

Materiality, Non-Financial Reporting and SDGs Integration: A Critical Analysis of Corporate Practices from the PSI Index

António Rodrigues*, Rui Fragoso**, Miguel Varela***

Abstract

This study analyzes how 16 companies listed on the Portuguese PSI Index integrate material sustainability issues and the Sustainable Development Goals (SDGs) into corporate strategies and non-financial reports (2021–2024). The PSI Index provides a distinctive empirical setting due to its small, concentrated capital market and strong exposure to European sustainability regulation. Using a longitudinal qualitative content analysis and an adapted PwC framework, the article examines the nexus between materiality assessments, SDG prioritization, and strategic integration. Results reveal highly heterogeneous reporting practices. Energy, utilities, forestry, and materials companies consistently translate material issues into priority SDGs backed by KPIs and measurable targets. Conversely, retail, services, finance, and construction firms remain mostly descriptive. The study contributes by providing longitudinal evidence in the pre-CSR transition, linking materiality maturity with SDG reporting quality, and offering a replicable coding approach to assess strategic integration. Limitations include reliance on published reports and sectoral diversity.

Keywords: Materiality, Dual Materiality, Non-Financial Reporting, Sustainable Development Goals, PSI Index, Corporate Sustainability Reporting, Corporate Sustainability Reporting Directive.

* Associate Professor of Management, ISG - Business & Economics School, Center for Advanced Studies in Management and Economics (CEFAGE) - University of Évora, Management Research Center (CIGEST), Lisbon, Portugal (antonio.rodrigues@isg.pt)

** Full Professor in Management, Center for Advanced Studies in Management and Economics (CEFAGE) - University of Évora, Portugal (rfragoso@uevora.pt)

*** Full Professor in Management, ISG - Business & Economics School, Center for Advanced Studies in Management and Economics (CEFAGE) - University of Évora, Management Research Center (CIGEST), Lisbon, Portugal (miguel.varela@isg.pt)



1. Overview

Growing awareness of global environmental, social, and economic challenges has driven companies to integrate sustainability practices into their corporate strategies. The SDGs defined by the United Nations in 2015, have become a universal benchmark to guide companies towards the goals of the 2030 Agenda. Companies listed on the PSI index of Euronext Lisbon, which includes the largest and most liquid companies in Portugal, incorporate the SDGs into their non-financial reports, reflecting their commitment to creating sustainable value (Branquinho, 2024; SDG Observatory, 2023).

Regulatory and social pressure on companies to report their ESG performance has driven the evolution of non-financial reporting. The European Corporate Sustainability Reporting Directive (CSRD) represents a milestone in this process, requiring greater rigor, comparability, and strategic integration of sustainability (European Commission, 2022).

Materiality, as a central topic in the preparation of sustainability reports, allows companies to identify the most relevant issues for their stakeholders and their business model. The literature highlights that the definition of materiality remains marked by subjectivity a lack of standardization, which compromises comparability between companies and sectors (Mio & Fasan, 2013; Baumüller & Sopp, 2022). The transition to the concept of dual materiality, referred to in the CSRD, reinforces the need to simultaneously consider the financial and socio-environmental impacts of business activities (PwC, 2021). Studies such as those by Rodrigues Dias (2022) show that, even in companies with advanced reporting practices, such as oil companies, a gap persists in the clear integration of material issues with stakeholder interests.

Prioritizing the SDGs in business strategies has been the subject of analysis by several observatories and studies. Gramonski et al. (2025) demonstrate that the integration of the SDGs is more effective when aligned with customized strategic frameworks, sound governance practices, and the use of digital technologies. In Portugal, the SDG Observatory of Católica Lisbon reveals that more than 90% of large Portuguese companies recognize the SDGs as a strategic opportunity, with SDG 8, 13 and 9 being commonly chosen (SDG Observatory, 2023; BCSD Portugal, 2020).

Regarding the reporting of contributions to the SDGs, the methodology applied by PricewaterhouseCoopers (PwC) within the SDG Reporting Challenge offers a structured and comparable approach. This methodology is based on the content analysis of corporate reports, evaluating the presence of 34 indicators representative of the 17 SDGs, as well as the existence of targets, KPIs, and strategic integration (PwC, 2018; Scott, 2018). The analysis of more than 700 companies in 21 countries revealed that only 23% disclose significant indicators and that less than 30% explicitly integrate the SDGs into their business strategy.

The academic relevance of this article also derives from a gap in prior research. Existing studies show that companies often mention SDGs selectively, but less is known about whether materiality assessments, SDG prioritization and reporting

quality operate as an integrated cycle. This study therefore does not only describe which SDGs are reported; it examines whether material topics are translated into strategy, KPIs and measurable targets. In doing so, it responds to debates on the quality and depth of non-financial reporting, the operationalization of dual materiality, and the distinction between symbolic SDG disclosure and strategic SDG integration.

This setting is theoretically and empirically relevant for three reasons. First, Portugal combines the European regulatory pressure associated with the CSRD and European Sustainability Reporting Standards (ESRS) with a relatively concentrated stock market, making the PSI Index a suitable case for observing how large listed firms respond to institutional pressure. Second, the PSI Index brings together sectors with different exposure to environmental, social and governance risks, allowing comparison between energy-intensive firms and firms whose materiality is more social, governance-related or value-chain oriented. Third, the Portuguese context has received less longitudinal attention than larger European markets, which makes the 2021-2024 period particularly useful for understanding the transition from voluntary or semi-structured non-financial disclosure to more standardized sustainability reporting.

This study addresses the following research questions:

RQ1: How do PSI Index companies translate material sustainability issues into corporate strategies, policies and governance mechanisms?

RQ2: To what extent does the prioritization of SDGs reflect companies' materiality assessments rather than a generic exercise?

RQ3: How consistent and measurable is SDG disclosure when assessed through the adapted PwC SDG Reporting Challenge dimensions of SDG identification, strategic integration, KPIs and targets?

The article is structured as follows. Section 2 reviews the literature and develops the analytical gap. Section 3 explains the sample, coding procedure and adapted PwC assessment criteria. Section 4 presents the findings through three key messages concerning materiality integration, SDG prioritization and reporting quality. The final section discusses contributions, limitations and future research.

2. Literature Review

2.1 Non-Financial Reporting

Non-financial reporting has become an essential tool for companies to be accountable to their stakeholders, reflecting ESG concerns. According to Directive 2014/95/EU, transposed into Portuguese law through Law No. 89/2017, certain

large companies are now required to disclose non-financial information relevant to understanding their position, performance, impact, and evolution. With the entry into force of the CSRD, the focus on standardization and verification of reported information intensifies, introducing the European Sustainability Reporting Standards (ESRS). These new standards require greater rigor, broader scope, and improved comparability, and are especially relevant for listed companies, such as those in the PSI Index, which face greater public and regulatory scrutiny. In the approach of Eccles & Krzus (2018), other international standards, such as Global Reporting Initiative (GRI), Sustainability Accounting Standards Board (SASB) and Task Force on Climate-related Financial Disclosures (TCFD), play a fundamental role in structuring reports, reinforcing transparency and investor confidence.

Non-financial reporting has become a strategic tool for communicating companies' ESG performance, especially after the implementation of Directive 2014/95/EU and the more recent CSRD. In Portugal, Decree-Law No. 89/2017 requires large companies to report on ESG issues in their annual reports. However, as demonstrated by Ferreira (2024) and Rodrigues (2023), the quality and depth of disclosures vary significantly among companies listed on the PSI Index, revealing structural gaps in the application of materiality principles and the integration of the SDGs.

