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Mapping the Nexus: A Bibliometric Analysis of ESG and Firm Performance Research

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Abstract: *The value of a firm is increasingly determined by three factors: its environmental protection initiatives, its social norms, and the corporate governance standards it follows, which are acronymized as ESG. In an effort to gain a more comprehensive understanding of the ESG and firm performance domain in business research, the present article intends to examine the current literature and provide an overview of the state of the literature, primary trends, and future prospects. The purpose of this paper is to conduct a bibliometric review of the impact of ESG on the firm's performance. The authors analyze a sample of 782 articles using the Scopus database. To analyze performance and visualize the conceptual structure of the domain, the publication trends, and the collaborations, the VOSviewer and Biblioshiny packages are applied. The research identified the increasing volume of citations and articles pertaining to ESG and its relationship with firm performance. Furthermore, the journal "Corporate Social Responsibility and Environmental Management" plays a significant role in advancing the field of ESG and firm performance research, as evidenced by the extensive number of published articles.*

Key Words: *ESG; Firm Performance; Biblioshiny; Scopus; Bibliometric Analysis; VOSviewer.*

1. INTRODUCTION:

"The world has enough for everyone's needs but not enough for everyone's greed", said Mahatma Gandhi (1). Over the past few years, organizations have become more concerned with business sustainability (2) which has led them to adopt sustainable strategies (3). Sustainability is integration of all environmental, social and financial factors into an organization's goals and activities that makes avenues for Environmental, Social and Governance (ESG) disclosure (4). ESG concerns are a fundamental aspect of sustainable development, aiming to create a harmonious interaction between the environment and individuals (5). As an example of sustainable development, the idea of ESG combines economic expansion, conservation of the environment and social justice (6).

The World Commission on Environment and Development (WCED, 1987) published its report "Our Common Future," commonly known as the Brundtland Report (7), to provide a thorough definition of sustainable business practices encompassing social, environmental, and economic dimensions, collectively termed '*corporate sustainability*' (8). Since the publication of the report, ESG disclosure has grown in significance as a quantitative measure of sustainable performance for businesses and socially concerned communities (9). According to the report, ESG refers to the information that companies provide to stakeholders and regulatory agencies about the environmental, social and governance demands of society (10). It is now essential for businesses to consider their activities by integrating ESG components into their business models due to the challenges of changes in climate, poor worker wellbeing and unethical commercial methods that have surfaced during the past twenty years (11). ESG factors are becoming a crucial component of business strategies for companies that provides a long-term source of competitive edge in addition to serving as a foundation for investor decision-making (12). The increasing demand for more systematic ESG disclosure has led to creation of several international initiative such as United Nation's Global Compact and Global Reporting Initiative (GRI) (13). The Global Compact 2004 report "Who Cares Wins?" marked the beginning of the ESG principles' implementation for corporations (14). To encourage transparent reporting by the corporates on their ESG outcomes, the GRI introduced ESG Disclosure Guidelines in 2016 (15). As per the United Nation's Sustainable Goals program, it is mandatory for all large organisations to declare their environmental and social effect by 2030 (16). As a result of various initiatives, the use of ESG integration as a sustainable strategy has grown significantly on a global scale. The Global

Sustainable Investment Review (GSIR), 2018 study indicates that over the past two years, ESG integration has increased by 69% to $17.5 trillion in assets (17). The discussion above indicates that economies and enterprises are evolving towards sustainability. In the recent years, the research on ESG has gained momentum. Thus, in order to identify the most recent trends it is imperative to summarise the ESG literature. In recent years, numerous literature reviews on various aspects of ESG have been carried out. 18 conducted bibliometric analysis and systematic review of ESG disclosure papers. 19 conducted bibliometric analysis to study the factors influencing ESG performance. In order to augment the research and uncover new evidence, this study employs new data to investigate the underlying association between ESG and firm performance using bibliometric analysis of publications published in the Scopus database using R Biblioshiny package and VOSviewer.
The present study seeks to investigate the following research questions.
(1) What is the trend in the publications of ESG and firm performance?
(2) Which publications, authors and countries have significantly contributed to the literature?

The subsequent sections of the article are structured as follow in the next sections. Section 2 presents an examination of the existing literature. The design and methodology of the bibliometric analysis are described in Section 3. Section 4 presents the results of the study. The conclusion of the study is presented in Section 5.

