

# The Social Pillar of ESG: A Bibliometric Mapping of Diversity, Inclusion, and Human Capital Research (2000–2025)

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## ABSTRACT

This study presents a bibliometric analysis of research pertaining to the social dimension of Environmental, Social, and Governance (ESG), emphasizing diversity, inclusiveness, and human capital from 2000 to 2025. The study analyzes publication trends, prominent authors, institutions, and countries, alongside co-authorship, co-citation, and keyword co-occurrence networks, utilizing data sourced from important scholarly databases and examined with VOSviewer and associated technologies. The findings indicate that the domain is structured around a central cluster of ESG, sustainability, sustainable development, corporate social responsibility, and ESG performance, from which specialized themes such as social disclosure, corporate governance, sustainable finance, and human capital development arise. National and institutional maps illustrate extensive collaborative networks centered around European and Asian hubs. The study theoretically illustrates that the social pillar is a multi-faceted construct that connects diversity, workplace practices, and human capital to organizational performance, stability, and legitimacy, despite the current research being fragmented and inconsistent across many countries and sectors. The paper finishes by discussing implications for managers, investors, and governments, and presents a research agenda focused on the social aspect of ESG.

**Keywords:** *Environmental, Social, And Governance (ESG), Social Pillar, Diversity, Inclusion, Human Capital, Bibliometric Analysis, Vosviewer, Sustainable Finance, Corporate Governance.*

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## 1. INTRODUCTION

The increasing significance of Environmental, Social, and Governance (ESG) frameworks has transformed the perceptions of enterprises, investors, and regulators about corporate responsibility and sustainable value creation. Building upon prior discussions regarding corporate social responsibility (CSR), ESG redefines sustainability as a quantifiable framework that investors may methodically incorporate into capital allocation strategies [1]. Since the early 2000s, ESG has transitioned from a specialized issue to a central focus in global finance, bolstered by efforts like the UN Global Compact, the Principles for Responsible Investment, and the proliferation of non-financial reporting standards. As of 2023, ESG-labelled strategies represented tens of trillions of dollars in assets under management, with researchers noting substantial—albeit occasionally inconsistent—correlations between ESG performance and financial results [2], [3].

Although public and academic discussions have predominantly focused on climate and governance matters, the "S" pillar has recently garnered increased attention as a vital focal point for social risk, legitimacy, and human capital development. The social pillar of ESG pertains to how companies govern their interactions with employees, communities, suppliers, and society as a whole. It encompasses labor practices, human rights, health and safety, supply chain conditions, diversity and inclusion (D&I), and the wider societal implications of corporate actions [4]. Recent practitioner assessments indicate that social performance has evolved over the past twenty years, mirroring the increasing complexity of global supply chains, intensified examination of business political affiliations, and calls for more inclusive workplaces. However, the "S" is less distinctly defined and more challenging to operationalize compared to environmental indicators such as emissions or governance factors like board independence [5]. The social pillar is frequently regarded

as a residual category in ESG ratings, despite empirical evidence indicating that social issues can significantly impact reputation, capital availability, and long-term resilience.

Diversity, inclusion, and human capital practices have become essential themes within the social pillar. Research indicates that gender and cultural diversity, inclusive work environments, and investments in employee skills and well-being correlate with creativity, less risk, and enhanced financial success [6]. The development of human capital—via training, just compensation, and conducive work environments—serves as a mechanism for enterprises to convert social commitments into productivity enhancements and competitive advantages. Simultaneously, these approaches are increasingly articulated in ESG terminology, incorporating D&I indicators, staff development metrics, and controversy ratings into social scores and integrated reports. Meta-analyses and extensive econometric studies of European and US enterprises indicate that "people centric" ESG characteristics can reduce risk and enhance performance, while the amount and direction of these benefits differ by context [2], [6].

Concurrently with the expansion of ESG, investigations into diversity and inclusion have proliferated swiftly across management, human resource, and organizational behavior publications. Bibliometric analyses indicate an increasing number of publications on workplace diversity, inclusion, and equity, emphasizing themes such as creativity, employee well-being, and organizational performance, alongside challenges such "diversity fatigue" and backlash consequences [7]. Comparable mapping initiatives in the tourist and service industries indicate that diversity and inclusion are progressively associated with consumer experiences, employer branding, and social justice issues [8]. Nevertheless, these literatures frequently develop alongside ESG scholarship instead of being methodically incorporated. Consequently, it is ambiguous how diversity, inclusion, and human capital are defined and implemented within the social pillar of ESG-oriented research, and how this has evolved over the past twenty-five years. Current discussions further aggravate the situation. Although ESG and DEI have achieved normative and regulatory prominence, they have also become subjects of political contention. Recent research indicates a reduction in shareholder backing for ESG resolutions in significant markets, particularly in the United States, where climate and diversity programs encounter coordinated political resistance.

Examinations of corporate filings reveal a significant decline in explicit DEI terminology within annual and 10-K reports as companies rename or minimize these programs due to legal and cultural pressures. Simultaneously, prominent enforcement actions targeting "greenwashing" and inaccurately labeled ESG products—exemplified by the penalties levied on DWS—highlight regulatory examination of the measurement and communication of environmental and social assertions. These tensions underscore the necessity of comprehending the intellectual framework and thematic progression of the social pillar: how diversity, inclusion, and human capital have been conceptualized, quantified, and associated with performance, risk, and legitimacy in academic discourse. Bibliometric analyses of ESG have commenced mapping this extensive domain, however they generally regard social concerns as a singular element of composite scores. Recent evaluations of worldwide ESG research identify prominent journals, authors, and nations, while delineating research clusters related to ESG performance, disclosure, and financial results [3], [9]. Other studies concentrate on particular areas, such as ESG in the public sector or sustainable finance, although they still prioritize overarching ESG frameworks instead of thoroughly examining the social pillar [10], [11]. In contrast, bibliometric investigations focused on workplace diversity and DEI—utilizing tools such as VOSviewer and CiteSpace—map conceptual clusters and collaborative

