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SUSTAINABILITY ACCOUNTING RESEARCH IN THE MENA REGION: A BIBLIOMETRIC REVIEW

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Abstract

Research background: Sustainability accounting is gaining recognition in the MENA region for assessing impacts amidst challenges like water scarcity and oil dependence. Despite lacking regulations, initiatives such as the Saudi 2030 Vision and the Qatar 2030 Vision emphasize the need for governance reform and improved sustainability reporting.
Purpose: Our study addresses the lack of comprehensive literature reviews in sustainability accounting in the MENA region by analyzing existing research. It provides insights into current studies, identifies key themes and trends, and highlights areas for further exploration. Covering data from over 18 years, the findings offer an overview of the developmental stages and prospects of sustainability reporting for researchers and stakeholders in both industry and academia.
Research methodology: Employing a mixed-methods approach, this study utilizes a bibliometric analysis, qualitative assessment, and content analysis to explore the field of sustainability accounting within the MENA region. Over a thousand related papers are quantitatively analyzed, with validation from reputable source Scopus.
Results: Our research reveals a remarkable surge in sustainability accounting research in the MENA region, connected to diverse theories and themes, showcasing immense future potential. A key feature of this research is the frequent collaboration between local and international researchers, which significantly aids in spreading knowledge and advancing sustainability accounting research.

Novelty: This study examines the role of sustainability accounting in various research areas within the MENA region. It also outlines practical approaches to utilizing sustainability reporting, contributing to advancements in research and development. As of the date this paper was written, and to the extent of our knowledge, there were no existing research papers specifically focused on the MENA region within this scope.

Keywords: Sustainability accounting, MENA, bibliometric review, reporting, sustainability research

JEL classification: M410

Introduction

Sustainability accounting research is essential for addressing how companies can contribute to a more sustainable society. As a result, this type of research spans across various business-related disciplines, such as economics, management, organizational and behavioral science. This interdisciplinary nature is evident in the wide range of concepts and theoretical approaches involved. Furthermore, organizations are increasingly embracing sustainability reporting to measure and communicate their sustainability impact to stakeholders (Tian et al., 2023).

Various calls for global regulations have been made to ensure consistency and comparability in sustainability accounting practices, especially since the release of the United Nations Sustainable Development Goals (SDGs)-2017 (Nunhes et al., 2020). The latest ones being the IFRS Framework for Reporting Sustainable Development and the Task Force on Climate-related Financial Disclosures recommendations which was disbanded after reaching its goal in 2023 (Cortés et al., 2025). As for the IFRS Sustainability framework, the International Sustainability Standards Board released its initial two sustainability reporting standards on 26 June 2023 (Bohn et al., 2024). The first standard is the General Requirements for the Disclosure of Sustainability-related Financial Information, which serves as the primary framework for disclosing significant information about sustainability-related risks and opportunities throughout an organization's value chain. The second standard is Climate-related Disclosures, which stands as the inaugural thematic standard and outlines criteria for entities to disclose details regarding climate-related risks and opportunities.

In the MENA region, there is growing recognition of the importance of sustainability accounting. Governments and organizations in the MENA region are starting to realize that sustainability accounting plays a crucial role in measuring and monitoring their social, environmental, and economic impacts. This need has gained prominence due to recent United Nations Climate Change conferences held in three MENA countries (Morocco in 2016, Egypt in 2022, and the UAE in 2023), highlighting the increasing significance of sustainable practices for these nations. Furthermore, the MENA region faces unique sustainability challenges, such as water scarcity, desertification, and overdependence on oil and gas resources (Aziz, 2023). However, while no regulations are currently in place regarding sustainability accounting in the MENA region, there is an increasing recognition of the need for governance reform and innovative initiatives to enhance sustainability investment and reporting. These initiatives are evident through strategic plans like the Saudi 2030 Vision, the Qatar 2030 Vision, and Tunisia 2030.

Scholarly literature on sustainability accounting in the MENA region is extensive in its content but limited in quantity, focusing on various research dimensions including theoretical foundations of sustainability accounting (Uyar et al., 2020), firm value and sustainability reporting (Kuzey, Uyar, 2017), corporate governance and social and environmental disclosures (Jizi, 2017), access to debt and CSR disclosures (Hamrouni et al., 2019), ESG reporting and performance (e.g. Buallay, 2019), country characteristics and sustainability reporting practices (Karaman et al., 2020).

To the best of our knowledge, there have been no review studies on sustainability accounting/reporting in the MENA region. Our study aims to address the lack of comprehensive literature reviews in the sustainability accounting field in the MENA region and aims to fill this gap by analyzing the existing literature on sustainability accounting. The review will provide insights into current research, identify key themes and trends, and highlight areas for further study. The findings will offer an overview for researchers and stakeholders in both industry and academia on the developmental stages and prospects of sustainability reporting based on data from over 18 years.

Our research follows the outlined sections. Section 1 outlines the methodology used in the study. Section 2 examines SR's scientific output, tracking its development, and authors. Section 3 delves into network analyses encompassing co-citations among authors, collaboration patterns, and keyword co-occurrence networks. In section 4, thematic categories, and topics relevant to sustainability accounting research are discussed. The findings are deliberated on in section 5 along with proposed directions for future research. Lastly, concluding remarks as well as study limitations are presented in section 6.

1. Methodology

1.1. Data collection

In order to ensure the result reflects the value of our studied topic, this study employed four phases of the PRISMA protocol that consist of (1) identification, (2) screening, (3) eligibility, and (4) inclusion (Page et al., 2021). PRISMA is the standard protocol accepted by researchers in academia and used in any category of a valid article review. The protocol helps to refine the selection of sample databases and bibliographic data. Figure 1 shows the PRISMA flow diagram.

Step 1: Database selection

The research will extract data from the Scopus database, an interdisciplinary source widely used in various studies due to its extensive coverage of high-quality journals. Many authors have recommended and utilized this valuable resource for conducting their research (Zhong et al., 2023). It includes the most pertinent and significant journals in its record offering better coverage and a widened scope of published research (Thelwall et al., 2022).

This database contains the necessary metadata needed to conduct a thorough bibliometric analysis of sustainability accounting in the MENA region.

Step 2: the inclusion/exclusion criteria

The search keywords were used as such: TITLE ABS KEY ("sustainability AND accounting" OR "sustainability AND reporting" OR "csr AND reporting" OR "green AND accounting" OR "esg AND accounting" OR "sdg AND accounting").

Our research is limited to the MENA countries defined by the IMF (Algeria, Bahrain, Djibouti, Egypt, Iran, Iraq, Jordan, Kuwait, Lebanon, Libya, Mauritania, Morocco, Oman, Qatar, Saudi Arabia, Somalia, Sudan, Syria, Tunisia, the United Arab Emirates, and Yemen).

Our subject area was limited to "Business, Management and Accounting" AND "Economics, Econometrics and Finance". Only articles were taken into consideration.

Step 3. data extraction and data cleaning

Relevance checks were conducted at various points, as depicted in Figure 1 of the PRISMA flow chart. A total of 259 articles (presented as n in the Figure 1) from 2005 to 2023 (2005 being the year of the first article within our scope found on Scopus, and 2023 being the last year available at the date of our data extraction) were ultimately chosen for the review process after eliminating duplicates, non-English articles, and unrelated articles to our scope of research.