2. LITERATURE REVIEW:

ESG is an all-encompassing, practical and grounded approach to governance (20). Market participants primarily utilize information pertaining to ESG as an indicator for value and to evaluate an organization's CSR quality (21). Companies having superior ESG performance face significantly reduced financial constraints (22), attract more diversified investors (23), and have reduce debt costs (24). Many studies have investigated the association between ESG and firm value (8; 25; 26; 27) but the nexus is still unclear. Some studies indicates that ESG has a positive impact on firm performance (26; 28; 29), while some studies showed a negative relation between ESG and firm performance (30; 31).
So, the main objectives of the article are to examine terminology related to ESG across different sources, and reveal the association between ESG and firm performance that is articulated in the literature. To achieve this, we performed a thorough bibliometric analysis of ESG research, examining the methodologies and approaches utilized in the examination of data obtained from the Scopus database.

3. METHODOLOGY AND DATA:

This study employs a bibliometric analysis methodology to find trends and future research directions (32). For the bibliometric analysis data were obtained from Scopus database on Feburary 5, 2025. During the preliminary screening phase, the search term “ESG” OR “Environment* Social Governance” AND “Firm Performance” OR “Corporate Performance” OR “Financial Performance” OR “Firm Value” was used in the title, abstract and keyword category. The term Environment* is employed to encompass all articles, including those that contain the keywords environment and environmental. The initial research phase resulted in a sample of 1537 papers. A screening was conducted utilizing the PRISMA procedure (33) which is shown in figure 1 utilizing the subsequent inclusion criteria: papers within the domain of Business, Management and Accounting and Economics, Econometrics and Finance, articles in final stage of publication, papers published in English language. The research sample include articles published at any time up to the date of inclusion. After data filtering total 782 papers has been obtained for bibliometric analysis. After data screening, the data was converted to CSV format and submitted to VOSviewer and Biblioshiny for bibliometric analysis.

4. RESULTS AND ANALYSIS:
4.1 Main Information of Data

This sub-section presents fundamental information regarding the study. The data summary, as per the Bibliometrix R software (version 4.2.2), shown in table 1 encompasses the following: 782 articles published in 313 journals, during the period of 2010-2025. The data reveals a robust and steady growth trend, exhibiting an annual increase of 28.89%. The average age of document is 2.6 and average citation per document is 36.69%. The findings indicate that 1923 authors have conducted substantial academic research on ESG and firm performance on a global scale, comprising 80 publications that were published by a single individual and 94 articles that were co-authored. On average, there are 2.86 co-authors for each document and also, 26.47% of partnerships have people from other countries as co- authors.

