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Sustainable Development Goals' Discourse in the Accounting and Business Literature: A Rhetorical Lens

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ABSTRACT

The role of academia in shaping the Sustainable Development Goals (SDGs) remains insufficiently understood. This study examines how SDG discourse is constructed within accounting and business research by integrating bibliometric analysis with a systematic review of 731 peer-reviewed articles published between 2020 and 2024. Using Aristotle's rhetorical framework as a heuristic lens, we analyze how legitimacy is signaled at the field level through journal prestige, methodological choices, and SDG keywording. Seven thematic domains emerge, revealing fragmented, innovation-driven, and governance-oriented patterns of engagement. While methodological rigor and normative appeal strengthen *logos* and *pathos*, scholarly *ethos* remains comparatively limited, as high-prestige outlets play a modest role. At the same time, generalized SDG references have increased, signaling growing symbolic alignment rather than substantive engagement. These dynamics point to a widening gap between academic discourse and goal-specific implementation. The study advances understanding of academia's influence on sustainability thinking and identifies pathways for more integrated and impactful SDG scholarship.

1 | The Urgent Need for the Achievement of Sustainable Development and the Role of Business Scholars

The urgent need for achieving the Sustainable Development Goals (SDGs) has become increasingly evident in light of escalating global challenges such as climate change, social inequalities, and economic instability (Barbier and Burgess 2020; IPCC 2023; Kamande et al. 2024; Sachs et al. 2022). As the 2030 deadline approaches (UN 2015), the critical role of the business sector, along with academia, policymakers, and civil society, in accelerating progress towards these goals cannot be overstated (Venturelli and Mio 2025). Addressing the interconnected nature of the SDGs requires immediate, coordinated action and innovative solutions that integrate sustainability principles into economic and social systems (OECD 2025; WBCSD 2024).

The Europe Sustainable Development Report 2023/24 offers an independent, quantitative evaluation of the progress made

by the European Union (EU), its member states, and partner countries towards achieving the SDGs. The report highlights a critical trend: at the current trajectory, approximately one-third of the SDG targets are projected to remain unmet by 2030 within the EU. A notable disparity is observed across European regions (SDNS Europe 2024). Northern and Western Europe are estimated to miss one-quarter of the SDG targets. Moreover, Southern, Central, and Eastern Europe face the possibility of failing to meet up to half of the targets on average. These findings underscore the urgent need for region-specific and accelerated policy interventions to foster sustainable development across the continent. Globally, progress towards the SDGs has been insufficient. The UN SDGs Report (UN 2023) indicates that progress on more than 50% of SDG targets is weak and insufficient, with 30% either stalled or regressing. Thus, while the EU has made strides towards achieving the SDGs, the current trajectory suggests that many targets will remain unmet by 2030 without intensified efforts. Addressing these challenges requires coordinated action, tailored strategies for different regions, and

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a commitment to sustainable development principles across all sectors of society.

Despite notable progress in certain areas, significant gaps remain (SDNS Europe 2024; UN 2023), particularly in the implementation of SDGs related to climate action (SDG 13), responsible consumption and production (SDG 12), and reduced inequalities (SDG 10). Bridging these gaps necessitates a systemic approach that leverages technological advancements, fosters partnerships, and aligns business strategies with sustainability imperatives. The urgency of achieving the SDGs extends beyond moral and ethical considerations, as their attainment is vital for ensuring a resilient and sustainable future for all.

The three main actors involved in sustainable development are state/public institutions, businesses, and customers (Menghwar and Daood 2021; Panfilo and Mio 2025). The literature indicates that the policies and strategies of peer companies significantly influence the strategies and activities of corporations (Kaustia and Knüpfer 2012). Moreover, as important agents in society, organizations are accountable for their actions and play a key role in the overall sustainability of the planet (Blanco-Zaitegi et al. 2022).

The results of Mio et al.'s (2020) interdisciplinary systematic review clarify the key role played by the discipline of business management and accounting, particularly strategy and management. Thus, considering the urgent need for achieving the SDGs and building on Mio et al. (2020) and Venturelli and Mio (2025), who emphasized the key strategic role of businesses in achieving the SDGs, we answered the call to explore the SDG literature specifically within accounting and business. While recent studies (e.g., Blanco-Zaitegi et al. 2022; Venturelli and Pizzi 2025; Lin et al. 2025) map the intellectual structure of the literature on sustainability in accounting and finance, the current study takes a broader perspective. Although the three main actors involved in sustainable development have been previously identified, to the best of the authors' knowledge, no studies have investigated the role of academia through its discourse. Drawing on Aristotle's rhetorical framework as a heuristic guide, this study uses the systematic review to uncover the deeper discursive patterns that shape how sustainability is understood within the field. Rather than simply cataloguing existing research, the analysis explores how accounting and business scholars construct, frame, and legitimize the discourse surrounding the SDGs.

Rhetoric is often conflated with discourse, which is a system of meaning that constructs the social reality through language, symbols, and practices (Foucault 1972; Fairclough 1992; Hall 1997), and is frequently used interchangeably with ideology. However, what sets rhetoric apart is its fundamental concern with persuasion (Higgins and Walker 2012; Alkaraan et al. 2023). Rhetorical studies indeed explore how language and other symbolic forms shape the thoughts, emotions, and actions of an audience.

Aristotle's theory of rhetoric identifies three strategic modes of persuasion: *ethos*, *logos*, and *pathos*.

Ethos refers to persuasion through the communicator's character or credibility. *Ethos* encourages the audience to

ascribe legitimacy, authority, and moral integrity to the speaker (Green 2004; Hartelius and Browning 2008).

Logos involves persuasion through reasoning and appeals to logic. *Logos* emphasizes rationality and uses empirical evidence (i.e., facts, statistics, and logical explanations) to substantiate claims (Aho 1985; Green 2004; Holt and MacPherson 2010; Brennan and Merkl-Davies 2014). It supports decision-making based on efficiency or reasonableness (Green 2001, 44).

Pathos engages the audience's emotions as a means of persuasion (Beattie 2014). It seeks to elicit emotional responses such as joy, sorrow, fear, or empathy to influence perception and behavior (Aho 1985). According to Burke (1966, 1969), effective emotional appeal occurs through identification (also termed sociality), in which the speaker conveys alignment with the audience's needs, values, and desires. As Schwartz (1966, 211) explains, the persuader selects from a network of associations around a subject those elements most likely to evoke a resonant emotional experience. *Pathos* often operates through figurative language, particularly metaphor (Brennan and Merkl-Davies 2014, 608), which enhances identification and emotional resonance.

This study offers several contributions to understanding how SDG discourse is constructed, legitimized, and framed within the business and accounting field. First, by systematically identifying and synthesizing the most salient themes across the literature, the analysis shows how the field organizes its engagement with the SDGs and where scholarly attention converges, diverges, or diminishes. This mapping reveals persistent emphases on certain goals while others receive limited attention. Making these imbalances visible not only advances understanding of how SDG discourse takes shape but also highlights clear and important avenues for future research.

Second, the study deepens understanding of the role of academia in shaping the meaning and strategic relevance of the SDGs. By examining how scholars frame, operationalize, and justify their engagement with the goals, the analysis demonstrates that academic discourse actively defines which dimensions of sustainability become visible, measurable, or strategically salient. In doing so, it shows how scholarly work contributes to legitimizing, contesting, or reframing the SDGs in ways that can influence managerial cognition, policy frameworks, and organizational sustainability strategies.

Third, the study advances a theoretically informed interpretation of the discursive mechanisms through which legitimacy is constructed in SDG scholarship. Treating *ethos*, *logos*, and *pathos* as heuristic lenses rather than literal textual analytics (cf.: Stucki and Sager 2018; Rubinelli 2018), the analysis reveals how methodological rigor, normative appeal, and publication venue prestige function as institutional signals within the field. These signals help explain why certain forms of SDG engagement gain traction and how scholarly discourse may contribute to symbolic alignment or partial decoupling, mirroring dynamics observed in corporate SDG practice.

Together, these contributions position the study as a field-level explanation of how SDG discourse evolves, how legitimacy is produced, and how scholarly patterns may become disconnected

from goal-specific impact. By revealing these dynamics, the study provides insights relevant not only to academic researchers but also to practitioners and policymakers seeking to understand how sustainability priorities are framed, justified, and operationalized within the business and accounting domains.

2 | Research Design

The objective of this study is to examine how accounting and business scholarship constructs, legitimizes, and symbolically aligns with the SDGs through field-level discursive patterns. Consistent with Dixon-Woods et al. (2005), who argue for integrative and interpretive approaches to synthesizing heterogeneous forms of evidence, our methodology combines bibliometric indicators with a systematic literature review of 731 peer-reviewed articles published between 2020 and 2024, together with an interpretive, theory-driven analysis. Following their view that diverse evidence types can be meaningfully integrated to develop higher-order conceptual understanding at the field level, we employ Aristotle's rhetorical framework as heuristic lenses to interpret field-level legitimacy signals rather than as textual coding categories (cf.: Stucki and Sager 2018; Rubinelli 2018). This approach aligns with established methodological guidance on synthesizing quantitative and qualitative evidence to examine broader discursive patterns within an academic domain.

In this context, the empirical indicators used in our analysis—journal outlet prestige, methodological and epistemic choices, and the generality versus specificity of SDG keywording—are treated as field-level signals. Outlet prestige operates as an institutional authority signal (*ethos*-like), methodological choices function as evidentiary legitimacy signals (*logos*-like), and keywording patterns act as symbolic alignment signals (*pathos*-like). These indicators do not equate directly to rhetorical modes; instead, they capture the ways in which credibility, reasoning, and identification are discursively expressed and framed at the field level. This interpretive strategy allows us to bridge rhetorical theory with bibliometric evidence and to analyze how SDG-related knowledge gains authority, coherence, and symbolic resonance within the accounting and business research community.

A systematic review applies a search method that involves five different steps (cf.: Denyer and Tranfield 2009; Civera et al. 2025):

Step 1: Define the Research Questions

Relying on Aristotle's rhetorical framework, the following research questions were formulated in the paper:

1. How journal-level prestige functions as an institutional authority signal related heuristically to *ethos*?
2. How epistemic and methodological approaches serve as evidentiary legitimacy signals associated heuristically with *logos*?
3. How the generality versus specificity of SDG keywording operates as a symbolic alignment signal that relates heuristically to *pathos* and how these symbolic signals evolve over time?

Step 2: Data Collection

Following the research protocol applied by Mio et al. (2020), the Scopus database was used as the primary source of recent studies on the researched topic. Keywords related to SDGs and business and their synonyms were considered. The search was limited to articles published in English in journals from 2020 to the end of November 2024. The dataset included articles classified within the *Business, Management, and Accounting* subject area according to the Scopus database taxonomy. The following research string was defined:

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((TITLE("SDGs") OR TITLE("Sustainable Development Goals") OR TITLE("SDG") OR TITLE("Global Agenda") OR TITLE("2030 Agenda") OR TITLE("Sustainable Development Agenda") OR KEY("SDG") OR KEY("Sustainable Development Goal")) AND (ABS("organization") OR ABS("firm") OR ABS("corporat*") OR ABS("company") OR ABS("business") OR ABS("enterprise") OR ABS("private sector"))) AND PUBYEAR > 2019 AND PUBYEAR < 2025 AND (LIMIT-TO (SRCTYPE, "j")) AND (LIMIT-TO (SUBJAREA, "BUSI")) AND (LIMIT-TO (DOCTYPE, "ar")) AND (LIMIT-TO (LANGUAGE, "English")))).
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A search for the string resulted in 1101 publications being returned. Limiting it to ABS journals yielded 731 results. The focus on high-quality peer-reviewed journals was intended to enhance the quality of the review (David and Han 2004) and respond to the first research question. These papers were considered for further investigation.