In 2018, Ferreira analyzed the integrated and sustainability reports of seven companies in the PSI-20 index, concluding that there is a scarcity of disclosed materiality matrices and a large disparity in the practices adopted. Although all companies include ESG themes, the way stakeholders are involved in defining materiality varies considerably. Employees and official entities are the most frequently referenced stakeholders, but the consultation mechanisms are unclear and inconsistent. The author highlights that the still imprecise regulation and the diversity in disclosure practices result in a lack of harmonization and, consequently, comparability between reports. Rodrigues (2023), in his study of non-financial reports from PSI 20 companies in 2021, identified the most frequently referenced SDGs: 7, 8, 5, and 13. However, most companies do not present specific indicators or quantifiable targets, which makes it difficult to assess the real impact. The author concludes that, although there is a growing concern with sustainability, the integration of the SDGs into corporate reports is still superficial and poorly systematized.

2.2 Reporting Formats and Scope of the Analysis

Integrated reporting is considered in this study only as one of several reporting formats through which companies disclose sustainability information. The analysis does not evaluate integrated reporting as a separate object of study; rather, it includes annual reports, sustainability reports and integrated reports whenever these documents contain non-financial information, materiality assessments, SDG references, indicators or targets.

This distinction is important because the empirical objective is not to compare report formats, but to assess the content and quality of sustainability disclosure across all publicly available corporate reports. Consequently, the focus is on whether the reports - regardless of format - connect material topics with strategy, SDGs, KPIs and measurable targets.

The literature on integrated reporting is therefore used only to support the broader argument that high-quality non-financial disclosure should connect sustainability information with value creation, governance and strategy. This narrower framing avoids overemphasizing integrated reporting when several companies in the sample publish sustainability or annual reports rather than fully integrated reports.

2.3 Materiality and Dual Materiality

In the European context, the discussion on materiality gained new relevance with the CSRD, which introduced the concept of dual materiality, consolidating the obligation to report both the financial impacts of ESG risks and the impacts of business activities on society and the environment. Cooperation between the GRI and European Financial Reporting Advisory Group (EFRAG) sought to align impact materiality and financial materiality, reinforcing the consistency of reports (Cambridge University Press, 2023; PwC, 2023).

The evolution of materiality in non-financial reporting has been central to the academic and regulatory debate. The literature recognizes that the traditional concept of materiality, focused only on information relevant to investors, is not sufficient to capture the complexity of corporate impacts in socio-environmental contexts (Christensen et al., 2021). The notion of dual materiality, introduced by the European Union through Directive 2014/95/EU and reinforced by the CSRD, seeks to address this deficit by requiring companies to report both external risks that affect their economic viability (outside-in) and the impacts they generate on the environment and society (inside-out) (Monciardini et al., 2023). This dual perspective is important because it aligns corporate accountability with a broader vision of responsibility towards society. Adams and Abhayawansa (2022) emphasize that dual materiality should be seen not only as a legal obligation, but as a strategic opportunity for companies to demonstrate legitimacy and create value with stakeholders. Empirical studies, such as that of Göttzsche et al. (2025), show, however, that operationalizing this concept remains a challenge, given that defining clear materiality criteria depends on the interaction between regulatory pressures, stakeholder expectations, and sectoral specificities. However, as Adams and Abhayawansa (2022) argue, dual materiality should not be seen merely as a normative requirement, but as an opportunity for companies to demonstrate organizational responsibility and improve their legitimacy with stakeholders. This approach is closely linked to corporate alignment with the SDGs, where sustainability reporting can contribute to making explicit the role of companies in global sustainable development. The identification of material issues is operationalized through materiality matrices, based on consultation with internal

and external stakeholders (GRI, 2021). However, several authors refer to the subjectivity and variability of these practices, which may compromise their comparability (Maniora, 2017; Adams, 2020).

The literature highlights risks associated with weakly evidenced sustainability disclosure. Maniora (2017) and Cho et al. (2015) show that information overload and symbolic legitimation can reduce the relevance of reporting when disclosures are not supported by metrics, targets or accountability mechanisms. In this article, the terms 'limited SDG integration' and "symbolic reporting" are used to describe disclosure that lacks strategic connection, KPIs or measurable targets. The stronger term 'greenwashing' is avoided unless supported by a clear operational definition and empirical test, which is beyond the scope of this study.

The Standard & Poor's (S&P) Global study (2025) identified that almost half of companies already incorporate dual materiality, although only 46% are able to quantify real metrics of external impact, revealing that the transition to quality reporting is still underway. That study found that only 48% of global companies structure their reports in line with the logic of dual materiality, and less than half objectively quantify social and environmental impacts. Götsche et al. (2025) call this phenomenon "dynamic materiality": issues initially considered immaterial (such as carbon emissions or gender equality) can become financially relevant as regulatory and social contexts evolve. From a methodological point of view, the literature recognizes structural problems. Maniora's study (2017) indicates that information overload impairs the relevance of reporting, while Hahn and Kühnen (2013) point out that the diversity of stakeholder expectations hinders consensus on materiality. This scenario can lead to greenwashing phenomena, in which companies report extensively but without real impact (Cho et al., 2015).

In Portugal, Ferreira (2024) and Loureiro et al. (2024) analyzed reports from companies listed on the PSI-20 index, concluding that although there is an increase in references to the SDGs, most companies do not present clear quantitative metrics or robust materiality matrices. Brito Lima (2021) reinforces this idea by demonstrating that, between 2017 and 2019, the sustainability reports of Portuguese companies showed inconsistency and lacked depth. Faria et al. (2024) add that the average quality of reports in Portugal in 2021 did not exceed 20% compliance with the GRI Standards. These results suggest that PSI Index companies are still in a transitional phase, in which non-financial reports are used more as instruments of reputation and legitimacy than as effective mechanisms for accountability and strategic integration with the SDGs. On the other hand, Faria et al. (2024) concluded in their study that the quality of disclosure was relatively low, not exceeding 20% compliance, and that no statistically significant impact on return on equity (ROE) was found. Another study by Monteiro et al. (2024) concluded that Portuguese companies that publish sustainability reports do not show significant differences in financial indicators, such as return on assets (ROA), compared to those that do not disclose them. These results suggest that, in Portugal, the financial benefits of disclosure are still limited, possibly due to an early stage of maturity and the difficulty of translating ESG metrics into tangible economic value.

Contemporary approaches to materiality increasingly emphasize the integration of environmental and social objectives into core business activities rather than treating sustainability as a peripheral communication exercise (Cici & D’Isanto, 2017). This perspective aligns with the evolution towards double materiality, which considers both the impact of sustainability issues on firms and the impact of firms on society and the environment.

2.4 Companies' Contribution to the Sustainable Development Goals (SDGs)

The UN's 2030 Agenda, which establishes 17 Sustainable Development Goals, challenges the business sector to contribute to global goals related to poverty eradication, gender equality, climate action, among others. Companies have integrated the SDGs into their non-financial reports, either as a strategic tool or as a communication instrument (UN Global Compact, 2018).

The global framework of the SDGs has been strongly influencing non-financial reports. Since 2015, the United Nations has defined the 17 SDGs as universal goals for 2030, and companies are increasingly called upon to demonstrate how they contribute to their achievement. According to KPMG (2022), more than 70% of the largest global companies already explicitly refer to the SDGs in their sustainability reports, although only a fraction present quantifiable impact indicators. The literature points to a trend in which the SDGs are frequently used in a declarative way, as a reputation tool, but without corresponding verifiable metrics (van der Waal & Thijssens, 2020). Authors such as Loureiro et al. (2024) analyzed Portuguese companies between 2016 and 2022 and found that, despite a growing reference to the SDGs in reports, most still do not have robust mechanisms for monitoring the effective impact of their activities. This misalignment between discourse and practice is also identified by Cho et al. (2015), who describe the existence of “organized hypocrisy” in sustainability reports, where the corporate narrative overshadows the rigorous measurement of results.