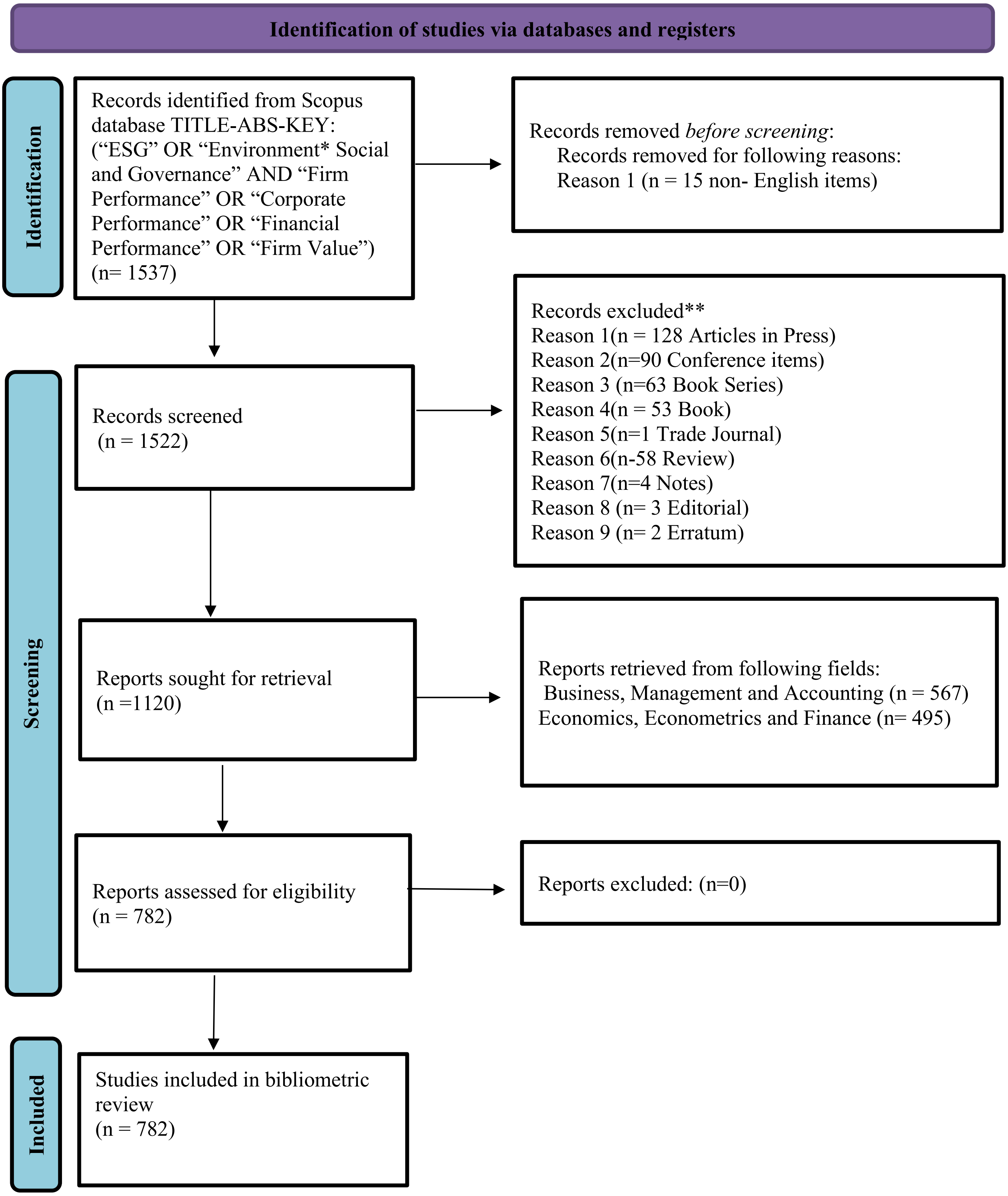


Figure 1: PRISMA Flow Chart

Table 1: The primary information regarding data

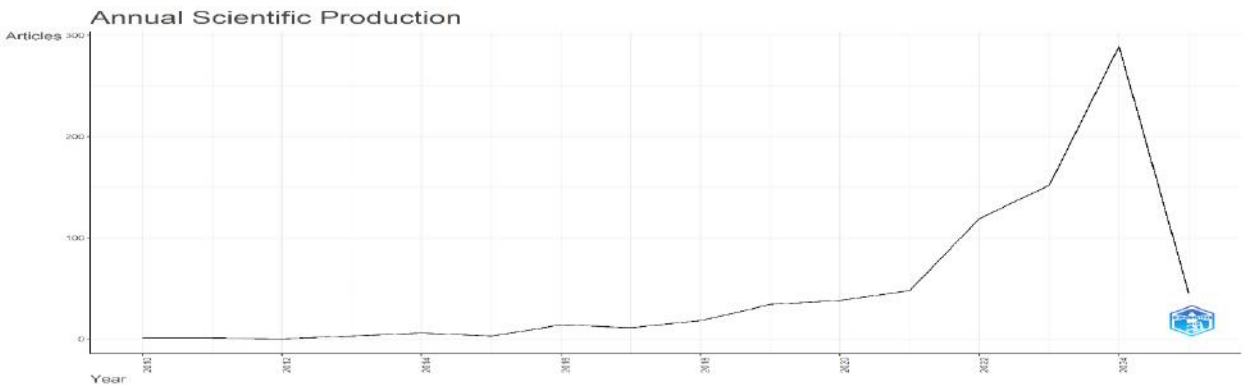
Description	Results
Key Information Regarding Data	
Time Frame	2010:2025
Sources (Books, Journals etc)	313
Articles	782
Rate of Annual Growth (%)	28.89
Average Citations Per Document	36.96
Authors	
Authors	1923
Authors of Single-Authored Documents	80
Authors Collaboration	
Single-Authored Documents	94
Co-Authors Per Documents	2.86
International Co-Authorships %	26.47

