THE IMPACT OF IDENTIFYING CONCEPTUAL TRENDS IN SUSTAINABILITY, PERFORMANCE AND GOVERNANCE RESEARCH USING BIBLIOMETRIC TECHNIQUES

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Abstract: *This research paper aims to analyze the impact and existence of sustainability reporting in the context of sustainable development goals between international requirements and national accounting practices. Thus, the study involved an analysis from two perspectives: 1) a systematic literature review to identify, select and critically evaluate relevant research from the period 2015-2025 and 2) a bibliometric analysis that involved an extraction and highlighting of the most suggestive references collected from the Core Web of Science collection database, using the similarity visualization program (VOS), during the period 2015-2025. This approach involved a comprehensive search and selection of all potentially relevant articles following the use of explicit and reproducible criteria in selecting articles for the proposed analyses. International agreements such as the 2025 Paris Agreement on Climate Change and strategies such as the EU Taxonomy, as a standard governing environmental sustainability within the EU, have stimulated the development of tools for determining. Governance is proxied by the Worldwide Governance Indicators. The impact of sustainability and performance has become a focal point in entrepreneurial frameworks, influencing startups, venture capital and innovation, and the record number of publications in 2023 and 2025 underlines its transition from a niche academic interest to a global economic and political imperative, while also reflecting the intersection with fields such as economics, environmental science and public policy, which have attracted diverse contributions to research. The results of the bibliometric analysis reveal a significant increase in the number of studies, including policy decisions and increased researcher interest, in the field of accounting between 2015 and 2025. These analyses provide insights into the evolution and progress of sustainable development and identify key themes, notable authors, institutions and geographical regions that have influenced academic research. The main findings highlight that corporate social reporting and performance has matured as a research field, with increasing thematic convergence around the integration of policies, performance indicators and innovation.*

Keywords: *corporate sustainability; financial performance; sustainability; corporate social performance; corporate environmental performance.*

JEL Classification: *Q5; H11; F64*

1.Introduction

This study aims to examine the academic literature on the perception and existence of performance and governance indicators at the national and international levels

through a bibliometric analysis in the field between 2015 and 2025. In addition, the paper will explore how the literature contextualizes the impact of the sustainable development goals between international requirements and national accounting practices in a paradoxical framework. It will also analyze how fiscal policies can contribute to achieving sustainability goals, given the importance of integrating them into financial digitalization policies to support performance, determination, sustainable management.
Furthermore, given the importance of integrating sustainability objectives into financial digitization and digital transformation policies, we focused on how tax policies can contribute to achieving sustainability objectives. Thus, to guide this bibliometric analysis, we focused on the following research questions: i) how is the collaboration network structured between researchers and institutions active in accounting practices, identified through the bibliometric analysis, and which are the main actors and research centers that influence the direction and impact of research in this field, ii) to what extent does the bibliometric analysis of publications on governance and performance highlight an integration of digital transformation concepts and tools and what are the potential synergies and research opportunities that arise from combining these two fields.
The current state of the literature highlights the growing role of accounting, sustainability policies and performance in achieving the Sustainable Development Goals in the Member States of the European Union. Therefore, bibliometric analysis is a comprehensive tool for identifying changes in sustainability and sustainability research. This approach is supported by Ozili (2022), who provides a comprehensive review of the finance literature and highlights the importance of bibliometric methods in clarifying the evolution and fragmentation of the field.
The Sustainable Development Goals between international requirements and national accounting practices represent a dynamic and increasingly critical dimension of sustainable economic development. It connects financial markets with sustainability goals, performance and encourages investment, renewable energy and infrastructure. The urgency of addressing climate change, combined with international commitments such as the Paris Agreement and the United Nations Sustainable Development Goals (SDGs), has accelerated its relevance in academic research and policy planning (Ma and Chang, 2023; Daoulhadj and Hussin, 2023, Liu and Wu, 2023) and also highlights the increasing integration of finance into sustainability reporting and ESG performance frameworks, increasing their influence on regulatory practices and investment behavior.
In the following, we present the Sections: Section 2 reviews the Literature Review, Section 3 displays the Data and Methodology, Section 4 reveals the Results, and Section 5 concludes.