2.5 Corporate Sustainability in Portugal and the PSI Index

The PSI index, composed of the largest companies listed on the Portuguese stock exchange, represents a privileged sample for analyzing the evolution of non-financial reporting in Portugal. These companies, such as EDP, Galp, Jerónimo Martins, and Sonae, have stood out in the adoption of ESG practices and in the disclosure of sustainability reports according to international standards. Studies by Deloitte Portugal 2023, APEE 2022, mention greater maturity in reporting, but also point to gaps in the clear definition of materiality and in the quantification of the contribution to the SDGs. The Portuguese context thus reveals a tension between regulatory requirements and the effective adoption of transformative sustainability practices. National and international literature converges on the recognition that non-financial reports, in the period 2021-2023, are at a point of transition; on the one hand, they reflect progress in the integration of dual materiality and alignment

with the SDGs, but on the other hand, they continue to present gaps in terms of rigor, comparability, and measurable impact.

Another aspect to consider is the link between materiality and the SDGs. The literature identifies a growing trend of companies associating their sustainability reports with the SDGs, but often superficially. Van der Waal and Thijssens (2020) point out that corporate reporting tends to select SDGs with greater visibility or more aligned with the company's reputation, neglecting objectives that could imply more profound changes in business models. KPMG (2022) confirms that, although most global companies already mention the SDGs, only a minority establish quantitative indicators and verifiable targets. Cho et al. (2015) introduced the notion of “organized hypocrisy” in sustainability reporting, describing practices in which companies construct sophisticated institutional narratives without a real correspondence in terms of impact. This critique remains relevant and is visible in recent studies on European markets. For example, Jørgensen et al. (2022) demonstrate that many companies use materiality matrices more as a tool for symbolic legitimization than as a strategic decision-making instrument.

In the Portuguese context, research has followed this debate, albeit in an initial stage. Brito Lima (2021), when analyzing PSI Index companies between 2017 and 2019, found large disparities in the quality of sustainability reports, with only a significant portion explicitly referencing the SDGs. Other authors, Faria et al. (2024), in subsequent studies, found that even after the entry into force of new regulations, compliance with GRI guidelines and dual materiality remained low, revealing difficulties in the practical operationalization of the concept. Ferreira (2024), in his study, concluded that PSI Index companies tend to develop materiality matrices based on perceptions of internal and external stakeholders, but rarely translate these exercises into clear sustainability policies or effective alignment with the 17 SDGs. Loureiro et al., (2024) reinforce this finding by analyzing the relationship of Portuguese companies with the SDGs, concluding that, between 2016 and 2022, mentions increased significantly, but the adoption of objective and auditable metrics remains limited.

When comparing the literature with other European markets, the results are similar. In the Spanish case, studies on IBEX-35 companies (Martínez-Ferrero & Lozano, 2021) identify that, although companies present higher levels of disclosure, the reports lack a direct link between materiality and impacts on the SDGs. In the German context, authors such as Busch and Friede (2021) argue that the effective integration of dual materiality only becomes robust when associated with harmonized reporting frameworks, such as those developed by the EFRAG and the Global Reporting Initiative.

The transition from voluntary sustainability reporting frameworks toward the mandatory requirements established by the CSRD and ESRS is expected to significantly increase comparability, transparency and accountability in corporate sustainability disclosures (Fornasari & Traversi, 2024). This regulatory shift has important implications for listed companies in Portugal, particularly those included in the PSI index, as it raises the level of standardization expected in both reporting practices and the underlying measurement of ESG performance.

Within this evolving institutional context, corporate governance plays a central role in translating regulatory requirements into organizational practice. Effective sustainability transformations depend on active board involvement in defining sustainability priorities, monitoring ESG performance, and ensuring alignment between long-term value creation and stakeholder expectations (Salvioni & Almici, 2022). In this sense, governance structures act as a mediating mechanism between external reporting pressures and internal strategic integration, shaping how companies respond to increasing demands for ESG transparency and accountability.

2.6 Critical Analysis of Literature

There seems to be a consensus on the strategic importance of ESG disclosure and the integration of the SDGs. However, the debate among authors regarding the concept of materiality remains. Hahn and Kühnen (2013) and Milne and Gray (2013) state that the definition of materiality in sustainability reports is often vague and subjective, hindering comparability between companies and consequently the usefulness of the information for stakeholders. From another point of view, studies by Cho et al. (2015) and Boiral (2013) suggest that without a strong normative framework and stakeholder engagement mechanisms, materiality risks being more associated with reputation than with organizational transformation.

Another debate in the literature focuses on the quality and depth of non-financial reporting. Although the existence of international standards such as GRI, SASB, and IIRC aims to contribute to some standardization, studies such as those by Michelon et al. (2015) and Stubbs and Higgins (2014) conclude that this standardization in terms of compliance with these standards alone does not guarantee the quality of the information. In this sense, Unerman and Zappettini (2022) state that, in many cases, reports are presented without measurable indicators, verifiable targets, or empirical evidence of impact. Another debate is between reporting and organizational transformation. Herzig and Schaltegger (2006) and Arjaliès and Mundy (2013) argue that sustainability reporting is only effective when integrated into management systems and accompanied by cultural changes. However, most empirical studies reveal that reporting practices continue to be treated as communication tools, without a direct relationship to strategy or internal decision-making processes (Gray, 2006; Moneva et al., 2006). The credibility of reports is another debate centered on the absence of independent audits and the lack of external verification as factors that compromise stakeholder trust and limit the function of non-financial reporting (Boiral, 2013; Adams, 2020). But, Ioannou and Serafeim (2017) conclude that mandatory reporting can generate improvements in ESG performance, but only when accompanied by accountability and transparency mechanisms.

The literature in general demonstrates that materiality continues to be applied in a somewhat unconscious way; non-financial reporting lacks depth and strategic integration; and the contribution to the SDGs is mostly artificial. These challenges

require a more normative approach, with monitoring standards, genuine stakeholder engagement, and the real integration of sustainability into business management.

3. Methodology

This study adopts an exploratory research approach combining qualitative content analysis, descriptive quantitative analysis, and disclosure assessment to examine materiality practices and the integration of the SDGs in non-financial reports published by PSI-listed companies on their official websites. The unit of analysis is the company-year observation. The final dataset comprises 16 PSI companies over four reporting years (2021-2024), corresponding to 64 company-year observations.

The empirical analysis covers all companies included in the Euronext Lisbon PSI Index during the study period. Consequently, the research examines the full population of PSI-listed companies rather than a sample. Reports analysed include sustainability reports, integrated reports, annual reports containing sustainability disclosures, and other non-financial reporting documents publicly available on corporate websites. Table 1 presents the companies included in the study and the corresponding sources used to access the reports analysed.

The coding process was based on a structured codebook designed to ensure consistency and comparability across observations. The codebook recorded: (1) material topics disclosed in materiality matrices or equivalent sustainability sections; (2) strategic initiatives, policies, governance structures, risk management processes, or targets associated with those topics; (3) SDGs explicitly prioritized or linked to business activities; (4) the presence of KPIs, quantitative indicators, baselines, monitoring mechanisms, and measurable targets; and (5) the overall SDG reporting quality level.

To address Research Questions 1 and 2, the study applies a structured content-analysis framework. Each report was systematically reviewed to identify the material topics disclosed by the company. Individual topics were subsequently grouped into four analytical categories: (1) environmental and climate-related issues; (2) natural resources, circular economy and biodiversity; (3) social, people and community issues; and (4) governance, value chain and compliance issues.