Source: Author's Own Computation

4.2 Trends in publications on ESG and Firm Performance

The objective of examining temporal aspects is to determine the beginnings and evolution of the research topic. A considerable volume of literature addressing the relationship between ESG factors and firm performance emerged during the period from 2010 to 2025. Figure 2 shows the annual publishing trends of publications from 2010 to 2025. As depicted by figure from 2010 to 2012, the output was limited, with only 1-2 articles each year. However, it increased significantly to 14 articles in 2016 and 11 in 2017. The number of publications commenced with 18 articles in 2018 and demonstrated notable expansion in the following years: 34 in 2019, 38 in 2020, 48 in 2021, 119 in 2022, leading to a substantial increase to 152 articles in 2023. This pattern persisted, resulting in a point of maximum of 289 articles in 2024.

Figure 2: Annual Scientific Production



Source: Author's Own Computation

4.3 Analysis of Authors

Table 2 summarizes the prominent authors who have significantly contributed to the research on ESG and firm performance within the fields of management, business, and economics. The ten most prolific authors in this domain are Buallay A, Hussainey K, Chouaibi J, Li X, El Khoury R, Elamer Aa, Lee Mt, Nasrallah N, Velte P, and Arayssi M. This was interpreted as the number of papers that the researchers had authored in the field of ESG and firm performance. Table 2 shows information regarding top authors, including their frequency of occurrence, fractional frequency, Total Citations (TC), and H-index. Buallay A is the most prominent author, having published 10 articles and a total of 340 citations with a H index of 9. Hussainey K, Chouaibi J and Li X come at second, third and fourth place with 5 publications each and total citation of 599, 293, and 192 respectively. In terms of highest total citations Velte P comes at top with a total of 627 citations followed by Hussainey K and Arayssi M with 599 and 514 citations respectively.

Table 2: Top 10 Authors by total publications

Author	Total Publications	Total Citation	h_index	g_index	Current Affiliation
Buallay A	10	350	9	10	Higher Education Council, Bahrain
Hussainey K	5	599	5	5	Bangor Business School, UK
Chouaibi J	5	293	4	5	University of Sfax, Tunisia
Li X	5	192	4	5	Xi'an Jiaotong University, China
El Khoury R	4	218	4	4	Lebanese American University, Lebanon
Elamer Aa	4	135	4	4	Brunel Business School, London
Lee Mt	4	357	4	4	SKEMA Business School, France
Nasrallah N	4	196	4	4	Excelia Business School, France
Velte P	4	627	4	4	Leuphana University, Lueneburg
Arayssi M	3	514	3	3	Lebanese American University, Lebanon

Source: Author's Own Computation

4.4 Analysis of Sources

Table 3 lists the top 10 journals along with their total citation and h index. According to 34, the h index is a quantitative metric that determines the total number of articles (h) in a publication that have at least h citations. It is used to assess the significance of journals. The most prevalent journals in terms of total numbers of articles published as shown in figure are Corporate Social Responsibility and Environmental Management (33 papers), Business Strategy and The Environment (29 papers), and Finance Research Letters (22 papers), while in terms of total citations journal 'Business Strategy and The Environment' topped the list with 3018 citations and 21 h -index, followed by Journal of Sustainable Finance and Investment 2228 total citations.

Table 3: Top 10 Journal by their total papers published

Sources	Total Papers	Total Citations	h_index	Publisher	ABDC Rankings	Publication Year Start
Corporate Social Responsibility and Environmental Management	33	1097	14	Wiley-Blackwell Publishing	C	2017
Business Strategy and The Environment	29	3018	21	Wiley-Blackwell Publishing	A	2014
Finance Research Letters	22	997	9	Elsevier	A	2021
Journal of Sustainable Finance and Investment	18	2228	13	Taylor and Francis	_	2015
Journal of Cleaner Production	18	1080	12	Elsevier	A	2017

Cogent Business and Management	16	256	8	Taylor and Francis	_	2021
Business Strategy and Development	14	190	6	John Wiley & Sons Inc.	_	2018
Journal of Business Ethics	12	1781	11	Springer	C	2010
Borsa Istanbul Review	9	250	7	Elsevier	_	2022
Sustainability Accounting, Management and Policy Journal	8	668	7	Emerald	B	2016

Source: Author's Own Computation

4.5 Analysis of Country

Table 4 enumerates the 10 foremost countries in terms of number of published and cited papers. Publication and citation analysis is a effective technique for evaluating the influence of research within the scientific community, facilitating the assessment of the most productive nations and the identification of publication trends. China has the most published papers (289), followed by the India (227), USA (163), Italy (133), and Malaysia (132). The table's data includes both developed and developing nations. China has emerged as the most productive nation among developing countries. However, among developed countries, the USA, Italy exerts the greatest impact in this area.