Step 3: Evaluation and Coding of Relevant Papers

The text data extracted from Scopus were used as the basis for further analysis using VOSviewer software to identify the principal research domains in the field under investigation (van Eck and Waltman 2023). The analysis for this systematic literature review was created based on the co-occurrence of keywords. Co-occurrence indicates the number of documents in which a keyword occurs. By limiting the number of occurrences of a keyword to five and setting the minimum cluster size to 15 items, seven principal research discourses were visualized. A set of information on each paper was assigned in an Excel spreadsheet to provide a consistent analysis of the papers within each cluster. These included author, title, journal name, volume, issue, year of publication, authors' affiliations, keywords, abstract, and article's number of citations. Manual coding was conducted by two independent researchers, both coauthors of this paper, following a coding scheme that was refined during a pilot phase involving 50 randomly selected articles. During this phase, the researchers independently coded the sample papers, and any discrepancies were resolved through a discussion to ensure intercoder reliability. The coding scheme provided explicit guidelines for classifying papers into predefined clusters and for collecting information on the research methodology (qualitative, quantitative, or mixed), the type of data employed (primary or secondary), the SDGs addressed, and the rhetorical framing.

Subsequently, the two researchers performed a manual content analysis of the finalized dataset. Each researcher was assigned a subsample comprising half of the total papers designated for manual coding. This task required a thorough reading of each paper, as abstracts typically lacked sufficient detail. For each paper, the coder recorded binary values (1 or 0) in the corresponding columns of an Excel spreadsheet to indicate the appropriate cluster, methodology, data type, SDGs addressed, and rhetorical assignment.

Step 4: Descriptive Analysis and Synthesis

Providing valid results required an evaluation of the formal aspects of the selected and coded material with descriptive bibliometric analysis and an in-depth examination of the patterns, trends, and impacts within each cluster.

Step 5: Results

To complete the systematic review, the authors prepared a discussion of the findings in relation to the theoretical framework adopted and insights for future research agendas.

3 | Findings

The number of publications on the SDGs in the business field has steadily increased from 2020 to 2024, culminating in an exponential increase in 2024. Among the 731 papers analyzed, 90 were published in 2020. The number declined slightly in 2021 to 86, but in subsequent years, there was renewed scholarly interest, with 127 publications in 2022, 141 in 2023, and a substantial increase to 287 in 2024. This upward trajectory underscores the growing prominence of the SDGs in business research.

These findings expand upon those of Mio et al. (2020), who reported that only 53 papers on SDGs in the business field were published from 2015 to 2020. Our results demonstrate a marked increase in business scholars' attention to this topic, particularly in the years following 2020.

3.1 | Outlet Prestige as an Institutional Authority Signal (Field-Level Ethos)

To answer the first research question, the distribution of studies across ABS journal rankings is examined. Research on the SDGs in accounting and business journals is predominantly published in lower-ranked journals, with a declining percentage as the ranking increases. Specifically, 36.80% of the studies were published in journals within the lowest-ranking category (ABS 1), whereas 33.65% appeared in ABS 2 journals. This represents 269 and 246 papers, respectively. A smaller proportion, 27.78% (203 papers), was published in ABS 3-ranked journals, and only 1.77% of the studies (13 papers) were found in top-tier ABS 4/4* journals. Among those published in ABS 4-ranked journals, five were published in *Production and Operations Management*, three were published in the *British Journal of Management*, and two were published in the *Annals of Tourism Research*. Additionally, one paper was published in each of the following top journals: *Journal of International Business Studies*, *Journal of Travel Research*, *Journal of Service Research*, and *Journal of*

the Academy of Marketing Science. Notably, five out of the 13 papers published in the journals rated as ABS 4 were published in 2024 alone. Overall, this suggests that SDG discourse is predominantly discussed in journals with lower *ethos* but is now gaining traction in higher-ranked publications. The *ethos* mode of persuasion is also investigated for each SDG discourse identified (see Section 3.3).

We further analyze the journals that engage most actively in discussions surrounding the SDGs. Table 1 lists the journals that have published at least six papers on this topic during the

TABLE 1 | ABS journals most debating on SDGs.

Journal name (ABS ranking)	Number of papers on SDGs (n > 5)	Number of papers over the total number of published papers ^a (in %)
<i>Journal of Cleaner Production</i> (ABS 2)	96	0.41%
<i>Business Strategy and the Environment</i> (ASB 3)	62	4.02%
<i>Technological Forecasting and Social Change</i> (ABS 3)	34	1.02%
<i>Corporate Social Responsibility and Environmental Management</i> (ABS 1)	30	2.61%
<i>Journal of Sustainable Tourism</i> (ABS 3)	17	2.32%
<i>Worldwide Hospitality and Tourism Themes</i> (ABS 1)	17	4.38%
<i>International Journal of Management Education</i> (ABS 1)	14	2.41%
<i>Journal of Business Research</i> (ABS 3)	14	0.35%
<i>Sustainability Accounting, Management and Policy Journal</i> (ABS 2)	13	4.38%
<i>Cogent Business and Management</i> (ABS 1)	12	0.58%
<i>Journal of Business Ethics</i> (ABS 3)	12	0.67%
<i>Corporate Governance</i> (ABS 2)	11	2.53%
<i>Meditari Accountancy Research</i> (ABS 1)	11	3.01%
<i>Production Planning and Control</i> (ABS 3)	11	1.83%
<i>Australasian Accounting, Business and Finance Journal</i> (ABS 1)	10	3.89%

(Continues)

TABLE 1 | (Continued)

Journal name (ABS ranking)	Number of papers on SDGs ($n > 5$)	Number of papers over the total number of published papers ^a (in %)
<i>IEEE Transaction on Engineering Management</i> (ABS 3)	10	0.43%
<i>Journal of Innovation and Knowledge</i> (ABS 1)	10	1.93%
<i>Marketing Intelligence and Planning</i> (ABS 1)	9	2.56%
<i>Journal of Management and Organization</i> (ABS 2)	7	1.77%
<i>Journal of Sustainable Finance and Investment</i> (ABS 1)	7	2.29%
<i>Critical Perspectives on International Business</i> (ABS 2)	6	3.92%
<i>International Business Review</i> (ABS 3)	6	1.39%
<i>International Journal of Production Research</i> (ABS 3)	6	0.28%
<i>Society and Business Review</i> (ABS 2)	6	4.14%
<i>Socio-Economic Planning Sciences</i> (ABS 2)	6	0.55%

^aThe number of papers published in the identified journals was retrieved from Scimago (2020–2023) and Researcher.Life Journal Finder: Journal Suggester for Your Manuscript (for the Year 2024).

investigated period. The table includes 25 journals of various ABS rankings and numbers of relevant papers published. The *Journal of Cleaner Production* emerges as the leading journal in absolute terms, demonstrating the highest commitment to exploring the SDGs within the accounting and business domain. It is followed by *Business Strategy and the Environment*, which, with 62 papers, reflects a significant focus on sustainable development in the business field. In third place is the *Technological Forecasting and Social Change* journal, which has published 34 papers from 2020 to 2024. However, the proportion of papers related to the SDGs relative to the total number of publications is highest in the *Sustainability Accounting, Management and Policy Journal* (4.38% of all papers published during the analyzed period) and in *Worldwide Hospitality and Tourism Themes* (4.38%), followed by *Society and Business Review* (4.14%) and *Business Strategy and the Environment* (4.02%).

Summarizing, journal prestige functions as an institutional authority signal by shaping the perceived *ethos* of SDG research: most studies appear in lower-ranked ABS 1–2 journals, indicating that the discourse has traditionally occupied venues with lower institutional authority. Only a small fraction reaches

top-tier ABS 4/4* journals, though recent increases suggest that SDG scholarship is gradually gaining credibility and entering higher-*ethos* outlets. This shift reflects a slow but growing legitimization of SDG discourse within the most prestigious spaces of the field.

3.2 | Adopted Methodologies as Evidentiary Signals (Field-Level *Logos*)

To address the second research question, the analysis shows that most SDG-related papers use quantitative (39%) or qualitative (36%) approaches, with fewer adopting mixed methods (13%), literature reviews (7%), or conceptual designs (5%). This strong orientation toward empirically grounded methodologies, especially quantitative analyses based on secondary data, functions as an evidentiary legitimacy signal, reinforcing the *logos* mode of persuasion by demonstrating methodological rigor and data-based reasoning. The *logos* mode of persuasion in terms of the specific methodologies adopted is also investigated for each SDG discourse identified (see Section 3.3).

3.3 | SDG Keywording and Discourses as Symbolic Alignment Signals (Field-Level *Pathos*)

First, Figure 1 presents the distribution of papers addressing one specific SDG, at least two goals, or all the SDGs.¹ The analysis reveals that most papers (339) address the SDGs as a whole without delving into a specific goal. Additionally, 34 papers explicitly focus on all 17 SDGs.

Among the individual goals, SDG 12 (Responsible Consumption and Production) emerges as the most frequently investigated, followed by SDG 8 (Decent Work and Economic Growth) and SDG 9 (Industry, Innovation, and Infrastructure). Conversely, SDG 14 (Life Below Water) and SDG 15 (Life on Land) are the least explored in the accounting and business domains.

Second, a network visualization approach was employed to answer the third research question, which seeks to identify the principal keywords associated with specific SDG-related themes and their evolution over time. VosViewer visualization identified seven distinct clusters that were classified based on the number of keywords they contain (in descending order). A detailed list of the most frequently occurring keywords in each cluster can be found in Appendix A. Based on the thematic analysis of keywords in each cluster, the authors identified emerging themes. The seven identified thematic clusters were the following: (1) the SDGs, decision-making, and grand challenges; (2) the SDGs and ESG components; (3) SDGs and capital markets; (4) the circular economy and innovation; (5) SDG reporting and sustainability accounting; (6) supply chains and business models; and (7) tourism, developing countries, AI, and climate change. Accordingly, we analyzed the studies associated with each cluster, proceeding from largest (in terms of the number of papers) to smallest. This approach identifies emerging patterns and theoretical gaps, providing a foundation for future research. Below, we briefly describe each cluster because it was not feasible to include all the papers identified through the systematic literature review for narrative purposes.² Therefore, we focused on papers that

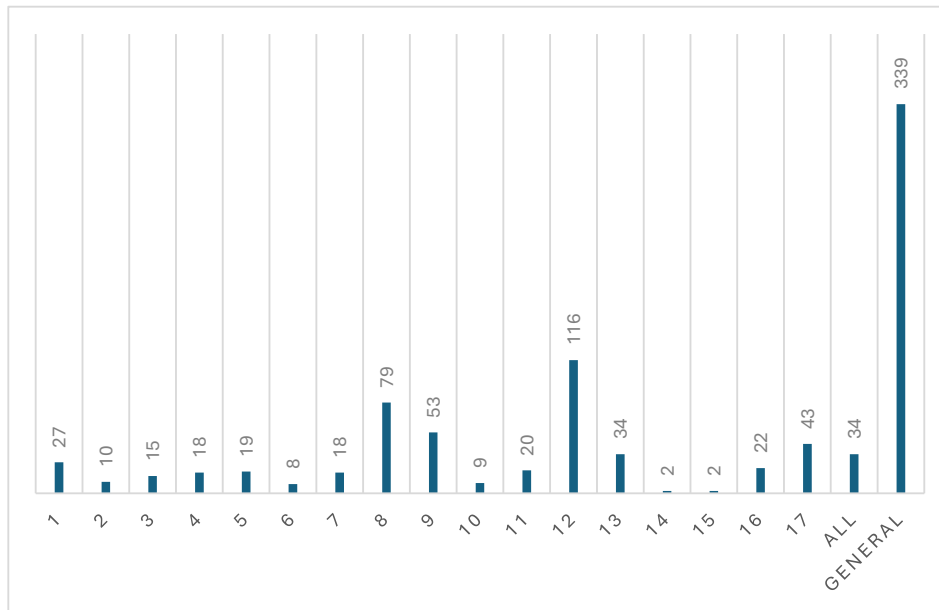


FIGURE 1 | Individual SDG mentioned in the studies.

received the greatest number of citations, explicitly addressed specific SDGs, and were associated with a single cluster.