networks but infrequently integrate their findings within the ESG framework [7], [12]. As of yet, there is no exhaustive bibliometric mapping that explicitly situates diversity, inclusion, and human capital at the center of the social pillar of ESG for the period 2000–2025. These developments indicate a series of interconnected issues. The literature on ESG and that on diversity, inclusion, and human capital are fragmented, exhibiting minimal cross-citation and conceptual integration. Secondly, although "S" issues are essential in contemporary policy discussions, the social pillar is frequently regarded as a "black box," encapsulated in composite indices that lack transparency regarding the foundational structures or their progression over time [3], [5]. Third, inconsistent empirical results regarding the correlation between social-related ESG indicators and financial performance underscore the necessity of comprehending how varying conceptualizations and measurement selections influence study outcomes [2], [6]. This fragmentation hinders scholars, practitioners, and policymakers from formulating coherent theories and evidence-based policies concerning the social aspect of ESG, particularly with diversity, inclusion, and human capital.

This study seeks to systematically map the bibliometric landscape of research concerning the social dimension of ESG, concentrating on diversity, inclusion, and human capital from 2000 to 2025. This study utilizes established bibliometric methodologies and visualization tools (e.g., VOSviewer, CiteSpace) to: (1) analyze publication trends, prominent journals, authors, institutions, and countries within this field; (2) identify and interpret intellectual frameworks via co-citation, co-authorship, and keyword co-occurrence networks; (3) investigate thematic clusters and their temporal progression, emphasizing the framing of diversity, inclusion, and human capital as elements of the social pillar; and (4) delineate significant research gaps and prospective avenues at the intersection of ESG, DEI, and human capital management [3], [7]. This study elucidates the parameters of the "S" in ESG and provides a systematic knowledge foundation to facilitate cohesive theoretical advancement, rigorous empirical research, and informed practice.

## 2. METHODS

This study employs a quantitative bibliometric and science-mapping methodology to carefully analyze the progression of research on the social dimension of ESG, concentrating on diversity, inclusion, and human capital from 2000 to 2025. The principal data source is the Scopus database, supplemented as needed by Web of Science to guarantee comprehensive coverage of prominent journals in management, finance, human resource management, and sustainability studies, consistent with standard practices in bibliometric reviews [13], [14]. The search strategy integrates ESG-related terminology with concepts of diversity and human capital through the use of Boolean operators, for instance: ("ESG" OR "environmental social governance" OR "sustainab\* invest\*") AND ("diversity" OR "inclusion" OR "DEI" OR "human capital" OR "workplace diversity" OR "social inclusion"). The search is confined to the years 2000–2025, encompassing journal papers and reviews, and exclusively includes publications in English to guarantee consistency in construction and reporting standards. Upon acquiring the initial dataset, duplicate entries across databases are eliminated, and titles and abstracts are evaluated to maintain solely those studies that expressly pertain to ESG about diversity, inclusion, or human capital.

Data cleansing and preparation adhere to established bibliometric protocols. Initially, comprehensive records (including authors, affiliations, journals, abstracts, keywords, and cited references) are exported in compatible formats (e.g., CSV, BibTeX). Secondly, author names, institutions, and keywords are standardized to rectify spelling discrepancies and synonymy (e.g., "DEI," "diversity, equity and inclusion," "workplace diversity") through a blend of manual examination and thesaurus resources, as advocated in previous methodological studies [13], [15]. Fundamental performance metrics are then computed, encompassing yearly publishing trends,

citation tallies, the most prolific and impactful authors, journals, organizations, and nations. This descriptive analysis offers a summary of the expansion and allocation of research efforts concerning the social component of ESG, situating DEI and human capital topics within the wider ESG literature.

The study utilizes VOSviewer and CiteSpace for science mapping to generate and visualize networks of co-authorship, co-citation, and keyword co-occurrence [16], [17]. Co-authorship analysis delineates cooperation frameworks among authors, institutions, and nations, whereas co-citation analysis elucidates the intellectual underpinnings and principal reference clusters that support the discipline. Keyword co-occurrence networks facilitate the identification of topic clusters pertaining to diversity, inclusion, human capital, and ESG, while also enabling the examination of their temporal progression via overlay visualization. Cluster solutions are analyzed by assessing prominent and central keywords, representative articles, and the thematic consistency of each group. The results from performance analysis and scientific mapping are synthesized to highlight prevailing research streams, emerging subjects, and under-explored areas that present potential for future work on the social pillar of ESG.