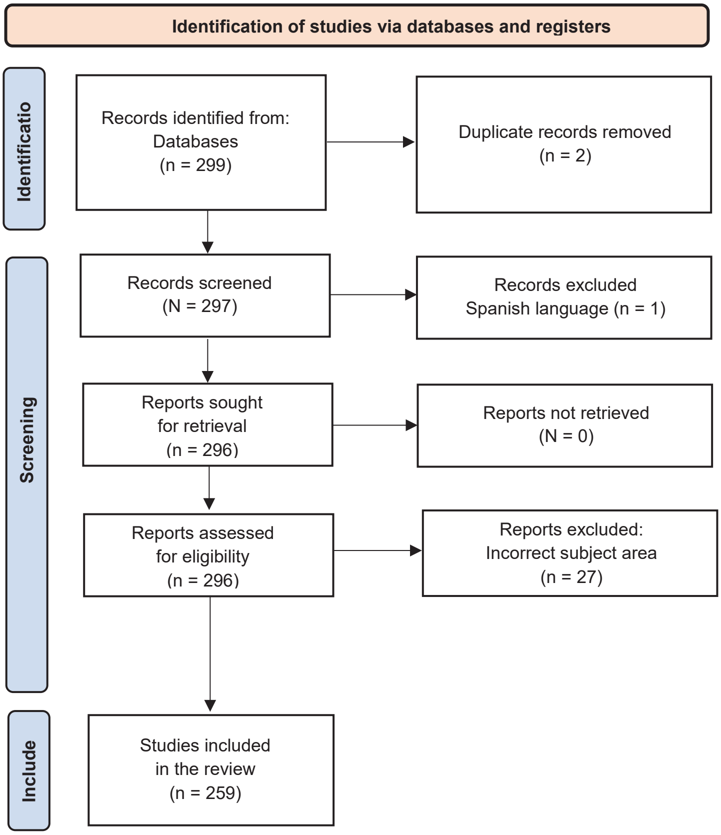

Figure 1. Sustainability Accounting research in the MENA Region 2005–2023 flow diagram

Source: own elaboration.

1.2. Research method

Table 1 presents our main research questions, sub-questions, and details of the methodology used for conducting our bibliometric review. Each question will be addressed throughout the course of this paper.

Table 1. Research questions, and corresponding bibliometric research techniques of sustainable accounting research in the MENA region

Q	Research questions	Methodology
1	2	3
Q1	What are the main attributes of sustainability accounting research in the MENA region?	Employing bibliometric techniques to develop domain visualization and networks
Q1.1	What is the publication trend of sustainability accounting research in the MENA region?	Examining the trend of publications using the yearly production graph

1	2	3
Q1.2	Which countries in the MENA region publish more on sustainability accounting?	Creation of a map displaying countries based on their publication levels
Q2	What are the main themes in sustainability accounting research in the MENA region?	Employing various types of clustering analysis
Q2.1	What are the authors key words of sustainability accounting research in the MENA region?	Conducting a clustering analysis of authors' keywords
Q2.2	Which authors and documents are frequently cited in sustainability accounting research in the MENA region?	Conducting a clustering analysis of the co-authorship network
Q2.3	Which references are frequently cited in sustainability accounting research in the MENA region?	Conducting a clustering analysis of co-citation
Q2.4	What theories are commonly referenced in sustainability accounting research in the MENA region?	Analyzing the referenced theories by using an alluvial diagram
Q3	What are the prospective areas for future research in sustainability accounting within the MENA region?	Analyzing the recommendations for future research in recent articles and in the most cited ones

Source: own elaboration.

2. Scientific output

The research primarily focuses on MENA countries, but other nations are also included due to international collaborations among authors. The United Kingdom is the most prominent country in our database. The map below in Figure 2 illustrates the output of sustainability accounting publications authored or co-authored by researchers from the MENA region. The use of the blue color denotes a higher number of articles, while a lighter shade indicates a lower number. Table 2 presents the top 10 MENA countries with the highest productivity in sustainability accounting research publications co-authored by individuals from the region.

From Figure 2 and Table 2, it can be observed that five major countries outside the MENA region have co-authorship with the MENA countries: the UK, France, the USA, Malaysia, and Türkiye. Additionally, of the top 10 productive MENA countries, eight are from the Middle East and only two are from North Africa. This indicates a concentration of sustainability accounting research in the Middle East and a research gap in some North African countries (e.g., Morocco and Algeria).

Table 2. Top 10 MENA countries by publication

MENA Countries	Articles	Citations
United Arab Emirates	46	598
Saudi Arabia	44	926
Tunisia	38	379
Egypt	33	480
Jordan	31	186
Kuwait	24	681
Iraq	22	170
Bahrain	19	505
Lebanon	17	727
Qatar	14	227

Source: own elaboration.

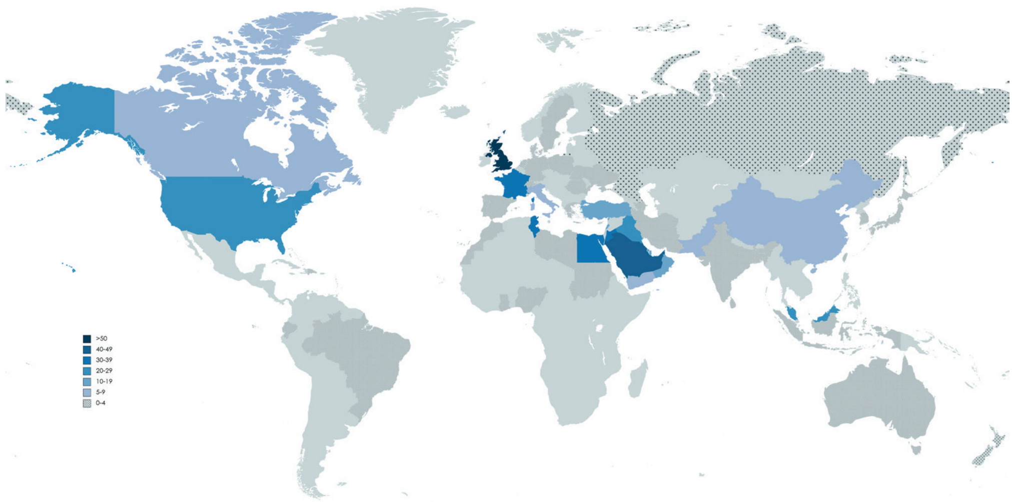

Figure 2. Country Scientific Production

Source: own elaboration.