3.3.1 | Cluster 1: SDGs, Decision-Making, and Grand Challenges

This cluster brings together research connecting the SDGs to organizational decision-making, partnerships, and responses to grand societal challenges. Studies examine strategic integration through decision-support systems (Modgil et al. 2020), entrepreneurial and operational indicators (Torkayesh et al. 2024), and digital technologies such as machine learning that enable more efficient sustainability-related decisions (Gupta et al. 2024). Work on multinational enterprises highlights efforts to embed the SDGs into global strategies (Selmier and Newenham-Kahindi 2021; Zucchella et al. 2023), while other studies identify barriers such as institutional gaps, operational constraints, and poor coordination (Farrukh and Sajjad 2024; Haritas and Das 2023). Cross-sector and community partnerships are consistently framed as essential mechanisms for addressing complex sustainability challenges (Filho et al. 2024; Ordonez-Ponce et al. 2021).

Across this cluster, sustainability is constructed primarily as a strategic and managerial challenge addressed through improved decision-making, collaboration, and technological enhancement. Rather than treating the SDGs as measurable performance goals, the literature frames them as broad strategic aspirations, echoing critiques that corporate SDG engagement often remains abstract and high-level (Haritas and Das 2023). Sustainability knowledge is therefore positioned within managerial discretion, focused on alignment rather than rigorous evaluation.

Rhetorically, the cluster relies heavily on *pathos*, emphasizing urgency, responsibility, and societal impact, consistent with findings that sustainability discourse often draws on

value-laden appeals (Higgins and Walker 2012). The prevalence of qualitative and conceptual work, combined with publication in lower-ranked journals, limits *ethos*, while occasional data-driven approaches (e.g., Modgil et al. 2020) offer some *logos* but do not dominate.

As documented in literature on symbolic sustainability adoption (Eng et al. 2024), many studies reference the SDGs without examining specific targets, using them instead as discursive scaffolding to signal alignment with global norms. Recurrent themes of fragmented implementation and superficial integration (Haritas and Das 2023) mirror known patterns of decoupling in sustainability communication (Allen and Caillouet 1994; Brennan and Merkl-Davies 2014).

Overall, this cluster reveals how academic discourse around decision-making and grand challenges amplifies aspirational narratives while offering fewer empirically grounded insights. It illustrates the broader pattern in which SDG research emphasizes symbolic alignment and rhetorical persuasion more than evidence-based assessment, highlighting a persistent gap between scholarly discourse and practical SDG implementation.

3.3.2 | Cluster 2: SDGs and ESG Components

This cluster brings together research linking the SDGs with CSR, environmental protection, gender equality, and broader social inclusion. CSR is commonly presented as a mechanism for addressing societal challenges (Cezarino et al. 2022; Satapathy and Paltasingh 2022; Lee and Hess 2022), while environmental initiatives, such as carbon-neutrality efforts in SMEs (Gomes and Pinho 2023) and green training programs (Cop et al. 2020), are framed as contributions to SDG-aligned outcomes. Social issues play a central role, with work on gender empowerment (Mogaji et al. 2021; Aman et al. 2024), hybrid work and well-being (Bolisetty et al. 2023), and hybrid or mission-driven organizations like B Corps (Tabares 2021).

Across this cluster, sustainability knowledge is constructed as socially embedded and normatively driven, emphasizing firms' responsibilities to address inequality and environmental shortcomings. The SDGs are used less as measurable targets and more as ethical imperatives, shaped by stakeholder expectations rather than specific indicators (López-Concepción et al. 2022). This broad framing expands the meaning of the SDGs but risks diluting their specificity by merging them with established CSR agendas.

Rhetorically, the cluster is dominated by *pathos*, drawing on themes of justice, fairness, and community well-being, consistent with prior work showing the moral foundations of sustainability discourse (Higgins and Walker 2012). Quantitative studies add some *logos*, though often through proxies such as CSR activities or employee well-being, rather than SDG-specific metrics. Since most papers appear in ABS 1–2 journals, *ethos* remains relatively limited, with legitimacy derived more from moral urgency than institutional authority.

A recurring pattern is the invocation of the SDGs without clear operationalization. Many studies highlight equality or environmental stewardship but do not evaluate whether these initiatives advance specific SDG targets. Gender empowerment (Mogaji et al. 2021) or hybrid work practices (Bolisetty et al. 2023), for example, are rarely assessed for measurable progress on SDG 5. Consequently, the cluster shows a risk of discursive decoupling, where SDGs serve as rhetorical umbrellas for existing CSR themes rather than evidence-based sustainability outcomes.

Overall, Cluster 2 illustrates how academic discourse often merges CSR and ESG logics with the SDG agenda, reinforcing the broader observation that scholars frequently use the SDGs as symbolic alignment mechanisms. The reliance on moral persuasion, limited engagement with SDG-specific indicators, and broad social framing together show how sustainability knowledge is legitimated through normative appeal rather than rigorous measurement, mirroring symbolic adoption patterns observed in corporate practice.

3.3.3 | Cluster 3: SDGs and Capital Markets

This cluster examines how capital-market mechanisms—governance structures, investment decisions, ESG practices, and risk assessment—shape corporate engagement with the SDGs. Research explores how board characteristics influence sustainability outcomes (Rahi 2024; Gangi et al. 2023; Cosma et al. 2022), how investors respond to firms' SDG-related performance (García-Sánchez et al. 2020; Vinodkumar and Alarifi 2022), and whether sustainable investing generates meaningful environmental or social benefits (Kölbel et al. 2020; Aust et al. 2020). SDGs 12, 9, and 8 appear most often, though many papers refer to the SDGs only broadly.

Across this work, sustainability is conceptualized primarily as a financially material concern, reframed as a factor influencing valuation, risk, and investor behavior. Rather than treating the SDGs as transformative societal goals, the literature positions them as market signals relevant to capital allocation and board oversight. This financialized perspective narrows sustainable

development to its governance and economic implications, making SDG progress appear desirable mainly when it aligns with shareholder interests.

Rhetorically, the cluster relies heavily on *logos*, with quantitative analyses and econometric designs serving as primary sources of legitimacy. This reflects broader disciplinary norms that privilege statistical rigor. However, the dominance of ABS 1–2 journals limits *ethos*, while *pathos* plays almost no role; moral or societal arguments remain secondary to financial logic.

Despite its methodological sophistication, the cluster often uses investor reactions, board dynamics, and ESG scores as proxies for SDG progress, rather than assessing specific SDG targets. As sustainable investing research cautions (Kölbel et al. 2020), markets may reward SDG branding without requiring substantive impact, resulting in structural decoupling between SDG rhetoric and real sustainability outcomes.

Overall, Cluster 3 shows how academic research can reproduce the market-oriented reframing of sustainability, reinforcing the broader argument that SDG discourse frequently prioritizes legitimacy within financial logics over meaningful engagement with SDG performance.

3.3.4 | Cluster 4: Circular Economy and Innovation

This cluster examines how circular economy practices, industrial development, and digital innovation are leveraged to advance the SDGs. Research highlights circular production systems in both large firms (Soh and Wong 2021) and SMEs (Darmandieu et al. 2022), as well as circular supplier selection and waste-management strategies (Mina et al. 2021; González-Sánchez et al. 2023). A parallel stream emphasizes technological enablers: AI, blockchain, digital twins, and digital platforms, as tools for redesigning value creation and reducing environmental impact (Ajwani-Ramchandani et al. 2021; Sharma and Gupta 2024; Cane and Parra 2020; Di Vaio et al. 2020). SDGs 12, 9, and 8 dominate, though many studies reference the SDGs only generally.

Across this cluster, sustainability is constructed as a technology-enabled efficiency and innovation challenge. Circularity is framed as a means to reduce waste, optimize resources, and improve performance, rather than a driver of broader socio-ecological transformation. This aligns with research portraying circularity as a business model innovation strategy with competitive benefits (Sharma and McLean 2024; Mann et al. 2024). As a result, SDGs are reinterpreted through the lens of industrial modernization and cost-efficient production.

This cluster shows a stronger *ethos* dimension than others, with many papers published in ABS 3 journals, and relies heavily on *logos* through quantitative models, simulations, and engineering-style optimization (Skare et al. 2024; Liu et al. 2024). Technological capability thus becomes a key source of legitimacy, while *pathos* is minimal and largely absent from the discourse.

Despite its technological sophistication, the cluster exhibits risks of decoupling. Many studies use innovation capability, digitalization,

or cost efficiency as proxies for sustainability without evaluating real environmental or social impacts. This echoes critiques that circularity can serve as a symbolic indicator of progress when deeper ecological or justice dimensions remain unaddressed (Fatimah et al. 2020; Chad 2023). Such techno-optimism may obscure the structural changes required for substantive SDG advancement.

Overall, Cluster 4 shows how sustainability is reframed as an operational and technological improvement challenge, reinforcing the broader argument that academic SDG discourse often prioritizes innovation narratives over comprehensive assessments of SDG performance.

3.3.5 | Cluster 5: SDG Reporting and Sustainability Accounting

This cluster examines how organizations disclose their SDG contributions and how accounting practices shape the credibility and comparability of those disclosures. Research documents a continued rise in SDG reporting (Rizzato et al. 2024; Weybrecht 2022) and shows that firms often highlight internal environmental actions while providing limited information on circularity, responsible consumption, or systemic impacts (Vallet-Bellmunt et al. 2023). Studies analyze determinants of reporting quality: governance, regulation, and firm characteristics, and call for more transparent, standardized frameworks (Iazzi et al. 2022; Pizzi et al. 2021; García et al. 2022). Many papers refer to the SDGs broadly, with relatively little engagement with specific goals.

In this discourse, sustainability is constructed primarily as a disclosure and measurement challenge. SDG performance becomes visible through indicators, scoring mechanisms, and narrative accounts rather than verified sustainability outcomes. This reflects concerns that reporting systems shape what organizations perceive as “sustainability,” often privileging what is easy to report over what is materially impactful (Abeysekera 2022; Christ et al. 2024). As a result, SDGs are translated into communicative artifacts, reinforcing a view of accountability centered on transparency rather than substantive change.

The cluster relies heavily on *logos*, using quantitative assessments and disclosure-quality evaluations to establish legitimacy (Pizzi et al. 2021; García et al. 2022). Because most work appears in ABS 1–2 journals, *ethos* remains limited, while *pathos* emerges mainly in critiques of incomplete or superficial reporting and appeals to stakeholder trust (Vallet-Bellmunt et al. 2023; Hedley et al. 2024).

Echoing concerns about SDG-washing (Heras-Saizarbitoria et al. 2022), the cluster shows persistent risks of decoupling between disclosure and actual SDG performance. Firms often emphasize selective contributions, omit key goals, or rely on symbolic indicators that do not reflect real progress. Reporting practices can serve strategic impression-management functions rather than genuine accountability, consistent with longstanding critiques in sustainability communication.