2. Literature review

The impact of the use of the Sustainable Development Goals has begun to gain momentum in recent years, so we set out to explore its evolution within the framework of a bibliometric analysis. The aim is to map the existing research landscape, to highlight the researchers, entities and regions with the greatest impact and to assess the impact of corporate social reporting, sustainability on different sectors. The study aimed to provide a comprehensive overview of how performance, sustainable development and sustainability have been integrated into

accounting policies at national and international levels, while identifying gaps and future research directions. The Sustainable Development Goals can contribute to financial stability in the following ways: by diversifying investment portfolios, encouraging long-term investment perspectives and reducing financial risks related to legislative changes. In addition to promoting financial stability, the Sustainable Development Goals directly support economic and social sustainability by promoting sustainable business practices and based on the legislation in force.
Several authors argue that the implementation of the Sustainable Development Goals at the international level is a way of socio-economic development in order to have unitary practices. Nowadays, there is an increasing emphasis on performance, especially after the approval of the SDGs in 2015, similar to the Paris Agreement. Our country joined the other 192 UN member states at the Summit held in September 2015, where the 2030 Agenda for Sustainable Development was adopted, a global action program in the field of environmental, economic and social development, aiming to promote balance between the three dimensions of sustainable development. The program is addressed equally to developed and developing countries. The 2030 Agenda presents the 17 Sustainable Development Goals (SDGs), informally united under the name of Global Goals, with the help of which an action agenda is established for the next 15 years in order to eliminate extreme poverty, combat inequalities and injustice and protect the planet by 2030: i) no poverty, ii) no hunger, iii) good health and well-being, iv) quality education, v) gender equality, vi) clean water and sanitation, vii) affordable energy, viii) decent work and economic growth, ix) industry, innovation and infrastructure, x) reduced inequalities, xi) sustainable cities and communities, xii) responsible consumption and production, xiii) climate action, xiv) life below water, xv) life on land, xvi) peace, justice and effective institutions, xvii) partnerships to achieve the goals.
The aim of Kuzei C. and Uyar A. (2017) is to investigate the factors influencing (1) sustainability reporting based on the Global Reporting Initiative, (2) the adoption of assurance statements in sustainability reports, and (3) the implementation levels of sustainability reports. Furthermore, the paper examines whether sustainability reporting is value relevant or not, based on the sample provided by 297 Turkish companies listed on Borsa Istanbul. The findings revealed a growing awareness of sustainability reporting based on the Global Reporting Initiative and a trend towards improving the quality of reports. Using the database of ten formulated hypotheses, the empirical evidence produced significant results, which explain the determinants behind sustainability reporting. Furthermore, the results confirmed that sustainability reporting is relevant in terms of its value.

3. Data and Methodology

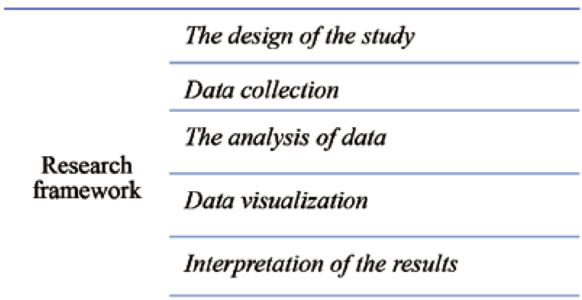
Bibliometric analysis is used by researchers to highlight the quality and impact of publications in the academic environment, being a real support in analyzing the various social and intellectual aspects of research. If we are to define the term governance, Worldwide Governance Indicators is the most important source, although some studies sometimes exceed the definitions provided by this database. During the analysis process, Web of Science highlighted 1006 academic documents on the topic of our research for discussion. In order to create maps and have an overview of all possible documents to analyze, all bibliographic data were loaded into the R-Bibliometrix application.

The application was developed using R software, using several R-Bibliometrix features: (1) security; (2) authors; (3) affiliations; (4) countries; (4) documents and references; (5) keywords; and (6) conceptual structure. In order to have the clearest possible evidence and the widest possible scientific mapping, the construction of bibliographic data networks with different visualization approaches is considered: conceptual structure, maps and scientific networks, as shown in Figure 1.