Figure 3 shows the growth of sustainability reporting research from 2005. No publications were found before this year, and there were no articles recorded between 2006 and 2009. The highest number of articles was recorded in 2023, followed by 43 articles in 2022. Moreover, the years from 2005 to 2016 contributed only to a small percentage (6.95%) of the total sample used in the review. This illustrates the exponential growth of sustainability research in recent

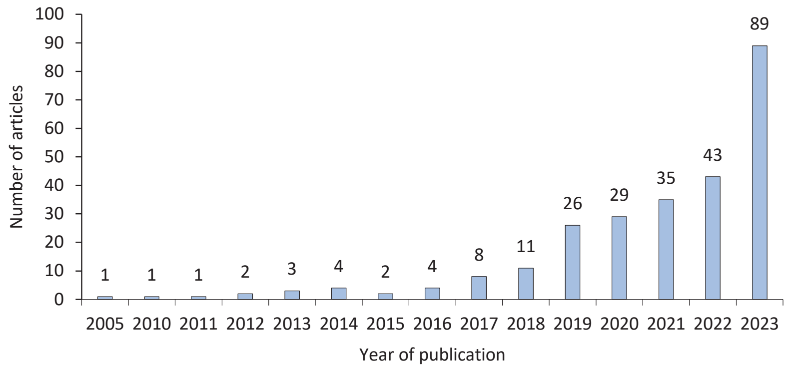

Figure 3. Annual scientific production (2005–2023)

Source: own elaboration.

years (2017–2023) and highlights the diversity within this field. Two distinct phases in growth can be observed after 2017. The period between 2017–2020 coincided with the UN's recognition of SDG 17, which significantly boosted sustainability research overall and specifically in sustainability accounting (Lehmann et al., 2021). The second phase from 2021–2023 reflects the COVID period, during which there was an elevated emphasis on sustainability accounting research in response to the global pandemic. Scholars sought to ascertain whether a company's ESG performance provided protection for socially responsible firms against the severe impact of the pandemic (Effah et al., 2023).

3. Network analysis

3.1. Co-citation network

The co-citation network of authors is constructed based on the referencing of two authors together in a third source, aiding in identifying knowledge dissemination within a specific field. Figure 4 illustrates the network of co-cited authors in sustainability reporting research. The figure is generated using a VoSViewer1.6.20 based on 259 journal articles from SCOPUS with at least 3 citations per author. Noteworthy observations can be deduced from this visualization. The thickness of the lines connecting authors signifies the strength of their association, while a larger node size indicates an author's influential position within the cluster.

In Figure 4, six distinct clusters are identified. The largest cluster is green, with authors in this article focusing on topics related to internal audit, risk, assurance, and sustainability disclosures. They also worked on the mechanisms of sustainability reporting (Uyar et al.,

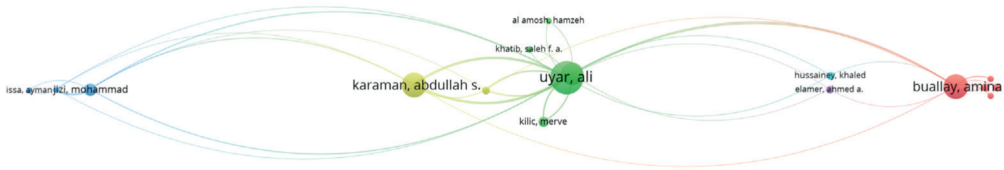

Figure 4. Annual scientific production (2005–2023)

Source: own elaboration.

2020). The second biggest one is yellow, which has strong ties with the red cluster. These authors explored sustainability reporting in various services and industries: banking (Buallay, 2019), supply chain, energy, and healthcare. The third significant cluster is the red one, and it examines firm value in relation to sustainability disclosure and performance (Alsaifi et al., 2020; Buallay, 2019). The remaining three clusters are not as prominent as before, but it is worth noting that they cover subjects such as stakeholder engagement, integrated reporting, and the importance of sustainability accounting in organizational governance (Arayssi et al., 2020; Jizi, 2017).

Table 3. Top 10 productive authors of sustainable accounting research in the MENA region

Author	Articles within our scope	Citations within our scope	Citations	h-index	g-index	e-index	Country
Uyar, Ali	16	576	7,303	43	85	67	France
Jizi, Mohammad	6	549	2,591	15	30	48	USA
Buallay, Amina	12	386	2,817	25	50	45	Bahrain
Karaman, Abdullah S.	12	338	1,700	19	41	34	Kuwait
Kilic, Merve	5	321	4,059	30	50	52	Türkiye
Bekun, Festus Victor	3	314	12,227	60	106	76	Türkiye
Kuzey, Cemil	11	289	5,466	33	73	60	USA
Arayssi, Mahmoud	3	268	782	10	27	25	Lebanon
Chouaibi, Salim	3	72	490	10	17	19	Tunisia
Alsaadi, Abdullah	3	71	237	5	13	14	Saudi Arabia

Source: own elaboration.

We have compiled a list of the top 10 productive authors ranked by citations. Table 3 shows their *h*-index, *g*-index, and *e*-index to assess their research impact and productivity in the field of sustainability accounting. For instance, an h-index of 43 for Uyar, Ali indicates that at least 43 of his publications have been cited a minimum of 43 times.

As shown in Table 4, the g-index of a researcher is always higher than the *h*-index because it gives weight to a highly cited paper. The e-index serves as an additional measure to the h-index for evaluating highly referenced researchers, addressing potential limitations in capturing all citation data by the g-index. It aids in assessing any overlooked surplus citations that these researchers may have accumulated beyond their h-index (Ali, 2021).

Table 4. Comparison of the methods of the author's index (Zhang et al., 2019)

Method	Formula	Specificity	Limits
h-index	$h = \frac{c}{1+\frac{c}{p}} \times n$ where *c* is" new citation" per year. *P* is papers of a researcher published per year; *n* is *n* year	It provides an approximation of the importance, significance of an author's publication	Influenced by self-citations, not quantifying co-authors' contributions
g-index	$g = (\frac{\alpha-1}{\alpha-2})^{\frac{\alpha-1}{\alpha}} \times h$ where *α* is a parameter, *h* is the value of the *h*-index	Takes better into account the citation scores of the top articles	The influence of a highly successful paper can lead to bias
e-index	$e = \sqrt{\sum_{p=1}^{h}\left(cit_p - h\right)}$ where *h* is the *h*-index, citp is the citation count of the pth paper	Excess citations are considered	It does not take into consideration the core citation count

Source: own elaboration based on Zhang et al. (2019).

3.2. Authors' key words network

Figure 5 displays the visual clusters of author keywords organized annually. In the initial years, there was a notable increase in sustainability accounting research in MENA, focusing on general subjects such as sustainability reporting, corporate social responsibility, and financial reporting. However, over time, the focus shifted to more specific areas such as firm value and governance of earnings management within financial research topics. This demonstrates an evolution and diversification of research reflecting deeper understanding and exploration into various aspects of sustainability accounting in the MENA region.