Table 4: Top 10 Countries by total number of publications

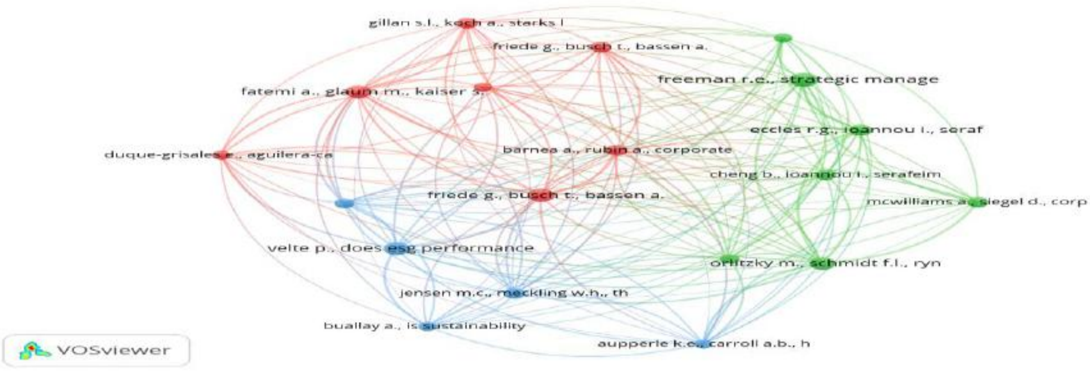
Country	Total papers	Total Citations
China	289	2636
India	227	1343
USA	163	3240
Italy	133	1319
Malaysia	132	1170
Spain	109	765
UK	92	2847
South Korea	75	271
Indonesia	67	156
Romania	65	344

Source: Author's Own Computation

4.6 Co- Citation Analysis

Co-citation analysis identifies publications that have been cited together and are thematically identical (35). This study uses document co-citation analysis to identify the papers that are commonly cited together in the fields of ESG and firm performance which is shown in figure 3. The analysis was carried out using VOS viewer. The nodes show the number of co-citations, and the nodes' thickness indicates the strength the co-citation relationships. This investigation revealed the existence of three different-colored clusters (red, blue, and green). As shown in the figure 3, the clusters are closely related to one another. In relation to clusters red cluster deals with ESG and financial performance (Fatemi et al., 2018; Friede et al., 2015), corporate social responsibility (Barnea & Rubin, 2010). Green cluster presents studies on stakeholder theory (Freeman, 1984), CSR and firm performance (Mcwilliam & Siegel, 2000). The blue cluster represents studies on ESG performance (Velte, 2017), sustainability reporting (Buallay, 2019), ESG controversies (Aouadi & Marsat, 2018).

Figure 3 Co-citation network analysis based on publications



Source: Author's Own Computation

5. CONCLUSION:

This study examines published ESG and firm performance articles in Scopus to ascertain their contributions to the research in the field using bibliometric analysis. The bibliometric analysis identifies publishing trends, most significant articles, most prominent authors and countries. Here are a few of the most important results from the research regarding the information presented in this work.

The annual scientific output indicates a steady rise in research papers from 2010 to 2021, succeeded by a significant spike between 2022 and 2024, culminating in a record peak in 2024 with 289 articles. According to the author analysis, Buallay A has the highest number of publications with a total of 10 and 9-h-index. while in terms of total citation Velte P comes at top with a total of 627 citations. Additionally, the findings show that the Corporate Social Responsibility and Environmental Management journal has significantly contributed in the field of ESG and firm performance, as evidenced by the consistently increase in ESG disclosure research papers and citations. The examination of the data indicates that China possesses the largest volume of published works.

The findings of this study had both practical and theoretical significance. First, it seeks to give a thorough overview of the literature concerning ESG and firm performance by highlighting the most important research and subjects in this area. Secondly, it assists scholars in understanding current ESG and firm performance themes, along with the most referenced publications and pertinent references. Third, the results of the research can assist ESG disclosure researchers to determine future research areas.

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