Table 1: Access Links to Reports (2021-2024) of All 16 Companies Investigated

Banco Comercial Português (BCP)	BCP – Annual Reports (includes ESG) https://ind.millenniumbcp.pt/pt/Institucional/sustentabilidade/Pages/relatorios_anuais.aspx
Galp Energia	Galp – Annual & Integrated Reports (includes ESG) https://www.galp.com/corp/en/investors/reports-and-presentations/reports-and-results
EDP (Energias de Portugal)	EDP – Integrated Annual & Sustainability Reports https://edp.com/en/responsible-action/transparency-and-reports/reports

EDP Renováveis	EDP Renováveis – Reports & Presentations (Investor Relations) https://www.edpr-investors.com/en/investor-information/reports-and-presentations/reports-and-presentations
Jerónimo Martins	Jerónimo Martins – Sustainability / Corporate Responsibility Reports https://www.jeronimomartins.com/en/sustainability/corporate-responsibility-publications/
NOS	NOS – Annual Reports (includes ESG) https://www.nos.pt/pt/institucional/investidores/publicacoes-e-comunicados/resultados
Corticeira Amorim	Corticeira Amorim – Sustainability & Reports https://www.amorim.com/en/sustainability/reports/
Altri	Altri – Sustainability/Annual Reports https://altri.pt/pt/sustentabilidade/relatorios
The Navigator Company	Navigator – Annual Reports (includes ESG) https://thenavigatorcompany.com/en/investors/annual-report/
REN – Redes Energéticas Nacionais	REN – Reports & Publications (includes Annual Reports with sustainability) https://www.ren.pt/en-gb/investors/results-and-presentations
Semapa	Semapa – Annual & Sustainability Reports (Investor Reports) https://www.semapa.pt/en/investors/financial-information/
Mota-Engil	Mota-Engil – Sustainability & Annual Reports https://www.mota-engil.com/en/investors/investor-kit/
CTT - Correios de Portugal	CTT – Integrated & Sustainability Reports https://www.ctt.pt/grupo-ctt/sustentabilidade/estrategia-e-principios/relatorios-e-indices
Ibersol	Ibersol – Annual Reports (includes sustainability) https://www.ibersol.pt/en/investors/reports/annual-reports
Sonae	Sonae – Integrated & Sustainability Reports https://www.sonae.pt/pt/investidores/informacao-financeira/
Teixeira Duarte	Teixeira Duarte – Sustainability & Annual Reports (access reports & statements) https://www.teixeiraduarte.pt/en/investors/financial-information/

The analysis further examined whether material topics were linked to corporate strategies, policies, governance structures, risk management processes, operational initiatives, or performance targets. In addition, SDGs were coded only when companies explicitly identified them as priorities or clearly linked them to material topics, business activities, governance mechanisms, or sustainability strategies. This procedure reduces the risk of treating generic SDG references or the mere use of SDG icons as evidence of meaningful strategic integration.

The coding framework was designed to ensure transparency regarding how evidence was extracted from the reports and how qualitative disclosures were transformed into comparable company-year observations. The coding framework is summarized in Table 2 and provides the operational basis for transforming qualitative disclosures into comparable company-year observations. Descriptive statistics were subsequently calculated using frequencies and percentages to support the interpretation of the findings.

Table 2: Coding Rules

Dimension	Coding Rule	Operational Indicator
Material topics	Coded when explicitly identified in a materiality matrix, material topic list or equivalent ESG section.	Topic category and company-year frequency.
Strategic integration	Coded when a material topic is linked to strategy, policy, governance, risk management, targets or operational initiatives.	Presence/absence and supporting evidence.
SDG prioritization	Coded only when SDGs are explicitly prioritized or connected to business activities.	SDG number and frequency across 64 observations.
KPIs and targets	Coded when indicators, baselines, annual monitoring or measurable targets are disclosed.	Type of metric and disclosure characteristics.
Reporting quality	Classified as low, medium or high based on the degree of SDG integration, measurement and monitoring.	Quality category by company-year observation.

To address Research Question 3, the quality and depth of SDG reporting were assessed using an adapted version of the PwC SDG Reporting Challenge methodology (PwC, 2020). This methodology was originally developed to evaluate how companies engage with the SDGs and integrate them into their strategies and operations. The adapted framework assesses three core dimensions: (1) identification of relevant SDGs; (2) integration of SDGs into corporate strategy; and (3) measurement through indicators, KPIs, targets, and monitoring mechanisms.

The adaptation is explicitly limited to information disclosed in publicly available reports and therefore evaluates disclosure quality rather than underlying corporate performance or internal management systems. This approach enables a consistent and comparable assessment of SDG disclosure practices across companies and over time. Given the exploratory nature of the study and the objective of ensuring coding consistency across the 64 company-year observations, the adapted framework employs a three-level classification scale (low, medium, and high), allowing for a clear and comparable assessment of SDG reporting quality.

A company-year observation was classified as low when the report only mentioned SDGs or used SDG icons without explaining their relevance to the business. A medium classification was assigned when priority SDGs were

identified and discussed, but indicators or measurable targets remained limited. A high classification was assigned when SDGs were clearly integrated into corporate strategy and supported by KPIs, quantified targets, monitoring processes, evidence of progress over time, and ongoing performance monitoring (Table 3).

Table 3: Reporting Characteristics

Level	Definition	Reporting Characteristics
High	Strategic integration and measurement	SDGs are integrated into corporate strategy and supported by KPIs, quantified targets, monitoring systems, and evidence of progress over time.
Medium	Partial integration of SDGs	Priority SDGs are identified and discussed, but indicators or targets are limited or not fully developed.
Low	Superficial reference to the SDGs	SDGs are mentioned or represented through icons without explanation or supporting indicators.

To enhance methodological transparency and replicability, additional coding details, decision rules, and illustrative examples of evidence used in the analysis are provided in Table 4.

Table 4: Illustrative Coding Examples and Decision Rules

Coding Category	Decision Rule	Examples of Evidence
Materiality disclosure	Presence of material topics, materiality matrix, stakeholder consultation, or dual materiality assessment.	Materiality matrix; list of material topics; stakeholder engagement process; references to CSRD/ESRS or dual materiality frameworks.
Strategic integration	Material topics linked to strategy, governance, policies, risk management, or investment decisions.	Decarbonization strategy; ESG governance committee; supplier sustainability policy; sustainable finance strategy; operational efficiency programmes.
SDG prioritization	Specific SDGs identified as priorities and connected to material topics or business activities.	SDGs linked to climate change, energy transition, circular economy, employment, social inclusion, infrastructure, or biodiversity.
Indicators and targets	Disclosure of KPIs, baselines, quantified targets, time horizons, and monitoring systems.	GHG emissions, renewable energy capacity, water intensity, certified forest area, accident rates, diversity indicators, green financing volumes, 2030 targets.
Reporting quality	Low, medium, or high classification based on SDG integration, measurement, and monitoring.	Low: icons/general references only; Medium: partial indicators; High: full integration with KPIs and targets.

3.1 Data and Sample

The PSI is Portugal's main stock index, composed of the largest companies listed on Euronext Lisbon. The sample includes the largest PSI companies operating in the Portuguese capital market. The history of the Portuguese Stock Index, PSI 20, begins on December 31, 1992, with 20 companies and a minimum quotation of 3000 points. Currently, it includes only 16 of the Portuguese companies with the largest market capitalization listed on Euronext Lisbon (Table 5).