Overall, Cluster 5 demonstrates how academic research may unintentionally reinforce the primacy of reporting over impact.

By focusing on disclosure quality more than substantive SDG outcomes, the cluster exemplifies how sustainability is often legitimated through procedural transparency, thereby masking important implementation gaps and supporting the paper's broader argument about rhetorical rather than material engagement with the SDGs.

3.3.6 | Cluster 6: Supply Chain and Business Models

This cluster examines how supply chain management and sustainable business models support SDG advancement. Studies address operational and environmental challenges such as waste reduction (Karki et al. 2021), carbon-neutrality strategies (Dohale et al. 2024), and resilience to geopolitical disruptions (Bednarski et al. 2023), as well as collaborative mechanisms that enable sustainable consumption and production (Mishra et al. 2022). Another stream links business model innovation to value creation, sustainability transmission, and technological frameworks like blockchain (Méndez-León et al. 2024; Calandra et al. 2023). Work in this cluster focuses mainly on SDGs 12, 9, and 8, with fewer general SDG references relative to earlier clusters.

Across these contributions, sustainability is constructed as an operational and organizational design challenge, where environmental and social goals are embedded into supply chain integration, partner coordination, and process redesign. Rather than serving as abstract moral aspirations, SDGs are framed as outcomes of collaboration, governance alignment, and innovation—consistent with research emphasizing sustainable supply chain architectures and business model innovation as mechanisms for measurable progress (Roshan and Balodi 2024; Rosati et al. 2023).

This cluster shows a comparatively stronger *ethos*, with many papers published in ABS 3 journals, and relies heavily on qualitative approaches that provide interpretive depth. This produces a form of *logos* grounded in rich empirical analysis rather than statistical generalization (e.g., Kumar et al. 2021; Carmagnac et al. 2024). *Pathos* is limited, appearing primarily in discussions of worker well-being or community impacts.

Despite its practical orientation, the cluster exhibits risks of partial decoupling. Many studies propose frameworks or collaborative models without validating whether these interventions lead to quantifiable SDG progress. Modelled improvements in carbon neutrality or waste reduction (Dohale et al. 2024) may not reflect real implementation, and business model innovations often assume—but do not test, value transmission or long-term social and environmental effects (Méndez-León et al. 2024).

Overall, Cluster 6 reinforces the broader finding that SDG discourse in business research often prioritizes organizational and technological redesign over direct assessment of SDG outcomes. While this cluster shows stronger engagement with substantive practices, reliance on conceptual models and untested assumptions highlight ongoing gaps between academic discourse and practical SDG achievement.

3.3.7 | Cluster 7: Tourism, Developing Countries, AI, and Climate Change

This cluster brings together research on tourism, developing economies, governance conditions, and technological innovation (especially AI), as they relate to the SDGs. Tourism studies examine both the sector's potential and its constraints, highlighting tensions between economic growth and environmental or social responsibility (Gössling 2021; Moneva et al. 2020). Work on developing countries underscores how governance weaknesses and political constraints impede sustainability progress (Siakwah et al. 2020). A technological stream explores AI-based tools for resource management and environmental monitoring, presenting digital innovation as a means to enhance climate performance (Di Vaio et al. 2020). The cluster primarily engages with SDG 8 and SDG 12, with fewer generalized SDG references.

Across this research, sustainability is constructed as context-dependent and structurally constrained, particularly in developing economies where institutional and political gaps hinder implementation (Siakwah et al. 2020). Tourism scholarship portrays sustainability as a contested terrain shaped by power relations, dependence on tourism flows, and local agency (Bianchi and De Man 2021; Hoque et al. 2020). In contrast, technology-oriented studies frame sustainability as an innovation-enabled process, emphasizing AI and digital tools as drivers of improved environmental outcomes (Di Vaio et al. 2020). These contrasting views reveal a tension between structural critiques and technomanagerial solutions.

Methodologically, the cluster relies heavily on qualitative, context-rich analyses, generating *logos* through empirical depth rather than statistical generalization. Because many papers critique governance systems and structural inequities, legitimacy derives from analytical rigor rather than moral appeal, resulting in a relatively muted *pathos* dimension. Although most studies appear in ABS 1–2 journals, high citation rates suggest that the cluster's insights resonate across the field.

The cluster also highlights significant risks of decoupling between SDG discourse and real sustainability conditions. Governance failures in developing countries often prevent meaningful implementation despite rhetorical commitments (Bianchi and De Man 2021). Technological studies emphasize AI's promise but rarely address disparities in digital readiness or access, which may limit actual SDG progress (Di Vaio et al. 2020). SDGs thus function both as aspirational language and as a critique of structural obstacles.

Overall, Cluster 7 reinforces the broader argument that SDG discourse is shaped by contextual and institutional constraints. Tourism and developing-country research illuminates systemic barriers to implementation, while technological studies foreground innovation without fully addressing structural limitations. Together, these dynamics illustrate how sustainability discourse oscillates between critical diagnosis and technoptimism, underscoring persistent gaps between SDG rhetoric and practical achievement.

3.3.8 | Other Important Areas: SDG Education

This smaller but meaningful stream examines how education supports SDG implementation. Studies highlight how universities embed sustainability competencies into curricula and pedagogical practices, positioning higher education as a driver of societal change (Talwar et al. 2024; Othman and Ameer 2024). Scholars emphasize strengthening students' sustainability awareness and using experiential learning to link classroom knowledge to real-world action (Chiang and Chen 2022; Tomasella et al. 2023). Additional work shows how responsible management education channels SDG principles into student engagement and behavioral development (Cripps and Smith 2023; Collier et al. 2022).

In this discourse, sustainability is constructed as a learning and capability-building process, where the SDGs serve as normative anchors for shaping values, decision-making skills, and societal

TABLE 2 | Details related to papers in each identified cluster.

Description	Cluster 1	Cluster 2	Cluster 3	Cluster 4	Cluster 5	Cluster 6	Cluster 7	Papers focused on education
ABS 1 papers	56	63	43	26	38	19	19	16
ABS 2 papers	68	46	31	30	36	25	14	6
ABS 3 papers	49	34	27	42	12	26	14	4
ABS 4/4* papers	5	4	0	1	1	1	1	0
Conceptual papers	14	6	3	2	5	3	3	2
Literature reviews	15	8	4	12	0	6	5	4
Papers adopting mixed methods	23	13	15	12	18	9	3	2
Papers adopting qualitative method	82	51	13	29	30	28	27	14

(Continues)

TABLE 2 | (Continued)

Description	Cluster 1	Cluster 2	Cluster 3	Cluster 4	Cluster 5	Cluster 6	Cluster 7	Papers focused on education
Papers adopting quantitative method	44	69	66	44	34	25	11	5
Papers related to SDG 1	8	9	2	0	1	1	7	0
Papers related to SDG 2	1	1	1	1	2	3	0	0
Papers related to SDG 3	4	5	2	1	1	3	0	0
Papers related to SDG 4	1	8	1	3	0	2	1	2
Papers related to SDG 5	2	16	2	1	2	0	1	0
Papers related to SDG 6	2	3	0	2	1	1	0	0
Papers related to SDG 7	2	3	3	4	2	3	1	0
Papers related to SDG 8	18	18	9	9	5	6	15	1
Papers related to SDG 9	7	1	10	15	6	13	1	1
Papers related to SDG 10	2	6	0	0	1	0	0	0
Papers related to SDG 11	6	3	2	5	2	0	4	0
Papers related to SDG 12	9	18	18	21	22	15	13	1
Papers related to SDG 13	2	10	4	5	5	4	4	0
Papers related to SDG 14	0	1	0	0	0	1	0	0
Papers related to SDG 15	1	2	0	0	0	0	0	0
Papers related to SDG 16	9	2	6	0	2	0	3	0
Papers related to SDG 17	14	5	5	4	7	3	6	0
Papers addressing all 17 SDGs	12	6	3	5	7	4	1	0
Papers addressing SDGs in a general manner	103	63	55	52	41	29	16	20
Citations per cluster	1881	1734	2489	2377	1543	2057	1506	78

awareness. Knowledge is framed less through organizational metrics and more through pedagogical transformation.

Rhetorically, the stream relies heavily on *pathos*, appealing to the moral importance of educating future leaders and cultivating ethical mindsets. *Logos* appears through qualitative assessments of educational interventions (e.g., Collier et al. 2022), while *ethos* remains limited because most work is published in ABS 1–2 journals.

Despite its aspirational tone, this research stream shows signs of decoupling, as many initiatives incorporate the SDGs symbolically without demonstrating long-term behavioral or societal impact. Frequent references to the SDGs in broad terms mirror patterns in other clusters, suggesting that education-focused discourse also leans toward rhetorical alignment rather than verified SDG contributions.

Overall, this cluster illustrates how SDG discourse extends into education but remains largely normative and symbolic, reinforcing the broader argument that much academic engagement emphasizes aspirational rhetoric over evidence of substantive SDG outcomes.

Table 2 details the methodologies adopted, the SDGs addressed, and the journal rankings of the papers included in all identified clusters.

3.4 | SDG Discourse's Evolutionary Trend

The longitudinal analysis reveals not just shifting keyword frequencies but a progressive transformation in how the SDGs are mobilized, interpreted, and legitimized within business and accounting research (see Table 3 for the distribution of the most frequent keywords across years). Rather than a linear, year-by-year progression, the discourse evolves through three distinct phases that illuminate broader dynamics in sustainability knowledge construction.

3.4.1 | Phase 1 (2020): Broad Anchoring and Exploratory Framing

Early publications anchor sustainability discussions in broad, foundational terms: “Sustainable Development Goals,” “Sustainability,” and “Sustainable Development,” with limited engagement with specific targets. Research focuses on exploratory themes such as tourism, CSR, and high-level reporting practices, reflecting an initial effort to situate SDGs within existing scholarly agendas. This phase is marked by conceptual breadth but analytical shallowness, and signals a reliance on *pathos*, as SDGs are used to invoke moral urgency without grounding in measurable outcomes.

3.4.2 | Phase 2 (2021–2022): Strategic and Managerial Integration

As the discourse matures, keywords shift toward decision-making, planning, stakeholder engagement, and innovation,

TABLE 3 | The most frequently occurring keywords in each year (as a % of all papers in each year)^a.