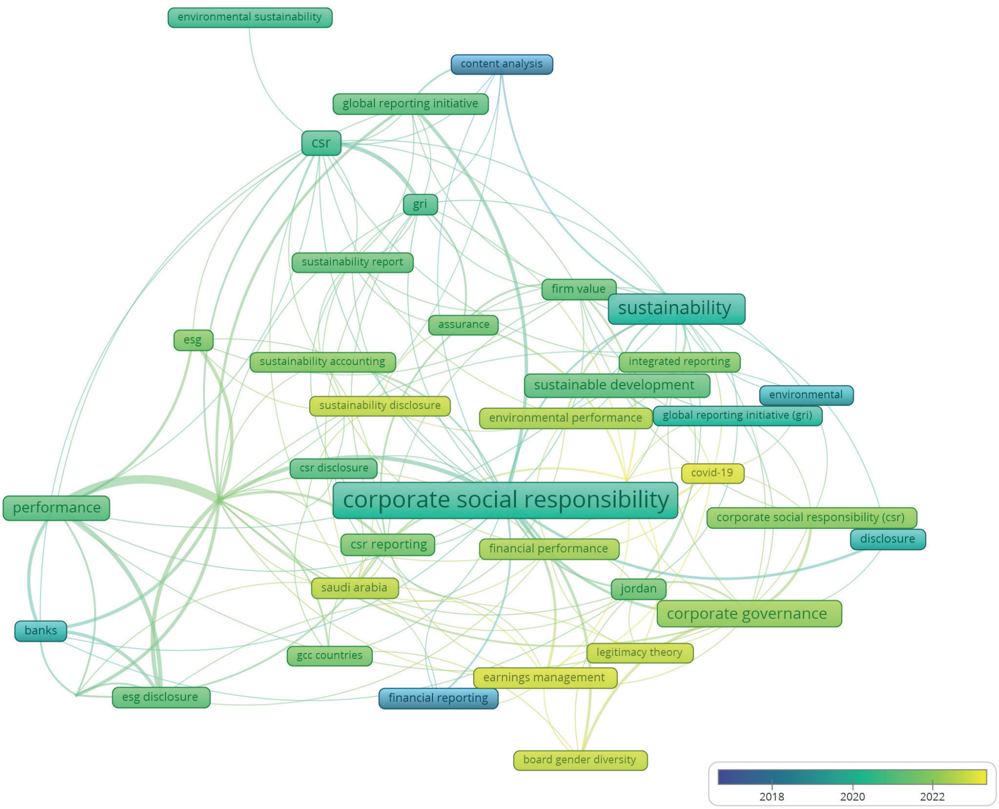

Figure 5. Visualization of the author's key words

Source: own elaboration.

4. Thematic analysis

4.1. Sources network

Based on Vosviewer visual clusters (Figure 6), references cited at least five times within the defined research scope have been identified, leading to the following inferences: the blue cluster explores strategic risk and the conceptual framework for sustainability reporting, providing a comprehensive examination of this area. Meanwhile, the purple cluster offers critical insights into some sustainability reporting standards. The red cluster compiles references related to financial and non-financial disclosures, governance, and ESG practices in general. Notably, the green cluster contains an extensive number of references that examine the relationship between firm value, financial performance, and market responses with sustainability accounting practices and disclosures in detail. It is well-shown in our figure that the main liaison between all of these sources is the agency theory by Jensen and Meckling – one of finance's important theories alongside the legitimacy theory and stakeholder theory (Pratama et al., 2022) – providing background for new areas of accounting research such as sustainability accounting.

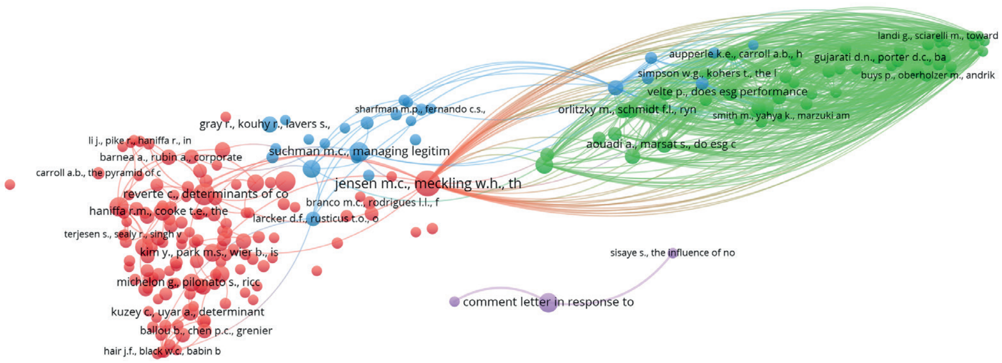

Figure 6. Visualization map of the most cited references

Source: own elaboration.

4.2. Most cited publications analysis

The 20 most referenced articles outlined in Table 5 were examined, and the connections between these articles, their cited theories, and themes were depicted using an alluvial diagram (Figure 7). The primary finding discovery was that stakeholder theory, agency theory, legitimacy theory, resource-based theory, and signaling theory are the five most frequently utilized theories due to their valuable contributions to understanding sustainability practices within organizations. Additionally, various theories from other research fields were also incorporated like Kuznets curve (economics) (Bekun et al., 2021), Friedman (economics) (Alsaifi et al., 2020), Bourdieu's practice theory (sociology) (Al-Htaybat, Von Alberti-Alhtaybat, 2018) as well as some post-modern philosophies such as post-structuralism and post-humanism through critical accounting. These theories and research findings indicate a connection between a company's disclosure of social and environmental information, sustainability reporting, financial performance, corporate governance, firm value, debt, and the characteristics of the country. Recent articles in the field of sustainability accounting are becoming increasingly specific, indicating rapid progress especially in the MENA region. This suggests that the field of sustainability accounting is still relatively new but growing at an exponential rate, as mentioned earlier.

Table 5. Most cited publications and their research matters

Document	Citations	Citation per year	Research matter
Jizi (2017)	242	40	The relation of board composition, to a firm's social and environmental disclosure
Kuzey (2017)	205	34	The determinants of sustainability reporting and its impact on firm value in Turkey
Bekun (2021)	179	90	The connection between institutional quality, renewables, and CO_2 emissions
Nekhili (2017)	173	29	The presence of family involvement and the relationship between CSR disclosure and firm market value
Arayssi (2016)	147	21	To investigate the relationship between women on boards, sustainability reporting, and firm performance
Fatai Adedoyin (2021)	132	66	The impact of economic complexity, tourism activities, and energy consumption on greenhouse gas emissions in the EU
Arayssi (2020)	121	40	The influence of board composition on ESG disclosure
Aboud (2018)	104	21	Social, environmental, and corporate governance disclosures and influence on the value of companies in an emerging market like Egypt
Uyar (2020)	89	30	Relationship between CSR performance and CSR reporting in the logistics sector
Karaman (2020)	86	29	Relationship between green logistics performance and sustainability reporting practices in the logistics sector
Karaman (2018)	83	17	Sustainability reporting impacts on firm value in the aviation industry
Adel (2019)	75	19	Corporate governance factors and the quality of corporate social responsibility disclosure in large European companies
Buallay (2020a)	73	24	Sustainability reporting by banks in the Gulf Cooperation Council and relation to audit committee attributes
Hinson (2010)	73	6	The communication banks operating in Ghana of their CSR programs
Asif (2013)	65	7	Sustainable development reporting patterns of Dutch companies
Buallay (2020b)	64	21	The difference between banks in developed and developing countries and the effect of sustainability reporting on market performance and financial performance
Alsaifi (2020)	58	19	The impact of carbon disclosures on market response, including abnormal return and cumulative abnormal return
Buallay (2020c)	57	19	The relationship between sustainability reporting (ESG) and three performance measures related to a firm's operational performance (ROA), financial performance (ROE), and market performance (Tobin's Q)
Al-Htaybat (2018)	57	11	Insights into the implementation of integrated thinking and reporting in a global organization, with a focus on the role of information technology (IT) in the process.
Hamrouni (2019)	56	14	The relationship between CSR disclosure and debt financing

Source: own elaboration.

The majority of articles on sustainability reporting in the MENA region adopt an exploratory and positivist approach, examining the new elements and relationships within the field of sustainability accounting. These studies focus on understanding sustainability reporting concepts that have already been investigated in more developed markets, rather than taking a critical, deconstructive perspective on the nuances of sustainability in the MENA context.