### 3. RESULTS AND DISCUSSION

#### 3.1 Network Visualization

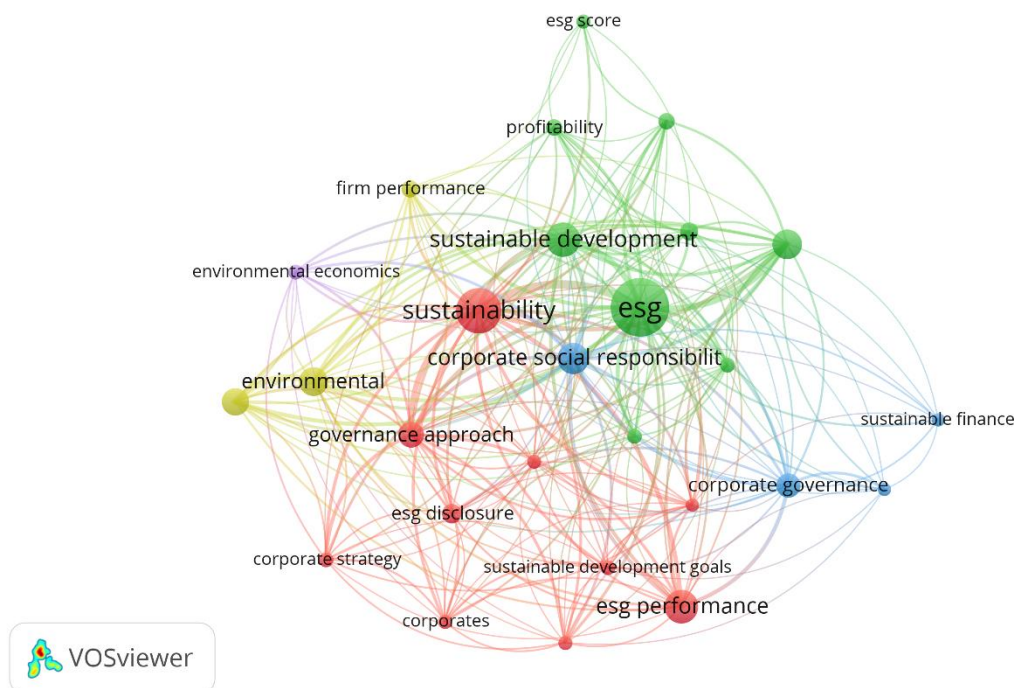


Figure 1. Network Visualization

Source: Data Analysis Result, 2025

The VOSviewer map depicts the keyword co-occurrence network that "esg" and "sustainability" occupy the central position within the knowledge network, characterized by substantial node sizes and numerous linkages to various other terms. This suggests that the majority of documents in the sample primarily utilize ESG and sustainability as their central conceptual frameworks, with discussions on performance, disclosure, governance, and development contextualized within these two concepts. The closeness of "corporate social responsibility" (CSR) to "ESG" and "sustainability" indicates that CSR continues to serve as a significant theoretical and historical basis for ESG research, with numerous studies employing the words interchangeably or shifting from a CSR perspective to an ESG perspective.

The green cluster including “ESG,” “sustainable development,” “ESG score,” “profitability,” and “firm performance” signifies a body of research that associates ESG practices with economic and financial results. Scholars are examining the extent to which ESG scores and comprehensive sustainability initiatives enhance profitability, mitigate risk, and improve corporate performance. The robust connections among “sustainable development,” “ESG,” and “firm performance” suggest that the literature increasingly perceives ESG as a means to harmonize economic objectives with sustainable development goals, rather than viewing them as different agendas.

The red cluster, centered on “ESG performance,” “ESG disclosure,” “sustainable development goals,” “corporate strategy,” and “corporates,” signifies a secondary primary stream concentrating on how firms assess, disclose, and strategically incorporate ESG. Within this cluster, ESG serves as both an outcome variable (performance) and a disclosure and reporting concern, intricately linked to the manner in which corporations connect their corporate objectives with the Sustainable Development Goals (SDGs). The intricate internal links indicate a cohesive examination of metrics, reporting quality, and strategic positioning, highlighting the significance of transparency and disclosure in influencing stakeholder views and capital accessibility.

The blue cluster encompassing “corporate governance,” “corporate social responsibility,” and “sustainable finance” indicates a governance-and-finance stream. This cluster of studies often examines the impact of governance mechanisms (such as boards, ownership structures, and shareholder rights) on ESG or CSR practices, and how these practices subsequently affect sustainable financing instruments and investment choices. The connection between “corporate governance” and “sustainable finance” demonstrates that governance quality is frequently regarded as both an element of ESG and a prerequisite for credible ESG performance, particularly from the viewpoint of investors and financial markets.

The smaller yellow and purple nodes, including “environmental,” “environmental economics,” and “governance approach,” are peripheral yet significant subfields. These words link environmental economics and particular governance frameworks to the overarching ESG-sustainability dialogue, serving as conceptual conduits between conventional environmental studies and corporate/financial research. Their position at the periphery of the network indicates that, although they are not as pivotal as ESG performance or disclosure, they contribute theoretical and methodological insights that enhance the primary clusters. The map illustrates a developed yet progressing domain, whereby ESG is deeply integrated into dialogues concerning performance, disclosure, governance, and sustainable development, with increasing focus on the interplay of these aspects inside corporate strategy and financial systems.