Keywords	2020		2021		2022		2023		2024	
	Keywords	Occurrence	Keywords	Occurrence	Keywords	Occurrence	Keywords	Occurrence	Keywords	Occurrence
Sustainable Development Goals	Sustainable Development Goals	52%	Sustainable Development Goals	42%	Sustainable Development Goals	46%	Sustainable Development Goals	37%	Sustainable Development Goals	45%
	Sustainable Development	34%	Sustainable Development	35%	Sustainable Development Goal	38%	Sustainable Development	32%	Sustainable Development Goal	21%
	Sustainability	30%	Sustainable Development Goal	35%	Sustainable Development	30%	Sustainable Development Goal	30%	Sustainable Development	20%
Planning	Planning	21%	Planning	22%	Sustainable Development	27%	Sustainable Development	15%	Sustainable Development	16%
	Sustainable Development Goal	17%	Sustainable Development Goals (SDGs)	16%	Planning	14%	Sustainable Development Goals (SDGs)	15%	SDGs	13%

(Continues)

TABLE 3 | (Continued)

2020			2021			2022			2023			2024		
Keywords	Occurrence		Keywords	Occurrence		Keywords	Occurrence		Keywords	Occurrence		Keywords	Occurrence	
Corporate Social Responsibility	16%		Sustainability	15%		SDGs	13%		SDGs	13%		Sustainable Development Goals (SDGs)	11%	
Sustainable Development Goals (SDGs)	11%		Corporate Social Responsibility	8%		Sustainable Development Goals (SDGs)	13%		Corporate Social Responsibility	11%		Corporate Social Responsibility	6%	
SDGs	8%		Decision-Making	8%		Corporate Social Responsibility	8%		United Nations	9%		SDG	5%	
Tourism	8%		SDGs	8%		Corporate Sustainability	7%		Supply Chain Management	7%		Circular Economy	5%	
United Nations	8%		Covid-19	7%		Sustainability Reporting	7%		Circular Economy	6%		Decision-Making	5%	
SDG	7%		Climate Change	6%		Environmental Economics	6%		Corporate Governance	5%		Innovation	5%	
Hospitality	6%		Corporate Sustainability	6%		Innovation	6%		Innovation	5%		Environmental Economics	5%	
Investment	6%		United Nations	6%		SDG	6%		SDG	5%		Corporate Governance	3%	
Sustainability Reporting	6%					Stakeholder	6%		Sustainability Reporting	5%		Sustainability Reporting	3%	
						United Nations	6%		Case Study	4%		United Nations	3%	
						Content Analysis	5%		Decision-Making	4%		Climate Change	3%	
						Corporate Social Responsibility (CSR)	5%		Environmental Economics	4%		Economic Growths	3%	
						Covid-19	5%		Covid-19	4%		Business	2%	
						Decision-Making	5%		Economic And Social Effects	4%		Economic And Social Effects	2%	

(Continues)

TABLE 3 | (Continued)

2020		2021		2022		2023		2024	
Keywords	Occurrence	Keywords	Occurrence	Keywords	Occurrence	Keywords	Occurrence	Keywords	Occurrence
				Stakeholders	5%	ESG	4%	Environmental Performance	2%
				Tourism	5%	Financial Performance	4%	Industry 4.0	2%
				Circular Economy	4%	Investments	4%	SDG Disclosure	2%
				CSR	4%	Stakeholders	4%	Supply Chain Management	2%
				Economic And Social Effects	4%			Sustainable Business	2%
				Industrial Performance	4%			Systematic Literature Review	2%
								Artificial Intelligence	2%
								Economic Growth	2%
								Environmental Sustainability	2%
								ESG	2%
								Financial Performance	2%
								Gender Equality	2%
								Institutional Theory	2%
								SDG 9	2%
								Sustainable Finance	2%
								Accounting	2%
								Board Gender Diversity	2%
								Carbon Emission	2%

(Continues)

TABLE 3 | (Continued)

2020		2021		2022		2023		2024	
Keywords	Occurrence	Keywords	Occurrence	Keywords	Occurrence	Keywords	Occurrence	Keywords	Occurrence
								China	2%
								Corporate Strategy	2%
								Covid-19	2%
								CSR	2%
								Digital Transformation	2%
								Economics	2%
								Entrepreneur	2%
								Entrepreneurship	2%
								Green Economy	2%
								Investments	2%
								Nigeria	2%
								Performance	2%
								SMEs	2%
								Stakeholder Theory	2%
								Supply Chains	2%
								Technology Adoption	2%
								Transparency	2%
								Unsustainable Development Goals	2%

^aKeywords identifying broad SDG-related themes are italicized, while those related to specific topics investigated in the studies are shown in bold.

suggesting the incorporation of SDGs into strategic and organizational analyses. Methodological keywords such as “content analysis” emerge, indicating a gradual strengthening of *logos* through evidence-based approaches. Yet, the rise of managerial and governance framing also narrows sustainability to issues amenable to organizational control, reinforcing a managerialized construction of the SDGs in which complex global goals are reframed as operational or strategic tasks.

3.4.3 | Phase 3 (2023–2024): Technologization and Symbolic Generalization

In later years, the discourse becomes more specialized and technologically oriented, with increasing emphasis on digital transformation, carbon emissions, environmental performance, and transparency. Theory-related keywords such as “institutional theory” and “stakeholder theory” appear for the first time, signaling attempts to strengthen ethos through more established academic frameworks. Paradoxically, this period also exhibits the most dramatic increase in general SDG references, rising to 74% of papers by 2024. This pattern suggests a growing discursive decoupling, where the SDGs are invoked symbolically to signal alignment with global sustainability narratives, even as empirical engagement with specific goals declines.

The evolution of SDG discourse also reflects a redistribution of scholarly attention. SDGs 12, 8, 9, and 13 remain consistently prominent, aligning with business-centric concerns such as production efficiency, economic performance, innovation, and climate action. In contrast, interest in SDGs 1, 2, 4, 11, 14, 15, and 17 declines markedly over time, indicating the marginalization of themes related to poverty, inequality, biodiversity, and governance. These shifts are clearly visible in Appendix B, which shows that many socially or ecologically foundational SDGs lose traction as the field increasingly prioritizes those goals with clearer links to organizational efficiency and measurable outputs.

Across the period, the growth in generalized SDG references, documented in both Table 3 and Appendix B, highlights the increasing symbolic use of SDG terminology. Scholars frequently employ SDG language to position their work within the global sustainability agenda (*pathos*), while legitimacy is supported through methodological rigor (*logos*) or, more recently, theoretical anchoring (*ethos*). However, the declining attention to specific SDGs and the limited assessment of concrete targets create space for rhetorical alignment without substantive engagement, mirroring decoupling patterns widely documented in sustainability communication.

Taken together, the evolutionary trend demonstrates that SDG discourse in business and accounting research has become more pervasive but less targeted, more methodologically sophisticated but not necessarily more impactful, and more rhetorically aligned but not proportionally grounded in evidence. As the SDGs diffuse across diverse research agendas, their conceptual precision weakens, and their symbolic value increases. This trajectory reinforces the broader argument that academic engagement with the SDGs, much like corporate engagement, can

oscillate between substantive inquiry and symbolic adoption, revealing important tensions in how sustainability knowledge is constructed and legitimized in the field.

4 | Discussion and Conclusions

This study set out to examine how accounting and business scholarship constructs and legitimizes SDG discourse, using Aristotle’s rhetorical framework—ethos, logos, and pathos—as heuristic lenses. Interpreting the findings through this lens reveals how academic engagement with the SDGs relies on specific patterns of authority signaling, methodological reasoning, and normative appeal. Together, these rhetorical dynamics shape not only what is researched but also how sustainability is framed, justified, and reproduced within the field.

Our longitudinal analysis shows a sharp rise in SDG-related publications from 2020 to 2024, accompanied by a noteworthy transformation in the way scholars refer to the SDGs. Initially, studies anchored their arguments in broad conceptual references to sustainability. Over time, however, discourse became increasingly fragmented across specialized domains, particularly in relation to governance, capital markets, innovation, circular economy, and supply chain management. Paradoxically, as specialization intensified, scholars also invoked the SDGs in more generalized, less target-specific ways. By 2024, nearly three-quarters of all reviewed papers referenced the SDGs only in general terms.

This trend points to a growing discursive decoupling, in which academic references to the SDGs contribute symbolically to the sustainability conversation without necessarily advancing goal-specific knowledge. While this symbolic use may nevertheless raise visibility and signal alignment with global priorities, it simultaneously weakens conceptual precision and risks reproducing the same disconnect between rhetoric and practice observed in corporate sustainability communication.

Interpreted through Aristotle’s rhetorical modes, the findings reveal three overarching patterns in how academic legitimacy is constructed. *Logos* is the dominant persuasive strategy, evidenced by the strong reliance on quantitative methods, especially regression-based analyses and secondary data, and by the use of structured analytical frameworks even in qualitative research. This focus on methodological sophistication helps scholars demonstrate rigor, though it often overshadows deeper engagement with specific SDG targets.

Ethos appears as an emerging yet uneven element of persuasion. Much SDG research still appears in lower-ranked ABS journals, but recent growth in ABS 3 and ABS 4 outlets suggests a gradual strengthening of academic authority, particularly in areas such as governance, capital markets, and technology-related sustainability. Publication venue therefore functions increasingly as a signal of credibility alongside methodological rigor.

At the same time, *pathos* is mobilized through normative alignment. Studies on CSR, social inclusion, education, and broader societal challenges frequently draw on moral and emotional

themes such as justice, responsibility, and well-being. Yet, because many papers invoke the SDGs only in general terms, this normative emphasis often serves a symbolic rather than analytically substantive role.

The seven clusters identified through bibliometric analysis display distinct combinations of *ethos*, *logos*, and *pathos*. Clusters dealing with decision-making, social responsibility, and education rely more heavily on normative or emotional persuasion, while those addressing capital markets, the circular economy, and supply chains are grounded primarily in *logos* and tend to appear in higher-ranked journals. This creates a varied rhetorical landscape, with some areas emphasizing moral positioning and others deriving legitimacy from technical or methodological rigor.

Treating discourse as a system of meaning reveals how academic research actively shapes what counts as relevant, legitimate, and actionable knowledge about sustainable development. By framing sustainability primarily through managerial, technological, or governance lenses, scholars influence how firms understand and operationalize sustainability. Likewise, by prioritizing certain SDGs (particularly SDGs 12, 8, and 9) while neglecting others (such as SDGs 1, 2, 11, 14, and 15), the academic field contributes to a skewed representation of sustainability priorities that may trickle into business practice and policy.

The fact that many scholars cite the SDGs without engaging substantively with them raises important questions about incentives in academic knowledge production. Prestige pressures, evaluation systems, and the increasing demand for sustainability-related framing may encourage researchers to adopt general SDG language while focusing primarily on traditional business concerns. Nevertheless, even symbolic engagement may shape public discourse and policymaking by reinforcing the visibility and normative importance of the SDGs.

This rhetorical analysis highlights several avenues for advancing SDG scholarship. First, scholars should pursue more integrated, cross-SDG investigations that reflect the interdependent nature of the global goals rather than reinforcing thematic silos. Second, future work should adopt more target-specific frameworks to reduce conceptual dilution and strengthen the substantive contribution of SDG research. Third, researchers should more critically examine the institutional and rhetorical dynamics that encourage symbolic adoption, both in academia and in corporate settings. Finally, applying rhetorical analysis to texts themselves, rather than proxies, may offer richer insights into how sustainability narratives gain legitimacy and shape organizational behavior.

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Conflicts of Interest

The authors declare no conflicts of interest.

Endnotes

¹ It is important to note that the total number of papers exceeds the final sample size, as many studies examine multiple SDGs simultaneously.

² The complete list of studies is available in the [Supporting Information](#).

³ For readability, Appendix A includes only keywords that occurred at least five times.