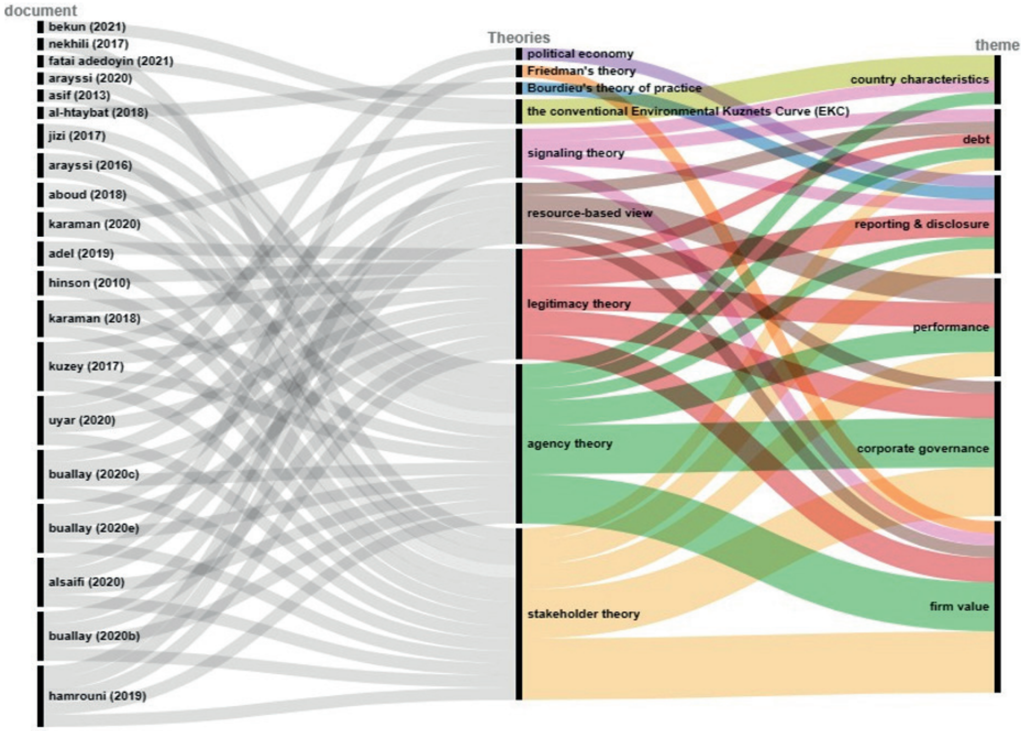

Figure 7. Alluvial diagram for most cited articles within our scope (article–theory–theme)

Source: own elaboration.

5. Future research perspectives

To identify potential gaps and areas for further investigation, the most referenced articles, along with recent publications from 2023, were examined. These articles were categorized into distinct themes – as presented earlier – that will allow future researchers to easily pinpoint the gaps, and this is detailed in Table 6.

Table 6. Future research directions

Theme	Future research question	Source
1	2	3
Corporate governance	To investigate the relationship between ESG disclosure and financial performance in the GCC countries	Arayssi et al. (2020)
	To explore the mechanisms through which board diversity affects CSR disclosure, as well as the potential moderating effects of other variables such as industry type and ownership structure	Jizi (2017)
	How can the agency theory, stewardship theory and social identity theory be integrated to provide a more comprehensive understanding of the relationship between CEO characteristics and environmental outcomes?	Mahran and Elamer (2023)
	To investigate the relationship between women on boards and other types of disclosure, such as environmental, economic, and strategic disclosure	Issa and Hanaysha (2023)
	To examine the impact of variables, such as board size, CEO duality, and ownership structure, on the relationship between audit committee chair effectiveness, sustainability disclosure, and firm performance	Alodat et al. (2023)
Performance	To examine the impact of different types of CSR activities on investment decisions, such as philanthropy, employee relations, and environmental sustainability	Kouaib and Amara (2022)
	To utilize the media agenda-setting theory to explore whether and how media can affect public expectations about firms' sustainable performance	Benameur et al. (2023)
	To explore the impact of sustainability disclosure on firm performance and the role of external factors, such as regulatory pressure and social norms	Alodat et al. (2023)
	To investigate the impact of sustainability reporting on other aspects of financial reporting quality, such as accruals quality or earnings persistence	Ahmed Hashed and Ghaleb (2023)
	To understand the motivations behind banks' sustainability practices	Mohamed Buallay et al. (2023)
	To explore the impact of sustainability reporting on other financial performance measures, such as return on equity (ROE) and market value	Buallay (2019)
Debt	To investigate the relationship between CSR disclosure and other forms of financing, such as equity financing or private debt, to explore the impact of the quality of CSR disclosures on access to debt financing, and to investigate the impact of CSR disclosures on other stakeholders, such as customers, employees, and supplier	Hamrouni et al. (2019)
Reporting & Disclosure	To assess whether NFD has an impact on the actions of socially responsible institutional investors	Al-Dosari et al. (2023)
	To incorporate other means of disclosure used by companies, such as press articles, websites, and personal interviews	Alodat et al. (2023)
	To examine whether higher CSR performers are more likely to assure their CSR reports or explore the effect of CSR practices or reporting on firm performance or market value	Uyar et al. (2020)
	To explore the relationship between integrated thinking and reporting and other organizational practices, such as sustainability reporting and corporate social responsibility	Al-Htaybat and Von Alberti-Alhtaybat (2018)
	To explore the integration of sustainability reporting with financial reporting	Asif et al. (2013)

1	2	3
Country characteristics	To use data from different countries to obtain an overall idea of the relationship between corporate governance and CSR performance	Aryan et al. (2022)
	To explore the impact of policy interventions, such as the use of advanced technology to prevent environmental degradation from energy usage and improving tourist activities in the countries	Fatai Adedoyin et al. (2021)
	To explore the conditions under which investing firms in specific industries or countries can engage in a more effective CSR agenda	Gerged et al. (2023)
	To examine regional results across countries and search for investment and CSR transparency	Fatai Adedoyin et al. (2021)
Firm value	To explore the impact of different types of stakeholders on the relationship between corporate transparency and firm value	Gerged et al. (2023)
	To explore internal and external contingencies that possibly moderate between the GRI adoption and firm value, such as ownership structures and market regulations	Nandy et al. (2023)
	To investigate the drivers of sustainability reporting, application levels, and external assurance in greater depth, using case studies and interviews	Kuzey and Uyar (2017)
	To investigate the role of other stakeholders, such as employees and customers, in the relationship between CSR disclosure and firm market value	Nekhili et al. (2017)
	To examine the impact of sustainability reporting on other aspects of firm performance, such as financial risk and cost of capital.	Karaman et al. (2018)
	To investigate the impact of ESG disclosures on the cost of capital and the cost of debt	Aboud and Diab (2018)
	To investigate the long-term impact of carbon disclosures on a firm's financial performance	Alsaifi et al. (2020)

Source: own elaboration.