Figure 1: Processing steps taken

Source: Authors' own compilation using SmartDraw software and the R-software, Package 'bibliometrix

The workflow specific for science mapping is based on five steps, as presented in Figure 2.



Source: Compilation by the author with the R tool – Bibliometrix

In conducting the research, the choice of bibliometric methods is considered by going through the most important steps: (i) selecting the knowledge base and the conceptual framework of the problem or field of study (ii) examining the conceptual framework (or research front) of the research; (iii) creating a social network structure.

The data collection process consists of two steps. Although, this stage may involve creating your own databases. First, the bibliographic data were derived from a comprehensive and popular academic database - Web of Science Core Collection. WOS Core Collection considers numerous studies, documents, journal articles published by researchers. The keywords in this analysis were in principle: "governance*" AND "performance". With the help of viewing these documents, it was possible to extract, visualize and map the numerous details analyzed by the researchers. Last but not least, the interpretation of results includes the stage in

which the results are interpreted in a logical structure, taking into account the different types of analysis and the various units of measurement of the analysis.
In this paper, we have used the most practical approaches to facilitate the connection between the research purpose and objectives as much as possible. We have conducted a bibliometric analysis, based on which we have developed the specialized literature. The bibliometric relationships between key concepts have been illustrated in VOSviewer.
Given the multifaceted objective of this research, to map thematic, conceptual and institutional developments in research on performance, determination and the bibliometric perspective between 2015 and 2025, while also discovering its evolving alignment with sustainability, this research adopts a structured bibliometric approach. In doing so, it also aims to explore how the sustainable development goals are situated within a paradoxical framework that balances economic growth with ecological responsibility and to what extent digital transformation tools and policies are integrated into the discourse.
This research considers productivity indicators, impact, the number of citations a paper receives and existing collaborations. Therefore, bibliometric analysis is a quantitative method used by researchers to deepen their understanding of a field of study by quantifying and visualizing research trends, knowledge structures and collaboration networks.

4. Results
Various analyses were applied using R-Bibliometrix and the Shiny application, processing 1,006 documents from the Web of Science to explore the importance and current knowledge on performance, sustainability. Visualized through scientific mapping and graphical methods, the results highlight key findings, such as significant networks of scientific collaboration. The analysis also includes detailed results covering scientific production from 2015 to 2025, including the most relevant and frequently cited sources, influential publications, prolific countries and productive researchers. The following sections present and discuss the results using data visualization tools to illustrate the conclusions.
Between 2015 and 2025, the scientific community generated 1,006 research papers, with contributions cited in each year analyzed. This period reflects a growing interest in performance and sustainability, especially in 2024 and 2025, which recorded the highest production, with 125 and 213 publications respectively. The increased number of publications that considered the topic of determining performance in the most recent period, 2023 and 2025, reflects the increasing importance given to sustainability factors in economic and sustainable development processes at a global level. International agreements such as the 2025 Paris Agreement on climate change and strategies such as the EU Taxonomy, as a standard governing environmental sustainability within the EU, have stimulated the development of tools for determining governance.
In Figure 3 we note that the prominence of terms such as “performance”, “determination” and “governance” in recent research reflects a strategic focus on using performance as a lever for both economic and environmental transformation. The terms reflect key themes that frame the sustainable development goals, accounting policies as an evolutionary, policy-based mechanism that aims to support sustainable development by creating institutional frameworks that support

sustainable investments. "Sustainability" reflects the adaptations needed in accounting and policy systems to support accounting programs through new initiatives.

Figure 3 Word cloud with important terms used in documents in the period 2015-2024
Source: Compilation created by the author with the R tool – Bibliometrix in processing data extracted from the WoS database

Regarding the correlation between keywords, authors and co-authors' country, the results are highlighted in Figure 4.