References

- Abeyssekera, I. 2022. "A Framework for Sustainability Reporting." *Sustainability Accounting, Management and Policy Journal* 13, no. 6: 1386–1409. <https://doi.org/10.1108/SAMPJ-08-2021-0316>.
- Aho, J. 1985. "Rhetoric and the Invention of Double Entry Bookkeeping." *Rhetorica: A Journal of the History of Rhetoric* 3: 21–43.
- Ajwani-Ramchandani, R., S. Figueira, R. T. De Oliveira, S. Jha, A. Ramchandani, and L. Schuricht. 2021. "Towards a Circular Economy for Packaging Waste Using New Technologies: The Case of Large Multinationals in Emerging Economies." *Journal of Cleaner Production* 281: 125139. <https://doi.org/10.1016/j.jclepro.2020.125139>.
- Alkaraan, F., M. Albahloul, and K. Hussainey. 2023. "Carillion's Strategic Choices and the Boardroom's Strategies of Persuasive Appeals: Ethos, Logos and Pathos." *Journal of Applied Accounting Research* 24, no. 4: 726–744. <https://doi.org/10.1108/JAAR-06-2022-0134>.
- Allen, M. W., and R. H. Caillouet. 1994. "Legitimation Endeavors: Impression Management Strategies Used by an Organization in Crisis." *Communication Monographs* 61, no. 1: 44–62. <https://doi.org/10.1080/03637759409376322>.
- Aman, R., M. Elo, P. Ahokangas, and X. Zhang. 2024. "Empowering Migrant Women's Entrepreneurship: Stakeholder Perspectives From the Entrepreneurial Ecosystem." *International Journal of Entrepreneurial Behavior & Research* 30, no. 7: 1698–1724. <https://doi.org/10.1108/IJEBR-04-2023-0425>.
- Aust, V., A. I. Morais, and I. Pinto. 2020. "How Does Foreign Direct Investment Contribute to Sustainable Development Goals? Evidence From African Countries." *Journal of Cleaner Production* 245: 118823. <https://doi.org/10.1016/j.jclepro.2019.118823>.
- Barbier, E. B., and J. C. Burgess. 2020. "Sustainability and Development After COVID-19." *World Development* 135: 105082. <https://doi.org/10.1016/j.worlddev.2020.105082>.
- Beattie, V. 2014. "Accounting Narratives and the Narrative Turn in Accounting Research: Issues, Theory, Methodology, Methods and a Research Framework." *British Accounting Review* 46: 111–134.
- Bednarski, L., S. Roscoe, C. Blome, and M. C. Schleper. 2023. "Geopolitical Disruptions in Global Supply Chains: A State-of-the-Art Literature Review." *Production Planning & Control* 1–27: 1–27. <https://doi.org/10.1080/09537287.2023.2286283>.
- Bianchi, R. V., and F. De Man. 2021. "Tourism, Inclusive Growth, and Decent Work: A Political Economy Critique." *Journal of Sustainable Tourism* 29, no. 2–3: 353–371. <https://doi.org/10.1080/09669582.2020.1730862>.
- Blanco-Zaitegi, G., I. Á. Etxeberria, and J. M. Moneva. 2022. "Biodiversity Accounting and Reporting: A Systematic Literature Review and Bibliometric Analysis." *Journal of Cleaner Production* 371: 133677. <https://doi.org/10.1016/j.jclepro.2022.133677>.
- Bolisetty, P. K., P. Sharma, and S. Bhattacharya. 2023. "Sustainable Health in the Era of Work From Anywhere." *Australasian Accounting Business and Finance Journal* 17, no. 1: 51–67. <https://doi.org/10.14453/aabf.v17i1.04>.
- Brennan, N. M., and D. M. Merkl-Davies. 2014. "Rhetoric and Argument in Social and Environmental Reporting: The Dirty Laundry

- Case." *Accounting, Auditing & Accountability Journal* 27, no. 4: 602–633. <https://doi.org/10.1108/AAAJ-04-2013-1333>.
- Burke, K. 1966. *Language as Symbolic Action: Essays on Life, Literature, and Method*. University of California Press.
- Burke, K. 1969. *A Rhetoric of Motives*. University of California Press.
- Calandra, D., S. Secinaro, M. Massaro, F. D. Mas, and C. Bagnoli. 2023. "The Link Between Sustainable Business Models and Blockchain: A Multiple Case Study Approach." *Business Strategy and the Environment* 32, no. 4: 1403–1417. <https://doi.org/10.1002/bse.3195>.
- Cane, M., and C. Parra. 2020. "Digital Platforms: Mapping the Territory of New Technologies to Fight Food Waste." *British Food Journal* 122, no. 5: 1647–1669. <https://doi.org/10.1108/bfj-06-2019-0391>.
- Carmagnac, L., M. E. Silva, and M. M. C. Fritz. 2024. "Exploring Sustainable Development Goals Adoption in Supply Chain Management: A Typology of Coexisting Institutional Logics." *Business Strategy and the Environment* 33, no. 4: 3463–3479. <https://doi.org/10.1002/bse.3661>.
- Cesarino, L. O., L. B. Liboni, T. Hunter, L. M. Pacheco, and F. P. Martins. 2022. "Corporate Social Responsibility in Emerging Markets: Opportunities and Challenges for Sustainability Integration." *Journal of Cleaner Production* 362: 132224. <https://doi.org/10.1016/j.jclepro.2022.132224>.
- Chad, P. 2023. "Rescuing Unwanted Household Goods: Moving Towards a Circular Economy." *Australasian Marketing Journal* 31, no. 4: 279–293. <https://doi.org/10.1177/14413582231165268>.
- Chiang, M., and P. Chen. 2022. "Education for Sustainable Development in the Business Programme to Develop International Chinese College Students' Sustainability in Thailand." *Journal of Cleaner Production* 374: 134045. <https://doi.org/10.1016/j.jclepro.2022.134045>.
- Christ, K. L., S. Dijkstra-Silva, R. L. Burritt, and S. Schaltegger. 2024. "Sustainability Management Accounting—Enabling Macro-Level Sustainability Transformation Towards the United Nations Sustainable Development Goals." *Meditari Accountancy Research* 32, no. 3: 923–944. <https://doi.org/10.1108/medar-03-2023-1952>.
- Civera, C., S. Moggi, V. Chiaudano, and E. Freeman. 2025. "Stakeholder Relationships in the Circular Economy. Conceptualizing Relational Approaches Through Systematic Literature Review." *Business Strategy and the Environment* 34, no. 8: 10698–10722. <https://doi.org/10.1002/bse.70>.
- Collier, E., K. E. Odell, and A. Rosenbloom. 2022. "Teaching Sustainable Development: An Approach to Rapidly Introducing the UN Sustainable Development Goals Into an Undergraduate Business Curriculum." *Journal of Global Responsibility* 13, no. 4: 361–379. <https://doi.org/10.1108/jgr-11-2021-0100>.
- Cop, S., U. V. Alola, and A. A. Alola. 2020. "Perceived Behavioral Control as a Mediator of Hotels' Green Training, Environmental Commitment, and Organizational Citizenship Behavior: A Sustainable Environmental Practice." *Business Strategy and the Environment* 29, no. 8: 3495–3508. <https://doi.org/10.1002/bse.2592>.
- Cosma, S., R. Leopizzi, L. Nobile, and P. Schwizer. 2022. "Revising the Non-Financial Reporting Directive and the Role of Board of Directors: A Lost Opportunity?" *Journal of Applied Accounting Research* 23, no. 1: 207–226. <https://doi.org/10.1108/jaar-04-2021-0102>.
- Cripps, K., and S. Smith. 2023. "Embedding a Sustainability Mindset in Responsible Management Education." *International Journal of Organizational Analysis* 32, no. 8: 1522–1538. <https://doi.org/10.1108/ijoa-05-2023-3774>.
- Darmandieu, A., C. Garcés-Ayerbe, A. Renucci, and P. Rivera-Torres. 2022. "How Does It Pay to Be Circular in Production Processes? Eco-Innovativeness and Green Jobs as Moderators of a Cost-Efficiency Advantage in European Small and Medium Enterprises." *Business Strategy and the Environment* 31, no. 3: 1184–1203. <https://doi.org/10.1002/bse.2949>.
- David, R. J., and S. K. Han. 2004. "A Systematic Assessment of the Empirical Support for Transaction Cost Economics." *Strategic Management Journal* 25: 39–58. <https://doi.org/10.1002/smj.359>.
- Denyer, D., and D. Tranfield. 2009. "Producing a Systematic Review." In *The Sage Handbook of Organizational Research Methods*, edited by D. Buchanan and A. Bryman. Sage Publications.
- Di Vaio, A., R. Palladino, R. Hassan, and O. Escobar. 2020. "Artificial Intelligence and Business Models in the Sustainable Development Goals Perspective: A Systematic Literature Review." *Journal of Business Research* 121: 283–314. <https://doi.org/10.1016/j.jbusres.2020.08.019>.
- Dixon-Woods, M., S. Agarwal, D. Jones, B. Young, and A. Sutton. 2005. "Synthesising Qualitative and Quantitative Evidence: A Review of Possible Methods." *Journal of Health Services Research & Policy* 10, no. 1: 45–53. <https://doi.org/10.1177/135581960501000110>.
- Dohale, V., S. Kamble, P. Amblikar, S. Gold, and A. Belhadi. 2024. "An Integrated MCDM-ML Approach for Predicting the Carbon Neutrality Index in Manufacturing Supply Chains." *Technological Forecasting and Social Change* 201: 123243. <https://doi.org/10.1016/j.techfore.2024.123243>.
- Eng, N., C. L. Troy, and D. S. Bortree. 2024. "Symbolic and Substantive Legitimation: Examining Corporate Commitments to Sustainable Development Goal 12." *Journal of Communication Management* 28, no. 1: 74–92. <https://doi.org/10.1108/JCOM-06-2022-0075>.
- Fairclough, N. 1992. *Discourse and Social Change*. Polity Press.
- Farrukh, A., and A. Sajjad. 2024. "An Exploratory Study of Barriers to Sustainable Development: Evidence From the New Zealand Flexible Packaging Industry." *Corporate Governance* 24, no. 3: 663–681. <https://doi.org/10.1108/cg-05-2023-0221>.
- Fatimah, Y. A., K. Govindan, R. Murniningsih, and A. Setiawan. 2020. "Industry 4.0 Based Sustainable Circular Economy Approach for Smart Waste Management System to Achieve Sustainable Development Goals: A Case Study of Indonesia." *Journal of Cleaner Production* 269: 122263. <https://doi.org/10.1016/j.jclepro.2020.122263>.
- Filho, W. L., L. V. Trevisan, J. H. P. P. Eustachio, et al. 2024. "Sustainable Supply Chain Management and the UN Sustainable Development Goals: Exploring Synergies Towards Sustainable Development." *TQM Journal* 37, no. 1: 18–41. <https://doi.org/10.1108/tqm-04-2023-0114>.
- Foucault, M. 1972. *The Archaeology of Knowledge*. Tavistock Publications.
- Gangi, F., L. M. Daniele, E. D'Angelo, N. Varrone, and M. Coscia. 2023. "The Impact of Board Gender Diversity on Banks' Environmental Policy: The Moderating Role of Gender Inequality in National Culture." *Corporate Social Responsibility and Environmental Management* 30, no. 3: 1273–1291. <https://doi.org/10.1002/csr.2418>.
- García, L. S., H. M. Bolas-Araya, and M. A. G. Benau. 2022. "Sustainable Development Goals and Assurance of Non-Financial Information Reporting in Spain." *Sustainability Accounting, Management and Policy Journal* 13, no. 4: 878–898. <https://doi.org/10.1108/sampj-04-2021-0131>.
- García-Sánchez, I., L. Rodríguez-Ariza, B. Aibar-Guzmán, and C. Aibar-Guzmán. 2020. "Do Institutional Investors Drive Corporate Transparency Regarding Business Contribution to the Sustainable Development Goals?" *Business Strategy and the Environment* 29, no. 5: 2019–2036. <https://doi.org/10.1002/bse.2485>.
- Gomes, S., and M. Pinho. 2023. "Can We Count on the Commitment of European SMEs to Achieve SDG12? An Exploratory Study of Business Sustainability." *Journal of Cleaner Production* 425: 139016. <https://doi.org/10.1016/j.jclepro.2023.139016>.
- González-Sánchez, R., S. Alonso-Muñoz, and M. S. Medina-Salgado. 2023. "Circularity in Waste Management: A Research Proposal to Achieve the 2030 Agenda." *Operations Management Research* 16, no. 3: 1520–1540. <https://doi.org/10.1007/s12063-023-00373-0>.