6. Discussion

The patterns identified in this bibliometric review of sustainability accounting within the MENA region align with several trends observed in major global syntheses, while also highlighting unique regional characteristics that contribute to the existing literature. The post-2015 increase in publications from the MENA region, as demonstrated in our annual scientific output analysis, reflects the rapid global expansion noted by Effah et al. (2023) and Diwan and Amarayil Sreeraman (2023), where research on sustainability disclosure has grown in response to global policy initiatives such as the SDGs and the Paris Agreement. However, while Effah et al. (2023) emphasize the predominance of Europe, North America, and Oceania, our country-level mapping indicates that research in the MENA region is predominantly concentrated in the United Arab Emirates, Saudi Arabia, and Tunisia, with significant cross-border collaboration occurring with institutions in the UK and France. This suggests a narrower institutional base but also indicates the region's integration into established international research networks.

The foundations of sustainability accounting in the MENA region closely align with the theoretical frameworks identified by Li et al. (2024) and Diwan and Amarayil Sreeraman

(2023), particularly the stakeholder theory, legitimacy theory, agency theory, resource-based theory, and signaling theory. However, our alluvial mapping indicates that these theories are operationalized in highly contextualized ways, linking governance structures, disclosure practices, and firm-level outcomes to region-specific economic and environmental realities. Notable works such as Jizi (2017) and Bekun et al. (2021), among our most-cited, exemplify this synthesis: governance and institutional quality are examined not as abstract constructs but as factors intertwined with the energy economy, carbon emissions, and firm valuation, which are themes less prominently featured in global reviews.

Thematic differences are particularly evident when comparing MENA findings to the global hotspots outlined by Effah et al. (2023) and Comoli et al. (2023). While governance, disclosure determinants, and ESG-performance relationships are common to both, MENA research places a greater emphasis on sector-specific sustainability challenges in resource-dependent economies. This thematic specificity contrasts with Comoli et al. (2023) broader mapping of ESG under crises, where disruption types – pandemics, regulatory shifts, climate risks – rather than sectoral economics are the focal categories.

Institutional drivers also diverge sharply from those synthesized in Li et al. (2024) and Effah et al. (2023), both of which describe ESG disclosure as predominantly market-driven. In the MENA context, our analysis reveals a stronger role for state-mandated frameworks, particularly in GCC countries, aligning more with the regulatory coercion elements discussed in (2023) under institutional theory.

This regulatory context may account for the relatively high concentration of output in countries with proactive national sustainability agendas, even if overall regional research capacity remains limited. The limitations identified in Chopra et al. (2024) regarding data fragmentation, variable methodological rigor, and the potential for disclosure to serve reputational rather than substantive aims also resonate in the MENA literature.

While quantitative bibliometric techniques have charted structural connections between authors, theories, and themes, the challenges of standardizing ESG metrics, integrating interdisciplinary approaches, and addressing possible greenwashing remain salient research gaps. Our structured future research agenda reinforces these needs, calling for cross-regional comparative studies, longitudinal tracking of regulatory impacts, and diversified methodological approaches.

In sum, by positioning MENA-specific trends alongside the insights of Effah et al. (2023), Chopra et al. (2024), Comoli et al. (2023), Diwan and Amarayil Sreeraman (2023), and Li et al. (2024), this review both affirms the global trajectories of sustainability accounting and highlights regionally embedded themes and institutional conditions. These findings invite a more nuanced comparative inquiry and the development of reporting and governance frameworks that reconcile international best practices with local economic and sustainable imperatives.

Conclusions

Study implications and significance

Our research is motivated by an interest to summarize the academic output concerning sustainability accounting in the MENA region, encompassing the development of research, primary, and prolific authors. Moreover, it examines highly referenced articles in the field and author connections, and common keyword associations. Furthermore, it identifies changes in themes, theories and emerging subjects within sustainability accounting. Ultimately, it outlines a roadmap for future research avenues.

From an academic standpoint, the primary finding of our research is the exponential increase in sustainability research in MENA, which is linked to various theories and themes, indicating significant potential for future research in the field. One of the main characteristics of the research in the region is that it is not only conducted by local researchers, but it is often a collaboration with researchers from other countries. This collaboration can facilitate the spread of knowledge and enhance sustainability accounting research.

From the policymakers' view, our article will offer significant insights by identifying the under-researched yet crucial aspects of sustainability accounting and disclosures in the MENA region, facilitating better allocation of funds, development of research, and creation of effective regulations.

From a managerial perspective, sustainability accounting and reporting are relatively new concepts for organizational structures and strategies in companies within the MENA region. This article can be highly valuable for managers, providing a comprehensive overview of current research on sustainability accounting and reporting in the region. It allows them to understand how these concepts are addressed across key areas of the industry, including performance, governance, firm value, access to debt and social impact.

Probable avenues for future exploration

Following the completion of this study, it is recommended that future research in MENA should focus on exploring more countries that have a research gap (e.g. Morocco and Algeria), as well as financial theories and their applicability for organizations in the region such as performance (Buallay, 2019) and firm value (Aboud, Diab, 2018), to understand the conditions related to MENA country specificities (Ahmed Hashed, Ghaleb, 2023) so these previous findings about performance and finance can be confirmed. Future research should also investigate the potential framework for a unified sustainability accounting standard in the MENA region, considering the unique cultural, environmental, and economic characteristics of each country. Future research should examine the impact of sustainability accounting practices on the growth of small and medium-sized enterprises, as well as on the interests of stakeholders.

Limitations of the study

This paper has certain limitations. Methodologically, it includes only English-language publications and employs a limited range of keywords for the search. Regarding the results, the study finds that there is a shortage of papers on sustainability accounting in the MENA region, highlighting a disconnect between academia and practitioners. This gap represents a valuable research opportunity, promising to foster numerous insightful analyses and studies, enhance academic resources, and bring greater rigor and consistency to the advancements in sustainability accounting within the MENA region.

Declaration of generative AI and AI-assisted technologies in the writing process

During the preparation of this work the authors used open AI in order to improve the language and its readability, with caution. After using this tool/service, the authors reviewed and edited the content as needed and take full responsibility for the content of the paper.

References

Aboud, A., Diab, A. (2018). The impact of social, environmental and corporate governance disclosures on firm value: Evidence from Egypt. *Journal of Accounting in Emerging Economies*, *8*, 442–458. DOI: 10.1108/JAEE-08-2017-0079.

Adel, C., Hussain, M.M., Mohamed, E.K.A., Basuony, M.A.K. (2019). Is corporate governance relevant to the quality of corporate social responsibility disclosure in large European companies? *International Journal of Accounting and Information Management*, *27*, 301–332. DOI: 10.1108/IJAIM-10-2017-0118.

Ahmed Hashed, A., Ghaleb, B.A.A. (2023). Sustainability reporting and earnings manipulation in Saudi market: Does institutional ownership matter? *Cogent Business & Management*, *10*, 2259607. DOI: 10.1080/23311975.2023.2259607.

Al-Dosari, M., Marques, A., Fairbrass, J. (2023). The effect of the EU's directive on non-financial disclosures of the oil and gas industry. *Accounting Forum*, *47*, 166–197. DOI: 10.1080/01559982.2023.2198179.

Al-Htaybat, K., Von Alberti-Alhtaybat, L. (2018). Integrated thinking leading to integrated reporting: case study insights from a global player. *Accounting, Auditing & Accountability Journal*, *31*, 1435–1460. DOI: 10.1108/AAAJ-08-2016-2680.

Ali, M.J. (2021). Understanding the 'g-index' and the 'e-index.' *Seminars in Ophthalmology*, *36*, 139–139. DOI: 10.1080/08820538.2021.1922975.

