ESG disclosures is on environmental issues and not on social and governance concerns. Future research should aim to understand their views on ESG impacts. Furthermore, despite the fact that investor interest in ESG is increasing, few studies have been conducted concerning its impact on investor behavior, particularly in emerging markets. Such shortcomings will enhance both the theoretical and practical dimensions of ESG and financial disclosures on an international scale.

## 5. Conclusion

The current study contributes to an updated view of the evolution within the landscape of ESG and financial disclosure, underlining critical differences between developed and developing countries, emerging trends of ESG integration into corporate reporting, and some of the leading theoretical perspectives. The findings underline that the disclosures on ESG issues, mainly sustainability, governance, and social responsibility, and their integration with financial disclosures in developed countries, are gaining momentum. It also further develops the understanding of how regional regulatory frameworks, institutional contexts, and market dynamics shape disclosure practices. Among the gaps identified are a lack of a universally agreed framework to approach ESG reporting and inconsistency in data quality provide a good base for further research aimed at bridging such gaps and improving the academic and practical uses of ESG and financial disclosure. The CSR Report Theory, Stakeholder Theory, and Corporate Governance are the underpinning theories in ESG and financial disclosure. It also identifies a gap in research studies that will be required for integrating theories on financial disclosure into ESG contexts and enhancing reporting standards, especially in developing countries. This paper contributes to the development of integrating ESG factors within the financial markets and fosters sustainable business practices at a global scale.

### 5.1. Future directions

Future research should target sector-specific dynamics of financial and ESG disclosures, such as high environmental or social impact industries. Empirical studies on comparative disclosure practices in developed and developing countries will go a long way in providing actionable insights to bridge the technological gaps. Researchers should also investigate tailored theoretical frameworks considering the unique socio-economic conditions of developing countries that enable a more context-specific understanding of ESG disclosure challenges. Longitudinal studies of how greenwashing practices evolve and how well regulatory interventions work in different regions may further help identify best practices that foster transparency. Finally, a greater understanding of investor behavior and how that shapes ESG priorities in the developing world could provide strategies for aligning global sustainability goals with local economic realities.

### 5.2. Recommendations

The study, based on the findings, recommends that policymakers and regulatory bodies in developing countries should work toward better and more uniform frameworks concerning ESG disclosure. Companies must be encouraged to provide full and transparent ESG information, including that on governance and social factors, so that investors have reliable and comparable information. It is also envisaged that the quality of ESG data and disclosures will also attract investment by companies, thereby enhancing coherence and credibility by applying best practices from more mature markets. Similarly, it is recommended that investors be encouraged to integrate ESG factors into their investment decision-making process by integrating such disclosures with traditional financial disclosure.

### 5.3. Limitations

The prevailing debate on regulatory, technological, and cultural factors brings out significant gaps in financial and ESG disclosure frameworks in both developed and developing nations. This analysis can only be performed based on some general differences between these economies and does not take into consideration the detailed differences within such broad categorizations. Moreover, the discussion is incomplete without bringing out sector-specific factors that may be additional moderators affecting the extent of disclosure. Another limitation is that most of the insights lack empirical evidence of claims regarding the influence of fintech adoption and the prevalence of greenwashing and are either theoretical or anecdotal. Although cultural and socio-economic differences are noted, their direct impact upon disclosure mechanisms and outcomes is underexplored, leaving room for more granular investigation.

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