### 3.2 Overlay Visualization

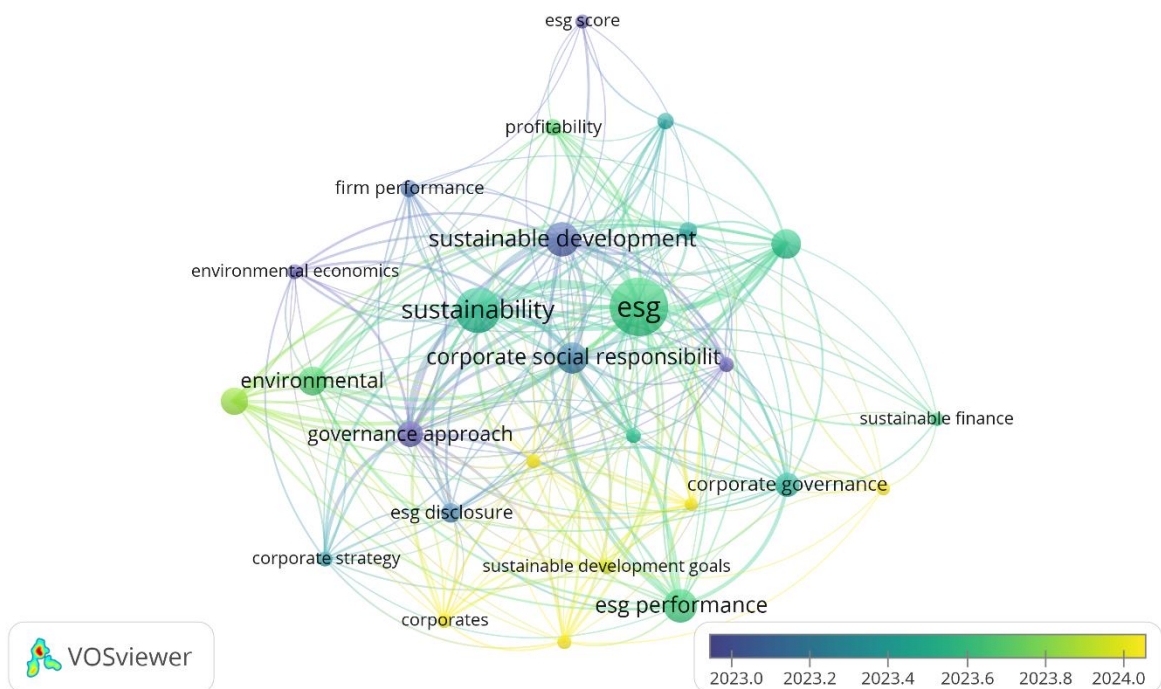


Figure 2. Overlay Visualization

Source: Data Analysis Result, 2025

The overlay visualization illustrates the indicates that "ESG" and "sustainability" are the structural core of the network; yet, their colors (green–turquoise) signify that they are established yet still active subjects, with an average publication year around in mid-2023. Interrelated concepts such as “sustainable development,” “corporate social responsibility,” and “firm performance” are highlighted in a darker blue-turquoise, indicating their reliance on earlier publications within the 2023 timeframe and their reflection of enduring discussions that remain frequently referenced. This pattern suggests that the intellectual underpinnings of the discipline are rather developed: academics regularly base their work on overarching sustainability and CSR ideas while linking them to ESG as the current framework.

The yellowish nodes, including "corporate governance," "sustainable finance," "sustainable development goals," "corporates," and certain instances of "ESG performance," indicate more contemporary research fronts, with an average publication year approaching late 2023 or early 2024. Their peripheral position within the network, along with robust connections to ESG and sustainability, suggests that scholars are increasingly examining the integration of ESG within governance frameworks, financial instruments, and initiatives aligned with the SDGs. The recent emphasis on "corporate governance" and "sustainable finance" indicates an increasing interest in the methods by which governance quality and capital markets implement ESG, alongside intensified scrutiny from regulators and investors.

Ultimately, concepts such as “environmental,” “environmental economics,” and “governance approach” are highlighted in bluish or greenish hues, signifying their role as conceptual bridges rooted in prior scholarship that continues to influence contemporary discussions. Their solid although muted colors contrast with the vibrant yellow of contemporary subjects, indicating that although environmental economics and governance frameworks have significance, the forefront of discourse is transitioning towards performance assessment, transparency norms, and finance-related applications. The overlay map indicates a domain that is solidifying around existing

ESG, sustainability, and CSR principles while venturing into new areas of governance, finance, SDGs, and performance measures in the most recent publications.

### 3.3 Citation Analysis

This study initially analyzes the top cited publications in the dataset to ascertain the intellectual foundations of ESG research. Table 1 delineates the 10 most often cited papers concerning ESG disclosure, performance, and financial consequences, encompassing several sectors like banking, logistics, hospitality and tourism, Brazilian capital markets, and G7 economies. These extensively referenced studies offer a comprehensive overview of how academics have defined ESG, encompassing its determinants, disclosure practices, and effects on firm value, cost of capital, and stability, thereby establishing a robust benchmark for comprehending the primary research track that shape the discipline.

Table 1. The Most Impactful Literatures

Citations	Authors and year	Title
561	Baldini, M., Maso, L.D., Liberatore, G., Mazzi, F., Terzani, S. (2018)	Role of Country- and Firm-Level Determinants in Environmental, Social, and Governance Disclosure
335	Nirino, N., Santoro, G., Miglietta, N., Quaglia, R. (2021)	Corporate controversies and company's financial performance: Exploring the moderating role of ESG practices
280	Bătae, O.M., Dragomir, V.D., Feleagă, L. (2021)	The relationship between environmental, social, and financial performance in the banking sector: A European study
239	Apergis, N., Poufinas, T., Antonopoulos, A. (2022)	ESG scores and cost of debt
216	Chiaromonte, L., Dreassi, A., Girardone, C., Piserà, S. (2022)	Do ESG strategies enhance bank stability during financial turmoil? Evidence from Europe
211	Uyar, A., Karaman, A.S., Kilic, M. (2020)	Is corporate social responsibility reporting a tool of signaling or greenwashing? Evidence from the worldwide logistics sector
196	Pulino, S.C., Ciaburri, M., Maganelli, B.S., Nasta, L. (2022)	Does ESG Disclosure Influence Firm Performance?
181	Miralles-Quirós, M.M., Miralles-Quirós, J.L., Gonçalves, L.M.V. (2018)	The value relevance of environmental, social, and governance performance: The Brazilian case
178	Uyar, A., Kilic, M., Koseoglu, M.A., Kuzey, C., Karaman, A.S. (2020)	The link among board characteristics, corporate social responsibility performance, and financial performance: Evidence from the hospitality and tourism industry
168	Yang, Q., Du, Q., Razzaq, A., Shang, Y. (2022)	How volatility in green financing, clean energy, and green economic practices derive sustainable performance through ESG indicators? A sectoral study of G7 countries