Table 5: *SI Index Companies Weight on the Index and Sector of Activity*

Company	Sector	Weight on PSI Index (%)
Banco Comercial Português (BCP)	Banking / Financial Services	16.5 %
Galp Energia	Energy / Oil and Gas	11.4 %
EDP (Energias de Portugal)	Utilities / Electric Power	11.4 %
EDP Renováveis	Utilities / Renewable Energy	9.3 %
Jerónimo Martins	Retail / Consumer Goods	10.3 %
NOS	Telecommunications / Media	9.3 %
The Navigator Company	Basic Materials / Pulp and Paper	6.2 %
Redes Energéticas Nacionais (REN)	Utilities / Energy Infrastructure	5.2 %
Sonae	Retail / Diversified	5.2 %
Corticeira Amorim	Industrials / Consumer Goods	3.1 %
Semapa	Basic Materials / Paper & Cement	3.1 %
Altri	Industrials / Materials	2.1 %
Mota-Engil	Construction and Engineering	2.1 %
CTT - Correios de Portugal	Industrials / Postal and Logistics Services	3.1 %
Ibersol	Consumer / Restaurants and Leisure	1.0 %
Teixeira Duarte	Construction and Engineering	1.0 %

Source: Own elaboration based on <https://live.euronext.com/pt/markets/lisbon>

The weights in the index vary because they depend on market capitalization and are periodically reviewed by Euronext, the main stock exchange in Europe. The weights are approximate averages for 2024, reflecting the relative market capitalization of the companies in the index. The PSI Index suggests a strong concentration in the energy and utilities sectors, which represent a significant part of the index. Food retail and the banking sector also have a relevant weight, while areas such as technology have a reduced presence. The companies in the index are subject to more rigorous regulatory scrutiny and are usually pioneers in adopting non-financial disclosure practices. The data were collected from annual sustainability reports and/or non-financial information, publicly available on the institutional websites of each company (Table 6).

Table 6: Non-Financial Annual Reports

Company	2021	2022	2023	2024
Banco Comercial Português	Annual Report and Accounts, Sustainability Report and Integrated Report	Annual Report and Accounts, Sustainability Report and Integrated Report	Annual Report and Accounts, Sustainability Report and Integrated Report	Annual Report and Accounts, Sustainability Report and Integrated Report
Galp Energia	Annual Report and Accounts; and Integrated Report	Annual Report and Accounts; Integrated Report	Annual Report and Accounts; Integrated Report	Annual Report and Accounts; Integrated Report
EDP – Energias de Portugal	Integrated Report	Integrated Report	Integrated Report	Integrated Report
EDP Renováveis	Annual Report and Accounts; Sustainability Report	Annual Report and Accounts; Sustainability Report	Annual Report and Accounts; Sustainability Report	Annual Report and Accounts; Sustainability Report
Jerónimo Martins	Annual Report and Accounts; Sustainability Report	Annual Report and Accounts; Sustainability Report	Annual Report and Accounts; Sustainability Report	Annual Report and Accounts; Sustainability Report
NOS	Annual Report and Accounts; Sustainability Report	Annual Report and Accounts; Sustainability Report	Annual Report and Accounts; Sustainability Report	Annual Report and Accounts; Sustainability Report
The Navigator Company	Integrated Report	Integrated Report	Integrated Report	Integrated Report
Redes Energéticas Nacionais (REN)	Integrated Report	Integrated Report	Integrated Report	Integrated Report
Sonae	Integrated Report	Integrated Report	Integrated Report	Integrated Report
Corticeira Amorim	Annual Report and Accounts; Sustainability Report	Annual Report and Accounts; Sustainability Report	Annual Report and Accounts; Sustainability Report	Annual Report and Accounts; Sustainability Report
Semapa	Annual Report and Accounts; Sustainability Report	Annual Report and Accounts; Sustainability Report	Annual Report and Accounts; Sustainability Report	Annual Report and Accounts; Sustainability Report
Altri	Annual Report and Accounts; Sustainability Report	Annual Report and Accounts; Sustainability Report	Annual Report and Accounts; Sustainability Report	Annual Report and Accounts; Sustainability Report
Mota-Engil	Annual Report and Accounts; Sustainability Report	Annual Report and Accounts; Sustainability Report	Annual Report and Accounts; Sustainability Report	Annual Report and Accounts; Sustainability Report
CTT - Correios de Portugal	Integrated Report	Integrated Report	Integrated Report	Integrated Report
Ibersol	Integrated Report	Integrated Report	Integrated Report	Integrated Report
Teixeira Duarte	Annual Report and Accounts; Sustainability Report	Annual Report and Accounts; Sustainability Report	Annual Report and Accounts; Sustainability Report	Annual Report and Accounts; Sustainability Report

4. Findings and Discussion

4.1 Materiality is Increasingly Strategic, But Integration Differs by Sector and Maturity

Table 7 summarizes the main shifts in materiality priorities observed across the sample companies between 2021 and 2024, together with their predominant sustainability focus in 2024. The analysis is based on materiality disclosures and sustainability reporting practices reported by each company.

Table 7: Topics and Sustainability Strategies by Company

Company	Evolution of Material Topics	Main Strategic Developments
EDP	From energy transition and climate action to dual materiality, climate risks and value chain impacts	Carbon neutrality targets, biodiversity initiatives, circular economy practices, CSRD/ESRS alignment
EDP Renováveis	From renewable energy expansion to climate dependencies and supply-chain responsibility	Wind and solar growth, biodiversity mitigation, ESG supplier criteria, climate risk assessment
GALP	From emissions and safety to dual materiality and climate governance	Decarbonization strategy, renewable investments, human rights integration, impact-based governance
REN	From energy security to integrated climate and operational risk management	Infrastructure resilience, adaptation planning, compliance strengthening, strategic risk integration
Navigator	From forest management to natural capital and ecological dependencies	Forest certification, emissions reduction, responsible procurement, environmental impact assessment
Altri	From forest efficiency to climate and regulatory risks	Certification, circular economy measures, ESG monitoring, CSRD readiness
Corticeira Amorim	From circular economy to advanced impact assessment	Recycling, eco-design, carbon footprint reduction, ESRS-aligned metrics
Jerónimo Martins	From nutrition and waste to value-chain social impacts	Plastic reduction, inclusion initiatives, biodiversity management, consumer impact assessment
Sonae	From ethics and innovation to dual materiality and ESG risks	Diversity programmes, circular economy initiatives, ESG governance integration, CSRD preparation
BCP	From ethics and risk management to ESG financial risks	Compliance, sustainable finance, ESG reporting, ESG integration into credit risk
NOS	From privacy and innovation to technological and social risks	Data security, digital inclusion, governance strengthening, financial materiality assessment
CTT	From social impact and logistics to operational sustainability	Fleet efficiency, emissions reduction, ESG governance development, regulatory alignment
Ibersol	From food safety to operational ESG impacts	Quality management, waste reduction, initial ESG reporting and sustainability integration

Mota-Engil	From environmental and social responsibility to integrated ESG management	ESG strategy integration, dual materiality assessment, ESG performance monitoring, governance and diversity targets
Semapa	From resource management to integrated sustainability performance	Circular economy initiatives, ESG governance, group-wide ESG integration, sustainability-driven investments
Teixeira Duarte	From environmental and ethical commitments to construction-sector sustainability	Environmental management systems, compliance, project-level ESG consolidation, sustainability reporting

While the specific themes vary across firms and sectors, the disclosures reveal a progressive integration of sustainability considerations into corporate strategy. Figure 1 complements this analysis by aggregating the identified topics into thematic categories and illustrating their evolution over time. Climate and energy transition issues remain consistently prominent throughout the period, particularly among companies operating in energy-intensive sectors. Governance and ethics topics become more visible in 2023, while risk management, value-chain impacts and dual materiality emerge strongly in 2024. These developments suggest that companies are increasingly embedding sustainability considerations into strategic decision-making and adapting their reporting practices to the requirements of the CSRD and ESRS framework.