- Gössling, S. 2021. "Tourism, Technology and ICT: A Critical Review of Affordances and Concessions." *Journal of Sustainable Tourism* 29, no. 5: 733–750. <https://doi.org/10.1080/09669582.2021.1873353>.
- Green, S. E., Jr. 2001. "Rhetoric and the Institutionalization of Takeover Defenses in the S&P 1500 From 1975–1998." Unpublished Doctoral Dissertation, Harvard University Graduate School of Business, Boston.
- Green, S. E., Jr. 2004. "A Rhetorical Theory of Diffusion." *Academy of Management Review* 29, no. 4: 653–669. <https://doi.org/10.1177/0893318908318513>.
- Gupta, B. B., A. Gaurav, V. Arya, and W. S. Alhalabi. 2024. "Data Science in Sustainable Entrepreneurship: A Multidisciplinary Field of Applications." *Technological Forecasting and Social Change* 209: 123798. <https://doi.org/10.1016/j.techfore.2024.123798>.
- Hall, S. 1997. *Representation: Cultural Representations and Signifying Practices*. Sage/Open University.
- Haritas, I., and A. Das. 2023. "Simple Doable Goals: A Roadmap for Multinationals to Help Achieve the UN's Sustainable Development Goals." *Society and Business Review* 18, no. 4: 618–645. <https://doi.org/10.1108/sbr-06-2022-0167>.
- Hartelius, E. J., and L. D. Browning. 2008. "The Application of Rhetorical Theory in Managerial Research: A Literature Review." *Management Communication Quarterly* 22, no. 1: 13–39. <https://doi.org/10.1177/0893318908318513>.
- Hedley, T., B. Porco, T. L. Keiningham, L. Aksoy, L. A. Statuto, and M. Amin. 2024. "Beyond Apples and Oranges: Unraveling the Complexity in Corporate Sustainability Reporting." *Journal of Service Management* 35, no. 4: 512–524. <https://doi.org/10.1108/josm-12-2023-0505>.
- Heras-Saizarbitoria, I., L. Urbieto, and O. Boiral. 2022. "Organizations' Engagement With Sustainable Development Goals: From Cherry-Picking to SDG-Washing?" *Corporate Social Responsibility and Environmental Management* 29, no. 2: 316–328. <https://doi.org/10.1002/csr.2202>.
- Higgins, C., and R. Walker. 2012. "Ethos, Logos, Pathos: Strategies of Persuasion in Social/Environmental Reports." *Accounting Forum* 36, no. 3: 194–208. <https://doi.org/10.1016/j.accfor.2012.02.003>.
- Holt, R., and A. Macpherson. 2010. "Sensemaking, Rhetoric and the Socially Competent Entrepreneur." *International Small Business Journal* 28, no. 1: 20–42. <https://doi.org/10.1177/0266242609350822>.
- Hoque, M. A., B. Lovelock, and A. Carr. 2020. "Alleviating Indigenous Poverty Through Tourism: The Role of NGOs." *Journal of Sustainable Tourism* 30, no. 10: 2333–2351. <https://doi.org/10.1080/09669582.2020.1860070>.
- Iazzi, A., L. Ligorio, D. Vrontis, and O. Trio. 2022. "Sustainable Development Goals and Healthy Foods: Perspective From the Food System." *British Food Journal* 124, no. 4: 1081–1102. <https://doi.org/10.1108/bfj-02-2021-0197>.
- IPCC. 2023. "Climate Change 2023: Synthesis Report. Intergovernmental Panel on Climate Change." https://www.ipcc.ch/report/ar6/syr/downloads/report/IPCC_AR6_SYR_FullVolume.pdf.
- Kamande, A., J. Walker, M. Martin, and M. Lawson. 2024. The Commitment to Reduce Inequality Index 2024. Oxfam International. https://www.oxfamfrance.org/app/uploads/2024/10/CRI_2024_Exec_Summ_ENGLISH_EMBARGOED.pdf.
- Karki, S. T., A. C. Bennett, and J. L. Mishra. 2021. "Reducing Food Waste and Food Insecurity in the UK: The Architecture of Surplus Food Distribution Supply Chain in Addressing the Sustainable Development Goals (Goal 2 and Goal 12.3) at a City Level." *Industrial Marketing Management* 93: 563–577. <https://doi.org/10.1016/j.indmarman.2020.09.019>.
- Kaustia, M., and S. Knüpfer. 2012. "Peer Performance and Stock Market Entry." *Journal of Financial Economics* 104: 321–338. <https://doi.org/10.1016/j.jfineco.2011.02.013>.
- Kölbel, J. F., F. Heeb, F. Paetzold, and T. Busch. 2020. "Can Sustainable Investing Save the World? Reviewing the Mechanisms of Investor Impact." *Organization & Environment* 33, no. 4: 554–574. <https://doi.org/10.1177/1086026620919202>.
- Kumar, A., S. K. Mangla, P. Kumar, and M. Song. 2021. "Mitigate Risks in Perishable Food Supply Chains: Learning From COVID-19." *Technological Forecasting and Social Change* 166: 120643. <https://doi.org/10.1016/j.techfore.2021.120643>.
- Lee, D., and D. J. Hess. 2022. "Measuring Corporate Social Responsibility: An Evaluation of a New Sustainable Development Goals Index for Fortune 500 Companies." *International Journal of Organizational Analysis* 30, no. 7: 137–154. <https://doi.org/10.1108/ijoa-12-2021-3082>.
- Lin, Z., C. Ma, O. Weber, and Y. S. Ren. 2025. "Inclusive Mapping of Sustainable Finance and Accounting: A Bibliometric Review." *Sustainability Accounting, Management and Policy Journal* 16, no. 2: 618–702. <https://doi.org/10.1108/SAMPJ-05-2024-0511>.
- Liu, Z., N. Clifton, H. Faqani, S. Li, and G. Walpole. 2024. "Implementing Circular Economy Principles: Evidence From Multiple Cases." *Production Planning & Control* 36, no. 13: 1774–1791. <https://doi.org/10.1080/09537287.2024.2415417>.
- López-Concepción, A., A. I. Gil-Lacruz, and I. Saz-Gil. 2022. "Stakeholder Engagement, CSR Development, and SDGs Compliance: A Systematic Review From 2015 to 2021." *Corporate Social Responsibility and Environmental Management* 29, no. 1: 19–31. <https://doi.org/10.1002/csr.2170>.
- Mann, E. C., N. Safari, J. Oetzel, S. Dillon, and A. J. Williamson. 2024. "Less Is More? Communicating SDG Orientation and Enterprises' Economic Performance." *Journal of Business Venturing Insights* 22: e00470. <https://doi.org/10.1016/j.jbvi.2024.e00470>.
- Méndez-León, E., R. Díaz-Pichardo, T. Reyes-Carrillo, and M. Del Rosario Reyes-Santiago. 2024. "What Is Unique About Sustainable Business Models for the Base of the Pyramid?" *Business Strategy and the Environment* 33, no. 3: 2345–2366. <https://doi.org/10.1002/bse.3609>.
- Menghwar, P. S., and A. Daood. 2021. "Creating Shared Value: A Systematic Review, Synthesis and Integrative Perspective." *International Journal of Management Reviews* 23, no. 4: 466–485. <https://doi.org/10.1111/ijmr.12257>.
- Mina, H., D. Kannan, S. M. Gholami-Zanjani, and M. Biuki. 2021. "Transition Towards Circular Supplier Selection in Petrochemical Industry: A Hybrid Approach to Achieve Sustainable Development Goals." *Journal of Cleaner Production* 286: 125273. <https://doi.org/10.1016/j.jclepro.2020.125273>.
- Mio, C., S. Panfilo, and B. Blundo. 2020. "Sustainable Development Goals and the Strategic Role of Business: A Systematic Literature Review." *Business Strategy and the Environment* 29, no. 8: 3220–3245. <https://doi.org/10.1002/bse.2568>.
- Mishra, R., R. K. Singh, and N. P. Rana. 2022. "Developing Environmental Collaboration Among Supply Chain Partners for Sustainable Consumption & Production: Insights From an Auto Sector Supply Chain." *Journal of Cleaner Production* 338: 130619. <https://doi.org/10.1016/j.jclepro.2022.130619>.
- Modgil, S., S. Gupta, and B. Bhushan. 2020. "Building a Living Economy Through Modern Information Decision Support Systems and UN Sustainable Development Goals." *Production Planning & Control* 31: 967–987. <https://doi.org/10.1080/09537287.2019.1695916>.
- Mogaji, E., R. E. Hinson, A. C. Nwoba, and N. P. Nguyen. 2021. "Corporate Social Responsibility for Women's Empowerment: A Study on Nigerian Banks." *International Journal of Bank Marketing* 39, no. 4: 516–540. <https://doi.org/10.1108/ijbm-04-2020-0195>.
- Moneva, J. M., M. J. Bonilla-Priego, and E. Ortas. 2020. "Corporate Social Responsibility and Organisational Performance in the Tourism