Source: Scopus, 2025

The articles included in Table 1 underscore many prevailing topics in ESG studies. Initial studies, including [18], [19], examine the value relevance and determinants of ESG disclosure and performance, demonstrating that both national institutions and firm-specific attributes influence ESG practices and their valuation in capital markets. Subsequent research enhances this viewpoint by correlating ESG with financial results in particular sectors: [20], [21] investigate the European banking sector, revealing that environmental and social performance, along with ESG strategies, are linked to bank stability and resilience during financial crises. Simultaneously, [22] investigate whether CSR reporting serves as a credible signal or as greenwashing within the global logistics sector, while another study by [23] links board characteristics to CSR and financial performance in hospitality and tourism, highlighting the governance mechanism that influences ESG practices. A further cluster of extensively cited studies examines the financial ramifications of ESG scores and disputes. [24] demonstrate that effective ESG practices can alleviate the adverse effects of company issues on financial performance, underscoring ESG's function as a tool for reputation management and risk mitigation. [25] present corroborative evidence indicating that elevated ESG scores correlate with a reduced cost of financing, implying that creditors favor enterprises regarded as more sustainable. [26] assert that ESG disclosure can enhance firm performance, whereas [27] broaden the discourse to the macro-financial context by analyzing how green financing, clean energy, and green economic practices—mediated by ESG indicators—propel sustainable performance in G7 nations. Collectively, these highly cited studies demonstrate the evolution of literature from merely outlining ESG disclosure trends to examining the causal mechanisms by which ESG practices influence risk, capital costs, and long-term performance across various sectors and institutional contexts.

### 3.4 Density Visualization

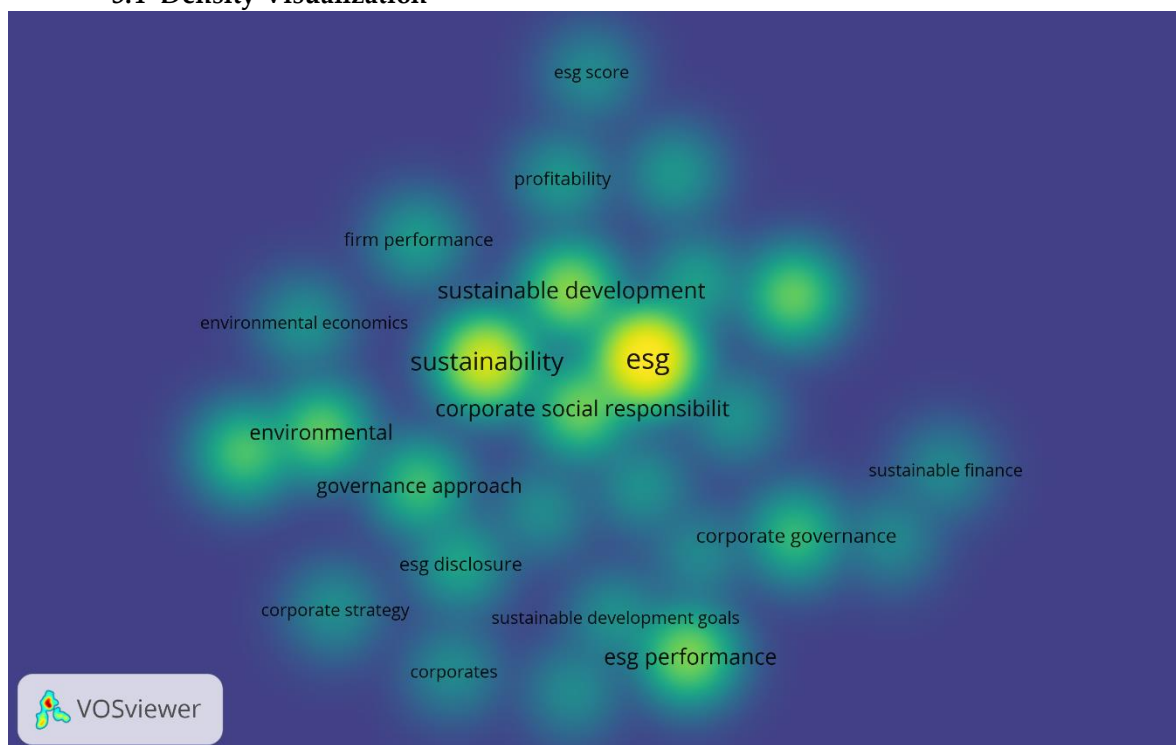


Figure 3. Density Visualization

Source: Data Analysis Result, 2025

The density graphic illustrates the indicates that "ESG" and "sustainability" constitute the most prominent core of the knowledge structure, as denoted by the brightest yellow region. These



phrases are central to the map and closely intersect with "sustainable development" and "corporate social responsibility," indicating that the majority of articles in the dataset focus on the extensive ESG–sustainability–CSR nexus. Surrounding this core, there exists a notable density for subjects such as "ESG performance," "ESG score," "profitability," and "firm performance," signifying a robust study focus on the measurement of ESG practices and their correlation with financial results. The vibrant green areas surrounding these keywords indicate their frequent co-occurrence and their role as essential links between the theoretical discourse on sustainability and empirical research on organizational performance.

As one progresses outside from the core, the hues transition to cooler greens and blues for terms such as "corporate governance," "sustainable finance," "governance approach," "ESG disclosure," "sustainable development goals," and "environmental economics." This pattern indicates that these subjects are significant although comparatively peripheral or infrequently associated with the fundamental ESG–sustainability lexicon. They signify more specialized subfields—governance frameworks, financial instruments, disclosure methodologies, and environmental economics—that contribute to the primary ESG debate without overshadowing it. The density map illustrates a domain firmly rooted in overarching sustainability and ESG principles, with performance and transparency as primary themes, while governance, finance, SDGs, and environmental economics reside in densely populated but subordinate areas of investigation.