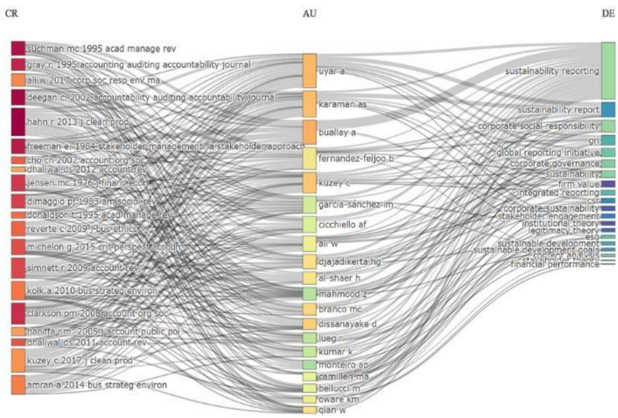


Figure 4. Conceptual structure according to keywords
Source: Compilation by the author with the R tool – Bibliometrix

Keyword clustering indicates thematic groupings where certain keywords are often associated with the same group of authors; countries and journals. For example; these keywords appear frequently in publications by Karaman As; Buallay A; reflecting the global emphasis on the importance of sustainability reporting.
Regarding the relationship between keywords and articles published in journals during 2015-2025, the results are highlighted in Figure 2. The interdependence between the terms, the themes debated in the articles is noted in the figure below, several prominent points called nodes with the titles ",, J Bus Ethics",,, J Clean

Prod",,, Corporate Social Responsibility Environment",,, Bus Strategy Environment",,, Account Audit Accounting".
Also, figure no. 5 exemplifies in more detail the four clusters that are formed within the bibliometric analysis, using the keywords in the journals / magazines published according to the impact created and the existing citations. In the first quadrant we have "corporate social responsibility" 45%, "performance" 46%, "determination" 37% marked with the green node. Also in the first quadrant the node is marked with red "corporate social responsibility" 15%, "disclosures" 19%, "performance" 13% which highlights the impact that these keywords and themes have been addressed in the existing publications. In quadrant no. 3, marked with purple, we highlight "determination" 19%, "corporate social responsibility" 11%, "governance" 22% and in blue the combination of "corporate social responsibility" 27%, "determination" 32%, "performance" 28%.

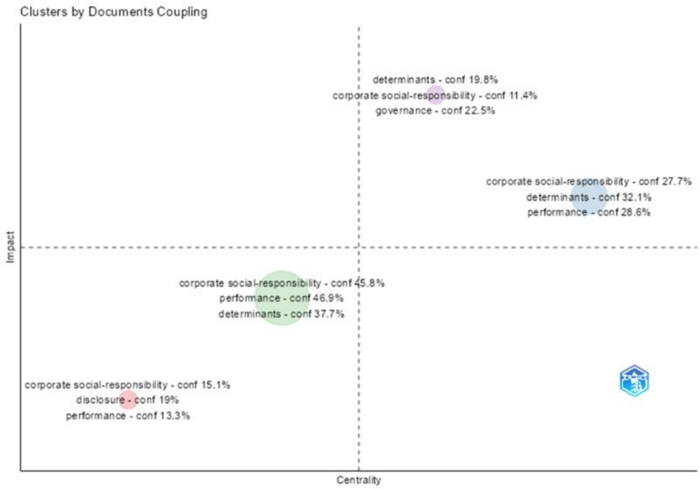


Figure 5. Conceptual structure according to keywords
Source: Compilation by the author with the R tool – Bibliometrix

The research aimed to identify the most frequently used group of three words that are highlighted very often in the documents. Figure 6 shows the most frequently used combination of words, having a high frequency and being observed in areas of interest, such as the obligation to comply with the development of sustainability reports by entities, transparency and their impact on good management and the elimination of risks of non-compliance with the legislation in force, namely "corporate social reporting" (frequency 560) and "performance" (frequency 305), "determination (245), "governance" (219), "impact" (206) and management, including compliance with accounting policies with many important pairs such as: "management" (frequency 185) and "quality" (149), and "accounting" with a frequency of 54.