Alodat, A.Y., Al Amosh, H., Khatib, S.F.A., Mansour, M. (2023). Audit committee chair effectiveness and firm performance: The mediating role of sustainability disclosure. *Cogent Business & Management*, *10*, 2181156. DOI: 10.1080/23311975.2023.2181156.

Alsaifi, K., Elnahass, M., Salama, A. (2020). Market responses to firms' voluntary carbon disclosure: Empirical evidence from the United Kingdom. *Journal of Cleaner Production*, *262*, 121377. DOI: 10.1016/j.jclepro.2020.121377.

Arayssi, M., Jizi, M., Tabaja, H.H. (2020). The impact of board composition on the level of ESG disclosures in GCC countries. *Sustainability Accounting, Management and Policy Journal*, *11*, 137–161. DOI: 10.1108/SAMPJ-05-2018-0136.

Aryan, L.A., Owais, W.O., Dahiyat, A., Rahamneh, A.A.A., Saraireh, S., Haija, A.A.A., Al-Hawary, S.I.S. (2022). The effectiveness of corporate governance on corporate social responsibilities performance and financial reporting quality in Saudi Arabia's manufacturing sector. *Uncertain Supply Chain Management*, *10*, 1141–1146. DOI: 10.5267/j.uscm.2022.8.013.

Asif, M., Searcy, C., Santos, P.D., Kensah, D. (2013). A Review of Dutch Corporate Sustainable Development Reports. *Corporate Social Responsibility and Environmental Management*, *20*, 321–339. DOI: 10.1002/csr.1284.

Baker, M., Gray, R., Schaltegger, S. (2023). Debating accounting and sustainability: from incompatibility to rapprochement in the pursuit of corporate sustainability. *Accounting, Auditing & Accountability Journal*, *36*, 591–619. DOI: 10.1108/AAAJ-04-2022-5773.

Bekun, F.V., Gyamfi, B.A., Onifade, S.T., Agboola, M.O. (2021). Beyond the environmental Kuznets Curve in E7 economies: Accounting for the combined impacts of institutional quality and renewables. *Journal of Cleaner Production*, *314*, 127924. DOI: 10.1016/j.jclepro.2021.127924.

Benameur, K.B., Mostafa, M.M., Hassanein, A., Shariff, M.Z., Al-Shattarat, W. (2023). Sustainability reporting scholarly research: a bibliometric review and a future research agenda. *Management Review Quarterly*. DOI: 10.1007/s11301-023-00319-7.

Bohn, L., Macagnan, C.B., Kronbauer, C.A. (2024). Navigating legitimacy: diverse stakeholder perspectives on the IFRS Foundation's establishment of the ISSB. *Meditari Accountancy Research*, *33*, 86–113. DOI: 10.1108/MEDAR-11-2023-2235.

Bosi, M.K., Lajuni, N., Wellfren, A.C., Lim, T.S. (2022). Sustainability Reporting through Environmental, Social, and Governance: A Bibliometric Review. *Sustainability*, *14*, 12071. DOI: 10.3390/su141912071.

Buallay, A., Al-Ajmi, J. (2020a). The role of audit committee attributes in corporate sustainabil- ity reporting: Evidence from banks in the Gulf Cooperation Council. *Journal of Applied Accounting Research*, *21*, 249–264. DOI: 10.1108/JAAR-06-2018-0085.

Buallay, A. (2020b). Sustainability reporting and bank's performance: comparison between developed and developing countries. *World Review of Entrepreneurship, Management and Sustainable Development, Inderscience Enterprises Ltd*, *16*(2), 187–203. DOI: 10.1504/WREMSD.2020.105992"10.1504/WREMSD.2020.105992.

Buallay A., Kukreja G., Aldhaen E., Al Mubarak M., Hamdan A.M. (2020c). Corporate social responsibility disclosure and firms' performance in Mediterranean countries: a stakeholders' perspective. *EuroMed Journal of Business*, *15*(3), 361–375. DOI: 10.1108/EMJB-05-2019-0066.

Buallay, A. (2019). Sustainability reporting and firm's performance: Comparative study between manufacturing and banking sectors. *International Journal of Productivity and Performance Management*, *69*, 431–445. DOI: 10.1108/IJPPM-10-2018-0371.

Buallay, A., Fadel, S.M., Alajmi, J., Saudagaran, S. (2021). Sustainability reporting and bank performance after financial crisis: Evidence from developed and developing countries. *Competitiveness Review*, *31*, 747–770. DOI: 10.1108/CR-04-2019-0040.

Chopra, S.S., Senadheera, S.S., Dissanayake, P.D., Withana, P.A., Chib, R., Rhee, J.H., Ok, Y.S. (2024). Navigating the Challenges of Environmental, Social, and Governance (ESG) Reporting: The Path to Broader Sustainable Development. *Sustainability*, *16*, 606. DOI: 10.3390/su16020606.

Comoli, M., Tettamanzi, P., Murgolo, M. (2023). Accounting for 'ESG' under Disruptions: A Systematic Literature Network Analysis. *Sustainability*, *15*, 6633. DOI: 10.3390/su15086633.

Cortés, D.G., Lodh, S., Akbar, S., Nandy, M. (2025). Disclosure Dynamism: TCFD Aligned Climate Claims of UK Corporates. *Business Strategy and the Environment*, *34*, 4191–4205. DOI: 10.1002/bse.4189.

Diwan, H., Amarayil Sreeraman, B. (2023). From financial reporting to ESG reporting: a bibliometric analysis of the evolution in corporate sustainability disclosures. *Environment, Development and Sustainability*, *26*, 13769–13805. DOI: 10.1007/s10668-023-03249-2.

Effah, N.A.A., Wang, Q., Owusu, G.M.Y., Otchere, O.A.S., Owusu, B. (2023). Contributions toward sustainable development: a bibliometric analysis of sustainability reporting research. *Environmental Science and Pollution Research*, *30*, 104–126. DOI: 10.1007/s11356-022-24010-8.

Fatai Adedoyin, F., Agboola, P.O., Ozturk, I., Bekun, F.V., Agboola, M.O. (2021). Environmental consequences of economic complexities in the EU amidst a booming tourism industry: Accounting for the role of brexit and other crisis events. *Journal of Cleaner Production*, *305*, 127117. DOI: 10.1016/j.jclepro.2021.127117.

Gerged, A.M., Salem, R., Beddewela, E. (2023). How does transparency into global sustainability initiatives influence firm value? Insights from Anglo-American countries. *Business Strategy and the Environment*, *32*, 4519–4547. DOI: 10.1002/bse.3379.

Gonzalez, C.C., Peña-Vinces, J. (2023). A framework for a green accounting system-exploratory study in a developing country context, Colombia. *Environment, Development and Sustainability*, *25*, 9517–9541. DOI: 10.1007/s10668-022-02445-w.

Hamrouni, A., Boussaada, R., Ben Farhat Toumi, N. (2019). Corporate social responsibility disclosure and debt financing. *Journal of Applied Accounting Research*, *20*, 394–415. DOI: 10.1108/JAAR-01-2018-0020.

Hariga, M., As'ad, R., Shamayleh, A. (2017). Integrated economic and environmental models for a multi stage cold supply chain under carbon tax regulation. *Journal of Cleaner Production*, *166*, 1357–1371. DOI: 10.1016/j.jclepro.2017.08.105.