### 3.5 Co-Authorship Network

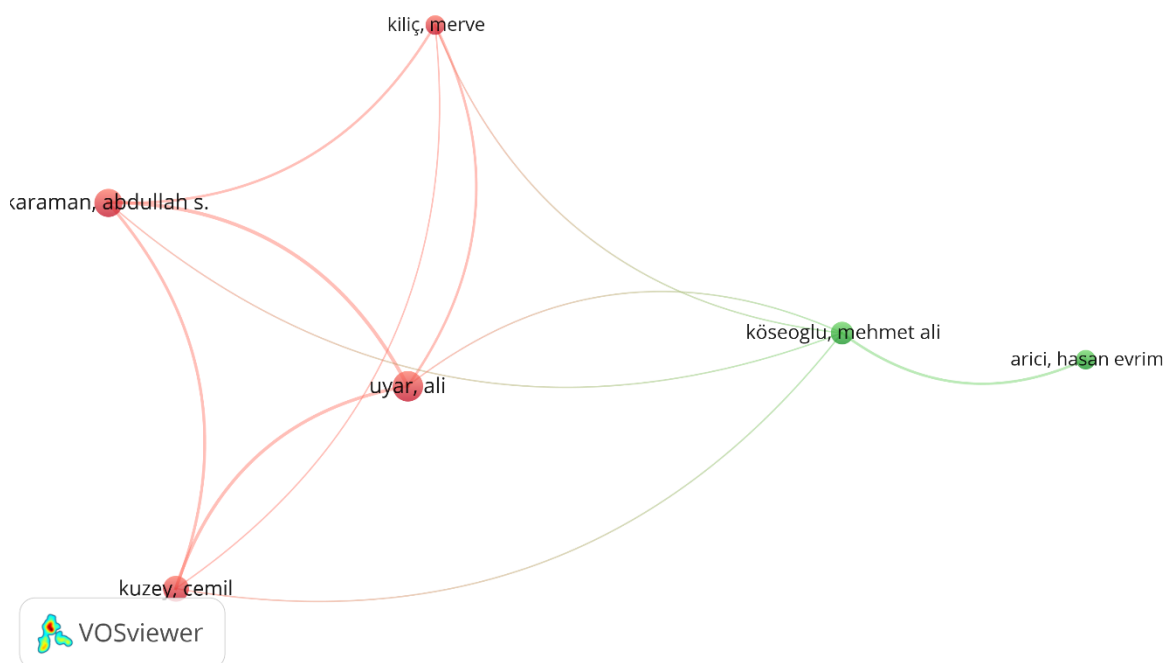


Figure 4. Author Visualization

Source: Data Analysis Result, 2025

The VOSviewer co-authorship network visualization depicts a compact yet cohesive collaboration network with two interlinked clusters. The red cluster is centered on Ali Uyar, who serves as the primary hub, collaborating closely with Merve Kiliç, Abdullah S. Karaman, and Cemil Kuzey; the extensive connections among these four authors signify frequent joint publications and a cohesive research team focused on ESG-related subjects. To the right, the green cluster is directed by Mehmet Ali Köseoglu, who maintains a significant connection to Hasan Evrim Arici, indicating a secondary yet separate collaboration. Köseoglu's connection to Uyar and Kiliç indicates his role as

a conduit between the two clusters, promoting knowledge sharing and potentially co-authoring interdisciplinary works. The graphic indicates that ESG research within this subset is predominantly influenced by a principal Turkish-affiliated research group, characterized by a central figure (Uyar) and a connecting author (Köseoglu) who links two closely integrated teams.