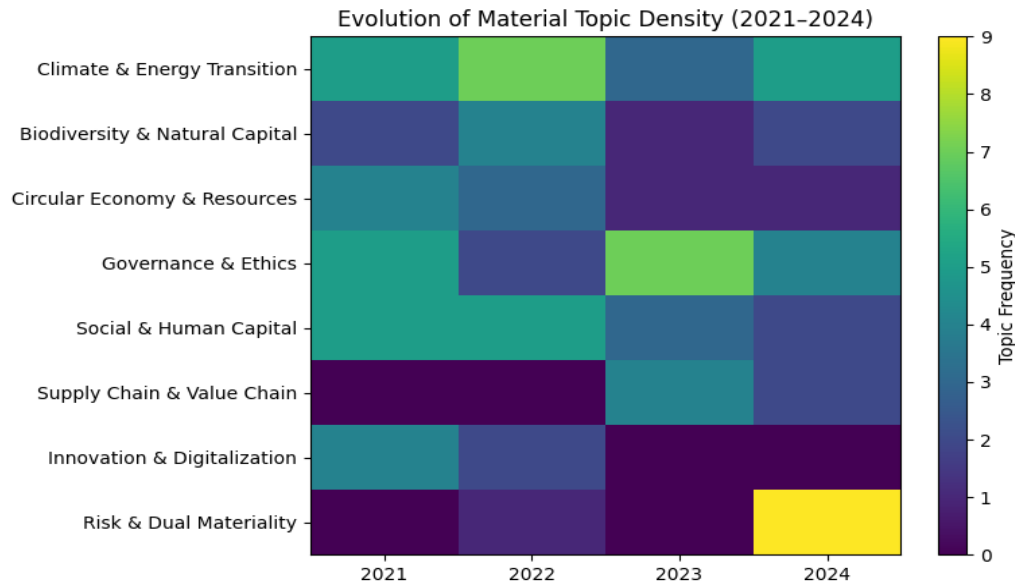
Of the total company-year observations examined, 64 contained materiality disclosures that could be classified into the broad materiality categories presented in Table 8. This table reports the frequency with which each of the four broad materiality categories is disclosed across these 64 company-year observations. Natural resources, circular economy and biodiversity emerge as the most frequently disclosed category (42.2% of observations), followed closely by social, people and community issues (40.6%). Environmental, climate, energy and risk issues and governance, value chain and compliance issues are each reported in 32.8% of observations. As a single company-year observation may disclose multiple materiality categories, frequencies and percentages are not mutually exclusive and therefore sum to more than 100% when aggregated.

The analysis of materiality matrices in companies where these matrices are explicitly disclosed allows an assessment of the maturity and evolution of ESG issue identification and prioritization practices. According to Eccles and Krzus (2018) and Khan et al. (2016), robust materiality assessments should integrate not only corporate impacts on society and the environment but also the financial risks and opportunities associated with those impacts.

The results indicate a predominance of environmental issues, particularly in the energy, forestry and materials sectors, consistent with studies linking materiality to sectoral environmental intensity (Friede, Busch & Bassen, 2015). Companies such as EDP, GALP, REN and Navigator present more structured materiality approaches, supported by measurable targets and increasing alignment with international frameworks, reflecting a more strategic approach to materiality consistent with the concept of shared value (Porter & Kramer, 2011). In contrast,

retail companies such as Jerónimo Martins and Sonae place greater emphasis on social issues, including inclusion, responsible consumption and value-chain impacts, reflecting the importance of stakeholder relationships in consumer-oriented sectors (Freeman, 1984; Mitchell, Agle & Wood, 1997). Financial and telecommunications companies, such as BCP and NOS, prioritize governance, ethics and data protection issues, reflecting concerns related to regulatory compliance and reputational risk management (Eccles, Ioannou & Serafeim, 2014).

Figure 1: *Evolution of Material Topic Density in Portuguese Listed Companies*



Notes: The frequencies shown are based on thematic coding of the topics identified in the sustainability reports included in the sample. Material topics were coded into thematic categories and aggregated by year. Colour intensity represents the frequency of occurrence of each category.

Table 8: *Frequency of Broad Materiality Categories*

Broad materiality category	Frequency	Percentage of observations
Natural resources, circular economy and biodiversity	27	42.2%
Social, people and community issues	26	40.6%
Environmental, climate, energy and risk issues	21	32.8%
Governance, value chain and compliance issues	21	32.8%

The longitudinal analysis reveals a notable evolution in 2024, particularly through the explicit incorporation of dual materiality concepts among larger companies with greater regulatory exposure. This development is consistent with the

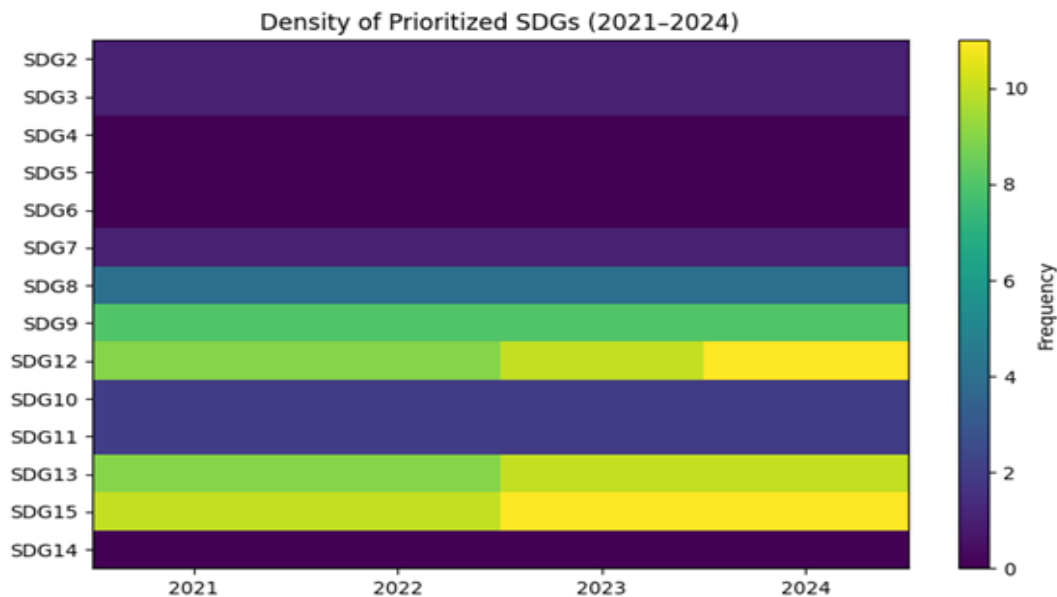
implementation of the CSRD and ESRS frameworks, which formalize the integration of both impact materiality and financial materiality perspectives (European Commission, 2022). However, companies such as CTT and Ibersol continue to display a more descriptive approach, characterized by limited quantification and weaker strategic integration, supporting previous evidence of methodological heterogeneity in ESG reporting (Boiral & Henri, 2017). Stakeholder engagement is mentioned by most companies, although reporting practices remain heterogeneous and often lack transparency regarding the processes used to identify and prioritize material issues. This finding supports previous criticisms concerning the symbolic use of materiality assessments as legitimacy tools rather than strategic decision-making instruments (Michelon et al., 2015).