Hinson, R., Boateng, R., Madichie, N. (2010). Corporate social responsibility activity reportage on bank websites in Ghana. *International Journal of Bank Marketing*, *28*, 498–518. DOI: 10.1108/02652321011085176.

Hsiao, P.K., De Villiers, C., Horner, C., Oosthuizen, H. (2022). A review and synthesis of contemporary sustainability accounting research and the development of a research agenda. *Accounting & Finance*, *62*, 4453–4483. DOI: 10.1111/acfi.12936.

Hummel, Katrin and Laun, Ute (2022), Disciplines and Paradigms in Sustainability Accounting Research – A Citation Network Analysis. *SSRN*. DOI: 10.2139/ssrn.3979843.

Issa, A., Hanaysha, J.R. (2023). Breaking the glass ceiling for a sustainable future: the power of women on corporate boards in reducing ESG controversies. *International Journal of Accounting and Information Management*, *31*, 623–646. DOI: 10.1108/IJAIM-03-2023-0053.

Jackson, D., Michelson, G., Munir, R. (2023). Developing accountants for the future: new technology, skills, and the role of stakeholders. *Accounting Education*, *32*, 150–177. DOI: 10.1080/09639284.2022.2057195.

Jizi, M. (2017). The Influence of Board Composition on Sustainable Development Disclosure. *Business Strategy and the Environment*, *26*, 640–655. DOI: 10.1002/bse.1943.

Karaman, A.S., Kilic, M., Uyar, A. (2020). Green logistics performance and sustainability reporting practices of the logistics sector: The moderating effect of corporate governance. *Journal of Cleaner Production*, *258*, 120718. DOI: 10.1016/j.jclepro.2020.120718.

Karaman, A.S., Kilic, M., Uyar, A. (2018). Sustainability reporting in the aviation industry: worldwide evidence. *Sustainability Accounting, Management and Policy Journal*, *9*, 362–391. DOI: 10.1108/SAMPJ-12-2017-0150.

Kouaib, A., Amara, I. (2022). Corporate Social Responsibility Disclosure and Investment Decisions: Evidence from Saudi Indexed Companies. *Journal of Risk and Financial Management*, *15*, 495. DOI: 10.3390/jrfm15110495.

Kuzey, C., Uyar, A. (2017). Determinants of sustainability reporting and its impact on firm value: Evidence from the emerging market of Turkey. *Journal of Cleaner Production*, *143*, 27–39. DOI: 10.1016/j.jclepro.2016.12.153.

Lehmann, P., Beck, S., de Brito, M.M., Gawel, E., Groß, M., Haase, A., Lepenies, R., Otto, D., Schiller, J., Strunz, S., Thrän, D. (2021). Environmental Sustainability Post-COVID-19: Scrutinizing Popular Hypotheses from a Social Science Perspective. *Sustainability*, *13*(16), 8679. DOI: 10.3390/su13168679.

Li, L., Saat, M.M., Khatib, S.F.A., Chu, P., Sulimany, H.G.H. (2024). Navigating the impact: A comprehensive analysis of ESG disclosure consequences through systematic review. *Business Strategy & Development*, *7*, e382. DOI: 10.1002/bsd2.382.

Mahran, K., Elamer, A.A. (2023). Chief Executive Officer (CEO) and corporate environmental sustainability: A systematic literature review and avenues for future research. *Business Strategy and the Environment*, *33*(3), 1977–2003. DOI: 10.1002/bse.3577.

Mohamed Buallay, A., Al Marri, M., Nasrallah, N., Hamdan, A., Barone, E., Zureigat, Q. (2023). Sustainability reporting in banking and financial services sector: a regional analysis. J*ournal of Sustainable Finance & Investment*, *13*, 776–801. DOI: 10.1080/20430795.2021.1978919.

Nandy, M., Kuzey, C., Uyar, A., Lodh, S., Karaman, A.S. (2023). Can CSR mechanisms spur GRI adoption and restore its lost value relevance? *Journal of Applied Accounting Research*, *24*, 609–634. DOI: 10.1108/JAAR-03-2022-0068.

Nekhili, M., Nagati, H., Chtioui, T., Rebolledo, C. (2017). Corporate social responsibility disclosure and market value: Family versus nonfamily firms. J*ournal of Business Research*, *77*, 41–52. DOI: 10.1016/j.jbusres.2017.04.001.

Osobajo, O.A., Oke, A., Lawani, A., Omotayo, T.S., Ndubuka-McCallum, N., Obi, L. (2022). Providing a Roadmap for Future Research Agenda: A Bibliometric Literature Review of Sustainability Performance Reporting (SPR). *Sustainability*, *14*, 8523. DOI: 10.3390/su14148523.

Page, M.J., McKenzie, J.E., Bossuyt, P.M., Boutron, I., Hoffmann, T.C., Mulrow, C.D., Shamseer, L., Tetzlaff, J.M., Akl, E.A., Brennan, S.E., Chou, R., Glanville, J., Grimshaw, J.M., Hróbjartsson, A., Lalu, M.M., Li, T., Loder, E.W., Mayo-Wilson, E., McDonald, S., McGuinness, L.A., Stewart, L.A., Thomas, J., Tricco, A.C., Welch, V.A., Whiting, P., Moher, D. (2021). The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. *BMJ*, n71. DOI: 10.1136/bmj.n71.

Pratama, A., Jaenudin, E., Anas, S. (2022). Environmental, Social, Governance – Sustainability Disclosure Using International Financial Reporting Sustainability Standards S1 in Southeast Asian Companies: A Preliminary Assessment. *International Journal of Energy Economics and Policy*, *12*(6), 456–472. DOI: 10.32479/ijeep.13581.

Scarpellini, S. (2022). Social impacts of a circular business model: An approach from a sustainability accounting and reporting perspective. *Corporate Social Responsibility and Environmental Management*, *29*, 646–656. DOI: 10.1002/csr.2226.

Singhania, M., Chadha, G. (2023). Thirty years of sustainability reporting research: a scientometric analysis. *Environmental Science and Pollution Research*, *30*, 102047–102082. DOI: 10.1007/s11356-023-29452-2.

Tettamanzi, P., Venturini, G., Murgolo, M. (2022). Sustainability and Financial Accounting: a Critical Review on the ESG Dynamics. *Environmental Science and Pollution Research*, *29*, 16758–16761. DOI: 10.1007/s11356-022-18596-2.

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. *Journal of Cleaner Production*, *253*, 119997. DOI: 10.1016/j.jclepro.2020.119997.

Zhang, F., Bai, X., Lee, I. (2019). Author Impact: Evaluations, Predictions, and Challenges. *IEEE* Access, *7*, 38657–38669. DOI: 10.1109/ACCESS.2019.2905955.

Zhong, X., Ang, H.L., Sharmini, S. (2023) Systematic Literature Review of Conversational Code-Switching in Multilingual Society from a Sociolinguistic Perspective. *Theory & Practice in Language Studies (TPLS)*, *13*(2). DOI: 10.17507/tpls.1302.06.

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Belidan, M.A., Baghad, H. (2025). Sustainability Accounting Research in the MENA Region: A Bibliometric Review. *Folia Oeconomica Stetinensia*, *25*(2), 24–47. DOI: 10.2478/foli-2025-0021.