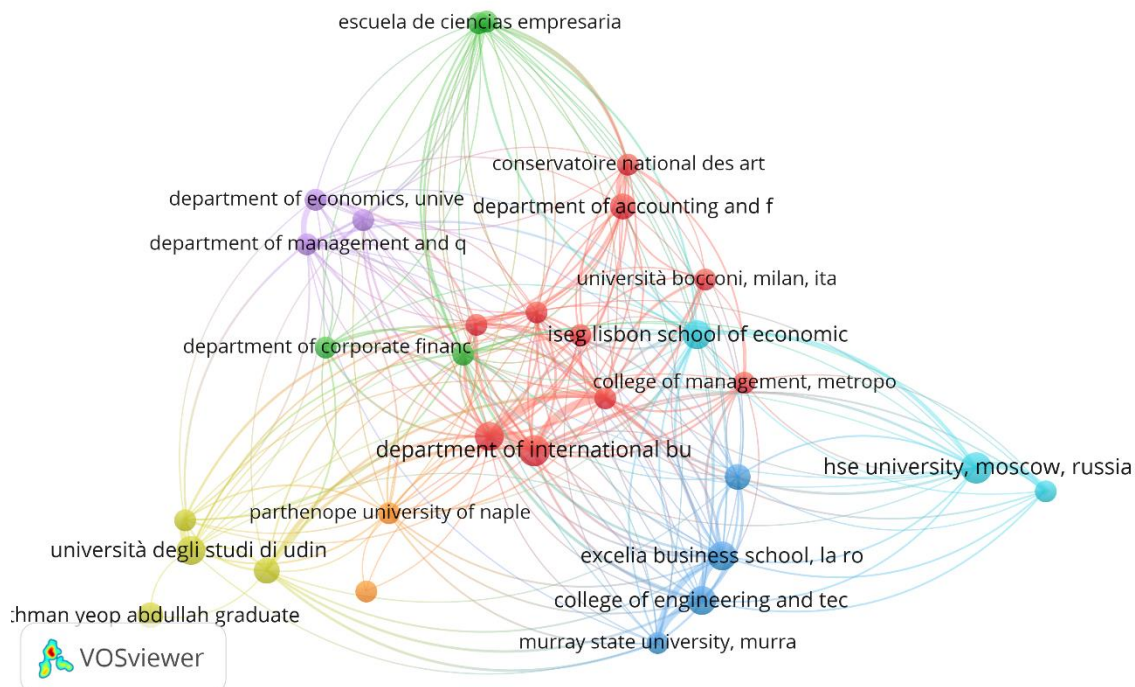


Figure 5. Affiliation Visualization

Source: Data Analysis Result, 2025

The institutional co-authorship map illustrates a complex, multi-clustered collaborative network in ESG research, with numerous European business schools and university departments serving as crucial hubs. The center comprises units like the Department of International Business, the Department of Accounting and Finance, and the ISEG Lisbon School of Economics, forming a densely interconnected red cluster that is associated with other institutions, signifying their role as significant producers and coordinators of collaborative publications. Encircling this core are colored clusters denoting regional or thematic affiliations: Italian universities (e.g., Università Bocconi, Milan and Parthenope University of Naples), Spanish/Latin institutions (e.g., Escuela de Ciencias Empresariales), and French schools (e.g., Conservatoire National des Arts, Excelia Business School), alongside a blue cluster centered on HSE University, Moscow, and collaborators such as Murray State University and several colleges of management and engineering. The dense, multi-faceted connections among these nodes indicate that ESG research within this dataset is propelled by international, multidisciplinary partnerships among economics, management, finance, and business school departments, rather than being confined to a singular nation or field of study.

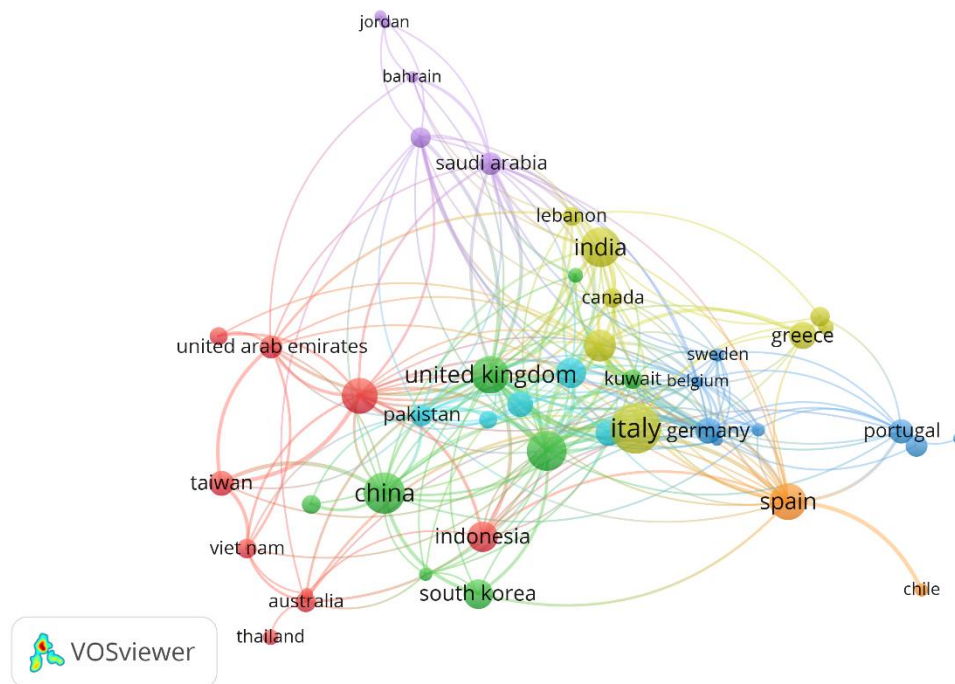


Figure 6. Country Visualization

Source: Data Analysis Result, 2025

The VOSviewer co-country collaboration map illustrates a robust, extensively international network, with the United Kingdom, Italy, Spain, China, and India identified as significant centers of ESG-related research. Their considerable node sizes and extensive links signify elevated publishing volumes and frequent international co-authorships, particularly between European and Asian nations. Spain, Italy, Germany, Greece, and Portugal constitute a robust European cluster, whereas China, South Korea, Indonesia, Vietnam, Thailand, Taiwan, and Australia aggregate within the Asia-Pacific area, frequently linked through collaborations with the UK and European partners. A distinct group comprises Middle Eastern nations—Saudi Arabia, Bahrain, Jordan, Kuwait, and the United Arab Emirates—whose connections align with major centers like the UK, Italy, and India, indicating that their ESG scholarship frequently arises from collaborative endeavors with more-established research frameworks. The map illustrates that ESG research is geographically diverse, however centered around a few key countries that serve as intermediaries between regional clusters and promote global knowledge exchange.

## Discussions

### Practical Implications

This study provides numerous actionable insights for corporate managers and HR professionals tasked with executing ESG and DEI strategies. The analysis of diversity, inclusion, and human capital within the ESG discourse elucidates which social issues are most closely linked to financial performance, risk management, and legitimacy for practitioners. Managers may leverage the identified clusters—such as board and worker diversity, human capital development, and social performance metrics—to prioritize activities that are most prominent in the research frontier and, consequently, more susceptible to examination by investors, rating agencies, and regulators. The bibliometric network elucidates the indicators (e.g., ESG scores, social disclosure, human capital metrics) often employed in empirical research, offering a selection of measurement approaches that organizations can incorporate into internal dashboards and external reporting.