From a theoretical perspective, the findings suggest that stakeholder theory helps explain why issues such as climate change, emissions reduction, occupational health and safety, human rights and business ethics are consistently identified as material across companies, given their relevance to multiple stakeholder groups (Freeman, 1984; Mitchell et al., 1997; Khan et al., 2016). At the same time, institutional theory helps explain the increasing convergence of materiality practices and the growing prominence of themes such as climate-related risks, governance mechanisms and dual materiality. Regulatory frameworks and reporting standards, including the CSRD, ESRS and TCFD, appear to exert coercive and normative pressures that contribute to the institutionalization of materiality assessments (DiMaggio & Powell, 1983; Adams, 2017; Baumüller & Sopp, 2022). However, the findings also show that companies facing similar stakeholder expectations and institutional pressures do not integrate material issues into strategy to the same extent. The resource-based view provides a useful explanation for these differences, suggesting that firms vary in their ability to transform sustainability-related challenges into strategic resources and organizational capabilities (Barney, 1991; Hart & Dowell, 2011). While some companies integrate materiality into strategic planning, risk management and innovation processes, others remain focused on compliance-oriented or operational responses. Consequently, materiality emerges not only as a disclosure mechanism but also as a strategic process that connects sustainability priorities, governance practices and long-term value creation.

4.2 SDG Prioritization Largely Follows Materiality, But Remains Selective

Figure 2 presents the density of SDG prioritization across the sample between 2021 and 2024. The second research question examines the extent to which companies prioritize the SDGs in line with their materiality assessments and strategic orientations. The results indicate a strong consistency between material sustainability topics and the SDGs integrated into corporate strategies.

Figure 2: *Density of Prioritized SDGs Across Portuguese Listed Companies*



The distribution of prioritized SDGs reveals a clear concentration around a relatively small set of goals. SDG 13 (Climate Action), SDG 12 (Responsible Consumption and Production), SDG 9 (Industry, Innovation and Infrastructure), SDG 8 (Decent Work and Economic Growth) and SDG 7 (Affordable and Clean Energy) are the most frequently prioritized across the sample. In contrast, SDGs such as 2, 3, 6, 10, 11 and 15 appear primarily in sectors whose business activities are directly linked to these sustainability challenges.

The predominance of environmental and transition-related SDGs reflects the materiality assessments reported by companies, particularly in energy, industrial and natural-resource-intensive sectors. EDP, EDP Renewables, GALP and REN consistently prioritize SDGs 7, 9 and 13, reflecting their strategic focus on decarbonization, renewable energy and infrastructure resilience. Similarly, Navigator, Altri and Corticeira Amorim emphasize SDGs 12, 13 and 15, consistent with material issues related to biodiversity, circular economy practices and natural capital management.

Overall, the findings suggest that companies adopt a selective rather than comprehensive approach to SDG engagement. SDG prioritization appears closely aligned with material sustainability issues, operational impacts and strategic objectives, supporting previous research that firms tend to focus on those SDGs most directly connected to their business models and stakeholder expectations rather than addressing the full SDG agenda.

From a general perspective, companies tend to prioritize a set of SDGs aligned with business models and sustainability issues identified as material. This pattern is consistent with the literature cited, which suggests that companies engage with the SDGs that are most directly linked to their operational impacts, risk exposure, and

strategic objectives, rather than adopting a comprehensive approach to the SDGs (van der Waal & Thijssens, 2020; Pizzi et al., 2021). Across industrial and energy-intensive sectors, SDGs 7, 9 and 13 appear as priorities. Companies such as EDP, EDP Renewables, GALP (in 2024), and REN demonstrate remarkable stability in prioritizing these SDGs throughout the analyzed period. This indicates a strong alignment between materiality assessments that highlight climate change, the energy transition, and infrastructure resilience, and strategic commitments to decarbonization, the expansion of renewable energies, and innovation.

The literature identifies SDG 13 as the most frequently cited SDG in corporate sustainability strategies globally, particularly in sectors exposed to climate-related risks and regulatory pressure (Scheyvens et al., 2016; Rosati & Faria, 2019). Similarly, SDGs 7 and 9 are frequently framed as enablers of both environmental sustainability and economic competitiveness, reinforcing their strategic relevance (ElAlfy et al., 2020). Empirical evidence confirms these conclusions, as companies prioritize SDGs that simultaneously address environmental impacts and value creation. Companies in the retail, services, construction, and finance sectors include "social" SDGs - SDG 2, SDG 3, SDG 8, SDG 10 and SDG 11. Examples include Jerónimo Martins, Sonae, BCP, Mota-Engil, and Teixeira Duarte consistently prioritize SDG 8, reflecting the materiality of employment, working conditions, and economic contribution.

However, empirical evidence also confirms a criticism addressed in the literature: companies tend to prioritize the social SDGs closest to their core activities, while other more systemic goals receive limited attention (van Zanten & van Tulder, 2018). There is a high stability in the prioritization of the SDGs over time, although this behavior may suggest strategic coherence, it also raises questions about the dynamic responsiveness of integrating the SDGs to evolving materiality assessments and emerging sustainability risks. This analysis is in line with studies that argue that companies' engagement with the SDGs is often symbolic. Along these lines, Bebbington and Unerman, (2018) and Pizzi et al., (2021) state that companies' behavior is to map existing initiatives to the SDGs rather than reshape strategies to address them. It follows from this that the SDGs function primarily as a communication tool, rather than a truly strategic framework. In a final perspective, the SDGs are prioritized and influenced by materiality assessments and the characteristics of each sector of activity. Companies consistently align their strategies with a set of SDGs that correspond to material sustainability issues, regulations, and business model relevance.

The results reinforce the explanations of stakeholders and institutions regarding the prioritization of the SDGs, while highlighting the role of strategic selectivity based on a resource-oriented view. The SDGs appear to be more likely to be prioritized when they can be internalized as strategic resources or capabilities, rather than when they represent broader social challenges unrelated to value creation. Globally, the results suggest that sustainability is still not consistently treated as a central element of companies' strategy, corroborating the literature that identifies a significant gap between ESG discourse and its effective incorporation into business models. This gap raises important questions about the ability of

current non-financial reporting practices to promote genuine strategic transformations.

The frequency distribution in Table 9 strengthens the evidence on SDG prioritization. SDGs 12 and 13 are present in 42 out of 64 company-year observations (65.6%), highlighting the strong prominence of responsible consumption and production and climate action across the sample. SDG 9 appears in 37 observations (57.8%), while SDG 8 appears in 32 observations (50.0%). By contrast, SDGs 7, 15, 10, 11, 2, 3 and 6 exhibit lower frequencies, suggesting that several socially oriented SDGs remain concentrated in specific sectors rather than being broadly integrated across the PSI sample. This distribution is consistent with the patterns identified, where SDG prioritization was shown to closely follow material sustainability issues defined at the company level. In particular, SDGs 7, 9 and 13 - strongly associated with energy transition, infrastructure development and climate action - correspond directly to the most frequently identified material topics in Table 7 and the aggregated categories presented in Table 8. Similarly, SDG 12 aligns with circular economy and resource efficiency themes, while SDG 8 reflects the recurring emphasis on employment, working conditions and economic contribution across multiple sectors.

Overall, the combined evidence from Tables 7, 8, and 9 suggests a high degree of alignment between materiality assessments and SDG prioritization. However, the persistence of low-frequency SDGs with broader social and systemic scope indicates that SDG engagement remains selectively aligned with core business impacts rather than fully encompassing the broader 2030 Agenda framework.