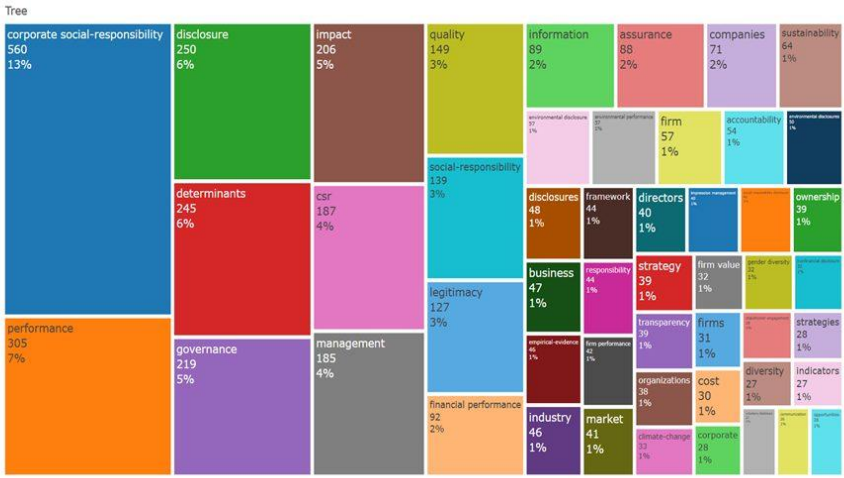


Figure 6 The most used combination of words
Source: R-Bibliometrix

Taking into account the number of citations and the number of published articles, the most representative word combinations, the key terms used in the works, were highlighted. Regarding possible links between countries, 2188 studies are highlighted that mark the existing relations between the analyzed countries.

5. Conclusions

Our analysis considered a scientometric mapping, taking into account the relationship between governance and performance indicators related to the 1006 documents published between 2015 and 2025 according to the bibliometric analysis. The research methodology considered a bibliometric analysis carried out in the R tool, namely Bibliometrix, using the Rshiny application.
Starting from the analysis in our research of the country-level/macro level, namely the alignment of states in ESG reporting with the SDGs, we recall here that the convergence between international requirements and national practices is considered a gradual, interactive process of aligning all local standards - especially in accounting (IFRS), auditing and corporate governance - with global norms in order to increase comparability, transparency and investment. These directives are intended to mitigate institutional differences, reduce regulatory arbitrage and strengthen financial stability. Sobrinho L (2023) in his work analyzes the convergence between international normative instruments, such as the Chicago Convention, and the domestic legal practice of states, focusing on the Brazilian case. The research adopts a qualitative and documentary approach, investigating how international regulatory frameworks are internalized, applied and interpreted by national institutions, especially the judiciary. The results highlighted that, despite formal adherence to the treaties, challenges persist in terms of compatibility between international standards and national jurisprudence, as well as in overcoming technical and institutional gaps. The conclusion highlights the need for more robust mechanisms for regulatory harmonization, institutional capacity building and articulation between different levels of governance, as a condition for

effective legal and operational security in the airline industry. Following the analyses carried out by the researchers, we note that at the macro level it is explained in which context companies can align and adopt ESG reporting, regulatory pressure and harmonisation between countries, and at the micro level the concrete institutional effect on their performance is analysed.

This study used bibliometric analysis to answer the research questions: mapping collaborative structures, identifying conceptual. In addition, the study aimed to examine how the literature frames performance and sustainability in a paradoxical framework and to what extent current research addresses this issue. A final research question explores how the literature on performance and corporate social reporting identifies and reflects critical gaps and limitations in the practical implementation of sustainable development mechanisms, especially in terms of geographical disparities, policy inconsistencies, or institutional misalignments. Together, these questions guide a comprehensive bibliometric approach that not only highlights the evolution of academic output on performance, but also uncovers opportunities for future research at the intersection of determination, sustainability, and digital transformation. As long as the influence of the political factor exists in the economic decision-making of a country and has increased significantly, future research should also analyze different national strategies to highlight best practices and strategies that improve governance systems.

As an overall conclusion, the analysis highlights the fact that governments must support innovation, technology, digitalization, and the long-term strategy for improving the system for developing governance indicators through the decisions they make. The results of the bibliometric analysis reveal a significant increase in the number of studies, including policy decisions and increased interest from researchers, in the field of accounting between 2015 and 2025. These analyses provide insights into the evolution and progress of sustainable development and identify key themes, notable authors, institutions and geographical regions that have influenced academic research. The main findings highlight that corporate social reporting and performance has matured as a research field, with a growing thematic convergence around the integration of policies, performance indicators and innovation.

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