The study elucidates for investors, analysts, and ESG rating agencies the operationalization of the "S" pillar within academic literature and its correlation with outcomes like as profitability, cost of capital, and firm stability. Comprehending these prevailing methodologies and deficiencies can facilitate the development of more effective screening instruments, engagement tactics, and stewardship policies that transcend limited diversity metrics or charitable endeavors. Policymakers and standard-setters may find the map of intellectual clusters and international collaborations advantageous: it delineates well-explored themes and regions alongside those that are inadequately researched, thereby facilitating the targeting of regulations, capacity-building programs, and cross-national initiatives towards areas with scant evidence such as social issues in emerging markets, informal labor, or supply chain human rights.

### **Theoretical Contributions**

This work theoretically re-centers the social pillar within ESG literature, which has frequently been overshadowed by environmental and governance issues. The bibliometric mapping demonstrates that by systematically linking diversity, inclusion, and human capital research to ESG concepts, the "S" is not simply a residual category but a multi-faceted construct that includes representation, workplace practices, human capital development, and wider social impacts. The identified clusters and co-citation patterns elucidate sub-streams—such as governance-driven DEI, human-capital-centric performance models, and social disclosure frameworks—that can be conceptualized as separate yet interconnected mechanisms by which social practices impact company outcomes. This delineates a more coherent conceptual framework for forthcoming integrative ESG models that distinctly segregate and then reassemble environmental, social, and governance paths.

The research integrates formerly distinct fields of corporate social responsibility, diversity management, human resource management, and sustainable finance. Visualizing the integration of fundamental CSR and HRM inside ESG-labeled research illustrates that the social pillar serves as an interface where stakeholder, legitimacy, resource-based, and institutional theories converge. This facilitates more sophisticated theorizing regarding how social practices generate or diminish value, their interaction with institutional contexts, and the negotiation of tensions between financial and social purposes. The temporal and network structures identified through mapping indicate a nascent research agenda focused on social risks and controversies, such as the mitigation of DEI backlash, social scandals, or labor rights violations through ESG practices, thus presenting a theoretically robust foundation for future investigations into risk, resilience, and organizational legitimacy.

### **Limitations and Directions for Future Research**

This study, akin to other bibliometric analyses, has numerous constraints that must be recognized when evaluating the results. The dataset is limited by database coverage, document type, and language filters; the emphasis on Scopus/Web of Science, journal articles, and English-language publications may inadequately represent significant contributions from books, practitioner reports, regional journals, or non-English scholarship. This is especially pertinent to the social pillar, where local institutional contexts and culturally distinctive interpretations of diversity and inclusion may be significant yet less apparent in global databases. The dependence on keywords and indexing terms provided by authors may result in the omission of pertinent research that discuss social concerns without employing ESG-related terminology, or conversely, hence potentially skewing the representation towards work explicitly labeled as ESG.

The study employs co-occurrence and co-citation techniques that uncover structural trends, although these methods do not, on their own, determine causality or assess the quality of individual studies. Elevated centrality or density within networks signifies volume and interconnectedness, rather than guaranteeing conceptual clarity or methodological rigor. Furthermore, considerations regarding thresholds (e.g., minimum citations, occurrences) and clustering methods might affect the resultant maps; varying parameter selections may produce somewhat

different groupings. Subsequent study may rectify these shortcomings by integrating bibliometric results with systematic literature reviews, meta-analyses, or qualitative content studies of significant clusters. Researchers may broaden their focus to encompass grey literature, policy documents, and non-English databases, or undertake comparative bibliometric analyses across various regions and sectors to comprehend the evolution of the social pillar of ESG under diverse institutional contexts. Such additions would enhance and elucidate the research base regarding diversity, inclusion, and human capital as fundamental elements of sustainable and ethical corporate practices.

## CONCLUSION

This study aimed to delineate the intellectual terrain of the social component of ESG, focusing specifically on studies pertaining to diversity, inclusion, and human capital from 2000 to 2025. We employed bibliometric and science-mapping methodologies to examine publishing trends, co-authorship and institutional networks, patterns of international collaboration, and the thematic structures based on keyword co-occurrence and co-citation studies. The results indicate that the domain is firmly rooted in a central cluster of concepts—ESG, sustainability, sustainable development, corporate social responsibility, ESG performance, and ESG disclosure—around which more specialized themes such as corporate governance, sustainable finance, board and workforce diversity, and human capital development are organized. The findings underscore a gradual transition from descriptive disclosure research to performance-focused evaluations that connect social variables with profitability, corporate stability, capital costs, and risk reduction. Prominent studies in banking, logistics, hospitality, and developing markets indicate that social practices—especially those connected to diversity and human capital—are increasingly regarded as value-relevant elements rather than mere ethical supplements. Collaboration networks elucidate the significance of European and Asian institutions and nations (e.g., the United Kingdom, Italy, Spain, China, India) as pivotal hubs that interlink regional clusters and promote transnational knowledge generation in ESG and DEI. At a theoretical level, the mapping elucidates that the "S" in ESG is optimally interpreted as a multifaceted construct comprising representation, workplace practices, human capital development, community impact, and social risk management. It also reveals fragmentation: social issues are frequently addressed in isolation, situated within either CSR or HRM literature, and only selectively included into ESG frameworks. This fragmentation elucidates why empirical results regarding social-financial connections may be inconsistent or contingent on circumstance. The study finds that enhancing the social aspect of ESG necessitates improved conceptual integration and methodological diversification. Future study should explicitly link diversity, inclusion, and human capital methods to ESG outcomes, investigate under represented regions and sectors, and analyze new challenges such as DEI backlash, societal controversies, supply chain human rights, and algorithmic prejudice. In doing so, scholars may furnish a more substantial evidence foundation to assist enterprises, investors, and policymakers in formulating socially inclusive and economically resilient ESG policies.

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