- Sector." *Journal of Sustainable Tourism* 28, no. 6: 853–872. <https://doi.org/10.1080/09669582.2019.1707838>.
- OECD. 2025. "Policy Coherence for Sustainable Development. Organisation for Economic Co-Operation and Development." <https://www.oecd.org/en/topics/policy-coherence-for-sustainable-development.html>.
- Ordonez-Ponce, E., A. Clarke, and A. MacDonald. 2021. "Business Contributions to the Sustainable Development Goals Through Community Sustainability Partnerships." *Sustainability Accounting, Management and Policy Journal* 12, no. 6: 1239–1267. <https://doi.org/10.1108/sampj-03-2020-0068>.
- Othman, R., and R. Ameer. 2024. "Rethinking Accounting Education for a Sustainable Future: Charting a Course for Sustainable Development Goals 2030." *Meditari Accountancy Research* 32, no. 5: 1809–1836. <https://doi.org/10.1108/medar-05-2023-2009>.
- Panfilio, S., and C. Mio. 2025. "Sustainable Development Goals and the Responsible Business." In *The Routledge Companion to Responsible Business*, edited by S. Markovic, A. Lindgreen, F. Maon, and C. Sancha, 80–94. Routledge.
- Pizzi, S., F. Rosati, and A. Venturelli. 2021. "The Determinants of Business Contribution to the 2030 Agenda: Introducing the SDG Reporting Score." *Business Strategy and the Environment* 30, no. 1: 404–421. <https://doi.org/10.1002/bse.2628>.
- Rahi, A. F. 2024. "Unpacking Women's Power on Corporate Boards: Gender Reward in Board Composition." *International Journal of Disclosure and Governance* 22: 64–80. <https://doi.org/10.1057/s41310-024-00228-5>.
- Rizzato, F., A. Tonelli, S. Fiandrino, and A. Devalle. 2024. "Analysing SDG Disclosure and Its Impact on Integrated Thinking and Reporting." *Meditari Accountancy Research* 32, no. 3: 803–831. <https://doi.org/10.1108/medar-07-2022-1751>.
- Rosati, F., V. P. Rodrigues, F. Cosenz, and J. Li-Ying. 2023. "Business Model Innovation for the Sustainable Development Goals." *Business Strategy and the Environment* 32, no. 6: 3752–3765. <https://doi.org/10.1002/bse.3334>.
- Roshan, R., and K. C. Balodi. 2024. "Sustainable Business Model Innovation of an Emerging Country Startup: An Imprinting Theory Perspective." *Journal of Cleaner Production* 475: 143687. <https://doi.org/10.1016/j.jclepro.2024.143687>.
- Rubinelli, S. 2018. "Logos and Pathos in Aristotle's Rhetoric: A Journey Into the Role of Emotions in Rational Persuasion in Rhetoric." *Revue Internationale de Philosophie* 286, no. 4: 361–374. <https://www.jstor.org/stable/26863737>.
- Sachs, J., C. Kroll, G. Lafortune, G. Fuller, and F. Woelm. 2022. *Sustainable Development Report 2022*. Cambridge University Press.
- Satapathy, J., and T. Paltasingh. 2022. "CSR Practices and Sustainable Development Goals: Exploring the Connections in Indian Context." *Business and Society Review* 127, no. 3: 617–637. <https://doi.org/10.1111/basr.12285>.
- Schwartz, J. 1966. "Kenneth Burke, Aristotle, and the Future of Rhetoric." *College Composition and Communication* 17: 210–216.
- SDNS Europe. 2024. *Europe Sustainable Development Report 2023/2024*. Dublin University Press. <https://eu-dashboards.sdgindex.org>.
- Selmier, W. T., and A. M. Newenham-Kahindi. 2021. "Communities of Place, Mining Multinationals and Sustainable Development in Africa." *Journal of Cleaner Production* 292: 125709. <https://doi.org/10.1016/j.jclepro.2020.125709>.
- Sharma, E., and G. N. McLean. 2024. "Corporate Social Responsibility, the United Nations' Sustainable Development Goals and Financial Performance, With Implications for Human Resource Development." *European Journal of Training and Development* 49: 516–532. <https://doi.org/10.1108/ejtd-10-2023-0151>.
- Sharma, R., and H. Gupta. 2024. "Leveraging Cognitive Digital Twins in Industry 5.0 for Achieving Sustainable Development Goal 9: An Exploration of Inclusive and Sustainable Industrialization Strategies." *Journal of Cleaner Production* 448: 141364. <https://doi.org/10.1016/j.jclepro.2024.141364>.
- Siakwah, P., R. Musavengane, and L. Leonard. 2020. "Tourism Governance and Attainment of the Sustainable Development Goals in Africa." *Tourism Planning & Development* 17, no. 4: 355–383. <https://doi.org/10.1080/21568316.2019.1600160>.
- Skare, M., B. Gavurova, and M. Rigelsky. 2024. "Quantification of the Impact of Innovations in Industry and Infrastructure for Sustainable Circular Economy Production and Consumption." *Journal of Innovation & Knowledge* 9, no. 1: 100456. <https://doi.org/10.1016/j.jik.2023.100456>.
- Soh, K. L., and W. P. Wong. 2021. "Circular Economy Transition: Exploiting Innovative Eco-Design Capabilities and Customer Involvement." *Journal of Cleaner Production* 320: 128858. <https://doi.org/10.1016/j.jclepro.2021.128858>.
- Stucki, I., and F. Sager. 2018. "Aristotelian Framing: Logos, Ethos, Pathos and the Use of Evidence in Policy Frames." *Policy Sciences* 51: 373–385. <https://doi.org/10.1007/s11077-018-9322-8>.
- Tabares, S. 2021. "Do Hybrid Organizations Contribute to Sustainable Development Goals? Evidence From B Corps in Colombia." *Journal of Cleaner Production* 280: 124615. <https://doi.org/10.1016/j.jclepro.2020.124615>.
- Talwar, S., A. Dhir, A. T. Madanaguli, and P. Ractham. 2024. "SDG-Embeddedness in Business School Operations: State-of-the-Art Literature, Ground Realities, and Measurement Parameters." *IEEE Transactions on Engineering Management* 71: 13428–13445. <https://doi.org/10.1109/tem.2023.3236609>.
- Tomasella, B., A. Wylie, and D. Gill. 2023. "The Role of Higher Education Institutions (HEIs) in Educating Future Leaders With Social Impact Contributing to the Sustainable Development Goals." *Social Enterprise Journal* 19, no. 4: 329–346. <https://doi.org/10.1108/sej-03-2022-0027>.
- Torkayesh, A. E., R. Alizadeh, and L. Soltanisehat. 2024. "Assessing Entrepreneurial Performance of G7 Countries Under Context of Social Sustainable Development Goals: A Multicriteria Decision Analysis Approach." *IEEE Transactions on Engineering Management* 71: 4918–4929. <https://doi.org/10.1109/TEM.2022.3227240>.
- UN. 2015. *Transforming Our World: The 2030 Agenda for Sustainable Development*. United Nations, Department of Economic and Social Affairs. <https://sdgs.un.org/2030agenda>.
- UN. 2023. *The Sustainable Development Goals Report*. Special ed. United Nations, Department of Economic and Social Affairs. <https://unstats.un.org/sdgs/report/2023/The-Sustainable-Development-Goals-Report-2023.pdf>.
- Vallet-Bellmunt, T., I. Fuertes-Fuertes, and M. L. Flor. 2023. "Reporting Sustainable Development Goal 12 in the Spanish Food Retail Industry: An Analysis Based on Global Reporting Initiative Performance Indicators." *Corporate Social Responsibility and Environmental Management* 30, no. 2: 695–707. <https://doi.org/10.1002/csr.2382>.
- van Eck, N. J., and L. Waltman. 2023. "Vosviewer Manual." <https://www.vosviewer.com/features/highlights#data>.
- Venturelli, A., and C. Mio. 2025. *The Routledge Handbook of Accounting for the Sustainable Development Goals*. Routledge International Handbooks.
- Venturelli, A., and S. Pizzi. 2025. "SDG Reporting in Social and Environmental Accounting Research." In *The Routledge Handbook of Accounting for the Sustainable Development Goals*, edited by A. Venturelli and C. Mio, 414–426. Routledge.
- Vinodkumar, N., and G. Alarifi. 2022. "Environmental Social Governance: A Core Value to Responsible Stakeholders and Stock

Market Sustainability in the Kingdom of Saudi Arabia.” *Journal of Sustainable Finance & Investment* 12, no. 4: 1085–1101. <https://doi.org/10.1080/20430795.2020.1827602>.

WBCSD. 2024. “Building the Business Case for Sustainability: A Practical Guide for Business Connecting Financial Drivers and Opportunities.” WBCSD in Collaboration With KPMG. https://www.wbcsd.org/wp-content/uploads/2024/07/Building-the-business-case-for-sustainability_Main-Report.pdf.

Weybrecht, G. 2022. “Business Schools Are Embracing the SDGs—But Is It Enough? How Business Schools Are Reporting on Their Engagement in the SDGs.” *International Journal of Management Education* 20, no. 1: 100589. <https://doi.org/10.1016/j.ijme.2021.100589>.

Zucchella, A., F. Sanguineti, and F. Contino. 2023. “Collaborations Between MNEs and Entrepreneurial Ventures: A Study on Open Innovability in the Energy Sector.” *International Business Review* 33, no. 5: 102228. <https://doi.org/10.1016/j.ibusrev.2023.102228>.

Supporting Information

Additional supporting information can be found online in the Supporting Information section. **Data S1:** Supporting information.

Appendix A

The Most Frequently Occurring Keywords³ in Each Cluster (as a % of All Papers in Each Cluster)

Cluster 1		Cluster 2		Cluster 3		Cluster 4		Cluster 5		Cluster 6		Cluster 7	
Keywords	Occurrence	Keywords	Occurrence	Keywords	Occurrence	Keywords	Occurrence	Keywords	Occurrence	Keywords	Occurrence	Keywords	Occurrence
Sustainable Development Goals	44%	Sustainable Development Goals	40%	Sustainable Development Goals	52%	Sustainable Development Goals	38%	Sustainable Development Goals	45%	Sustainable Development	41%	Sustainable Development Goals	50%
Sustainable Development	29%	Sustainable Development	28%	Sustainable Development	29%	Sustainable Development Goal	36%	Sustainable Reporting	29%	Sustainable Development Goal	38%	Sustainable Development Goal	27%
Sustainable Development Goal	27%	Sustainable Development Goal	27%	Sustainable Development Goal	29%	Sustainable Development	35%	Sustainable Development	25%	Sustainable Development Goals	38%	Sustainable	17%
SDGs	20%	Sustainability	21%	Sustainability	19%	Circular Economy	26%	Sustainability	18%	Sustainability	30%	Sustainable Development	15%
Sustainability	15%	Sustainable Development Goals (SDGs)	14%	Corporate Governance	14%	Sustainability	24%	Sustainable Development Goals (SDGs)	18%	Supply Chain Management	25%	Sustainable Development Goals (SDGs)	13%
Sustainable Development Goals (SDGs)	11%	Corporate Social Responsibility	12%	Sustainable Development Goals (SDGs)	14%	Innovation	13%	SDGs	17%	Sustainable Development Goals (SDGs)	15%	Tourism	13%
Planning	8%	SDG	8%	ESG	11%	Sustainable Development Goals (SDGs)	12%	Sustainable Development Goal	16%	Supply Chains	14%	Ecotourism	10%
SDG	6%	Climate Change	5%	SDG	10%	Industry 4.0	10%	Corporate Sustainability	10%	United Nations	8%	Sustainable Tourism	10%
Decision-Making	6%	United Nations	5%	United Nations	9%	SDGs	9%	Content Analysis	8%			Hospitality	10%
United Nations	6%	CSR	4%	Investments	8%	Systematic Literature Review	7%	Global Reporting Initiative	8%				
Covid-19	5%	Economic And Social Effects	4%	SDGs	8%	United Nations	5%	Non-Financial Reporting	7%				

Cluster 1		Cluster 2		Cluster 3		Cluster 4		Cluster 5		Cluster 6		Cluster 7	
Keywords	Occurrence	Keywords	Occurrence	Keywords	Occurrence	Keywords	Occurrence	Keywords	Occurrence	Keywords	Occurrence	Keywords	Occurrence
Economic And Social Effects	4%	Gender Equality	4%	Board Gender Diversity	7%			SDG Disclosure	7%				
Corporate Sustainability	3%	SDG	4%	Sustainable Finance	7%			Institutional Theory	6%				
Cross-Sector Partnerships	3%	Stakeholder	4%	Investment	6%			Integrated Reporting	6%				
		Environmental Economics	3%	Environmental Economics	5%			Reporting	6%				
				Financial Performance	5%			United Nations	6%				
				Gender Diversity	5%								
				Risk Assessment	5%								

Appendix B

Papers Related to SDGs From 2020 to 2024 (as a % of All Papers in Each Year)

	2020	2021	2022	2023	2024
Papers related to SDG 1	11%	9%	5%	1%	1%
Papers related to SDG 2	1%	2%	3%	1%	1%
Papers related to SDG 3	3%	6%	2%	1%	1%
Papers related to SDG 4	8%	0%	6%	1%	1%
Papers related to SDG 5	3%	5%	2%	2%	2%
Papers related to SDG 6	2%	2%	1%	1%	0%
Papers related to SDG 7	3%	5%	4%	2%	1%
Papers related to SDG 8	38%	24%	11%	1%	3%
Papers related to SDG 9	18%	20%	8%	3%	2%
Papers related to SDG 10	2%	3%	2%	0%	1%
Papers related to SDG 11	8%	6%	4%	1%	1%
Papers related to SDG 12	47%	37%	20%	5%	3%
Papers related to SDG 13	20%	5%	3%	2%	2%
Papers related to SDG 14	2%	0%	0%	0%	0%
Papers related to SDG 15	1%	0%	0%	0%	0%
Papers related to SDG 16	8%	7%	5%	1%	0%
Papers related to SDG 17	21%	10%	9%	1%	1%
Papers addressing all 17 SDGs	2%	3%	11%	9%	1%
Papers addressing SDGs in a general manner	0%	0%	20%	71%	74%