Table 9: *Frequency of Prioritized SDGs Across 64 Company -Year Observations*

SDG	Frequency	Percentage
SDG 12	42	65.6%
SDG 13	42	65.6%
SDG 9	37	57.8%
SDG 8	32	50.0%
SDG 7	16	25.0%
SDG 15	12	18.8%
SDG 10	8	12.5%
SDG 11	8	12.5%
SDG 2	4	6.2%
SDG 3	4	6.2%
SDG 6	4	6.2%

4.3 Stronger Materiality Improves the Credibility of SDG Alignment

The combined analysis of the RQ1 and RQ2 results shows a direct relationship between the themes identified as material and the prioritization of the SDGs, confirming the discussion in the literature that materiality should be the basis for companies' alignment with the SDGs (Khan et al., 2016; Van Zanten & Van Tulder, 2018). In general, the prioritized SDGs reflect the dominant material themes by sector. In the energy and materials sectors, the themes of energy transition, climate change, circular economy, and natural resource management predominate (RQ1), while in RQ2, SDGs 7, 12, 13, and 15 predominate. In the retail sector, the relevance attributed to social themes, such as inclusion, responsible consumption, and consumer well-being, corresponds to the prioritization of SDGs 2, 3, 8, and 12. However, the analysis reveals that this link is often implicit and predominantly communicational, rather than fully operationalized. Although companies identify relevant material issues, their translation into measurable contributions to the SDGs is weak, especially in the social and governance dimensions. This discrepancy confirms criticisms in the literature that point to the use of the SDGs as a symbolic framework, not associated with strategic processes and performance measurement systems, as confirmed by the studies of Bebbington & Unerman, 2018; Van der Waal & Thijssens, 2020. Companies with greater materiality maturity, EDP and GALP, demonstrate a more consistent articulation between material issues, strategic objectives, and priority SDGs, approaching the approach of Heras-Saizarbitoria et al. (2022). On the other hand, companies with less developed materiality analyses (RQ1) also present a more generic prioritization of the SDGs (RQ2), suggesting that the methodological weakness of materiality is directly reflected in how the SDGs are integrated.

In conclusion, strengthening the analysis of materiality - particularly through the full adoption of the duality of materiality and the quantification of impacts - is a necessary condition for a credible and strategic integration of the SDGs. Without this, alignment with the SDGs tends to remain fragmented and symbolic, of little interest for the creation of sustainable value and for the objectives of the 2030 Agenda.

4.4 SDG Reporting Quality Improves Over Time, But Measurability Remains Uneven

Based on the longitudinal analysis of non-financial reports, SDG reporting quality varies significantly across companies, reflecting different levels of maturity in the integration of indicators, targets, and strategic alignment. Using the PwC framework, the analysis reveals substantial heterogeneity in reporting practices, consistent with prior evidence that reporting quality is closely linked to the maturity of materiality assessments and the adoption of dual materiality principles (KPMG, 2020; PwC, 2021). Table 10 presents a synthesized overview of SDG reporting characteristics across the sample companies between 2021 and 2024. The table consolidates information on dominant SDGs, the evolution of indicators and

targets, and the overall assessment of reporting quality based on the PwC SDG Reporting Challenge framework.

Table 10: *SDG Reporting Quality by Company 2021-2024 (PwC Framework)*

Company	Dominant SDGs (2021–2024)	Evolution of Indicators & Targets	Reporting Quality
EDP	7, 9, 12, 13	Progression from KPIs and 2030 targets to integrated targets and full dual materiality alignment	High
EDP Renewables	7, 9, 12, 13	Expansion of renewable KPIs, CO ₂ avoided metrics and alignment with EU taxonomy	High
GALP	7, 12, 13	From KPI-based reporting to integration of dual materiality in sustainability strategy	High
REN	7, 9, 13	Consistent KPIs evolving into partial dual materiality and strategic targets	High
Navigator	12, 13, 15	Stable environmental KPIs with increasing integration of materiality assessment	High
Altri	6, 9, 12, 13, 15	Strengthening of emissions, water and bio-diversity indicators with full ESG integration	High
Corticeira Amorim	6, 7, 8, 9, 12, 13, 15	Evolution from quantitative KPIs to CSRD-aligned ESG targets and circular economy metrics	High
Jerónimo Martins	2, 3, 8, 12, 13	Predominantly narrative reporting with gradual strengthening of social KPIs	Medium
Sonae	8, 9, 12, 13	Moderate KPI development and increasing ESG integration	Medium
BCP	7, 8, 9, 12, 13	Strong evolution from ESG financing KPIs to full integration into credit risk and dual materiality	High
CTT	8, 9, 12	Mainly descriptive reporting with limited KPI structuring	Medium
NOS	9, 10	Narrative reporting with limited but stable KPI development	Medium
Ibersol	8, 12	Descriptive reporting with minimal KPI evolution	Medium
Mota-Engil	8, 9, 11, 13	Transition from qualitative ESG to structured KPIs and full integration into management systems	High
Semapa	6, 8, 12, 13	Progressive consolidation of environmental KPIs and ESG integration across business units	High
Teixeira Duarte	8, 9, 11, 12	Limited KPIs with gradual improvement, but persistent weak quantification of targets	Medium

Energy and forestry companies - EDP, GALP, REN, and Navigator - exhibit consistently high-quality SDG reporting throughout the period analyzed. These companies disclose stable sets of SDGs aligned with their materiality assessments and core business models, supported by clearly defined KPIs, long-term targets (e.g., 2030 decarbonization goals), and integration with frameworks such as TCFD

and, more recently, dual materiality and CSRD requirements. This pattern suggests that SDG reporting is used not only as a disclosure tool but also as a mechanism for managing and communicating environmental and financial impacts (Eccles and Krzus, 2018). By contrast, companies in retail, consumer goods, construction, and public services (e.g., Jerónimo Martins, Sonae, CTT, NOS, and Ibersol) show gradual improvements in reporting clarity, particularly regarding social SDGs. However, their disclosures remain largely descriptive, with limited use of measurable indicators and targets. This evidence reinforces the argument that the full integration of structured reporting methodologies and dual materiality frameworks is essential for enhancing the strategic relevance of ESG disclosures (Heras-Saizarbitoria et al., 2022; van der Waal & Thijssens, 2020).

From a comparative perspective, SDG reporting quality remains heterogeneous across companies and sectors, ranging from high levels of integration in energy and industrial firms to medium levels in consumer-oriented and construction sectors. At the same time, the evidence suggests a gradual improvement over time, particularly in the increasing use of KPIs, stronger alignment with CSRD requirements, and greater incorporation of dual materiality principles. This evolution is consistent with the literature on institutional pressures and reporting maturation, which argues that regulatory frameworks and standardization processes drive progressive improvements in disclosure quality and comparability (Hörisch et al., 2020; Boiral et al., 2021).

While Table 10 offers a synthesis of reporting practices at the company level, Table 11 presents the quantitative distribution of SDG reporting quality across the 64 company-year observations through the frequency and relative distribution of reporting quality categories throughout the study period. The results show that medium-quality reporting is slightly more prevalent than high-quality reporting, accounting for 54.7% and 45.3% of the observations, respectively. No observations were classified as low-quality reporting. Overall, the findings suggest that although most companies demonstrate structured SDG reporting practices, differences remain in the depth of quantitative indicators, target-setting, and the degree of integration of sustainability into corporate strategy.

Overall, while the findings suggest that most companies demonstrate structured reporting practices on the SDGs, differences still exist in the depth of quantitative indicators, target setting, and the degree of integration of sustainability into corporate strategy. On the other hand, no company's annual observation is classified as low, suggesting a generally minimal level of SDG awareness across the sample.

Beyond the descriptive distribution of reporting quality, the findings suggest that the quality of sustainability reporting is increasingly associated with broader ESG performance and the capacity of firms to demonstrate measurable sustainability outcomes, as argued by Cini & Ricci (2018). In this context, higher-quality SDG reporting reflects not only greater disclosure maturity, but also a stronger ability to translate sustainability commitments into operational indicators, performance monitoring systems, and strategic decision-making processes.

Table 11: *Distribution of SDG Reporting Quality across Company-Year Observations*

Reporting quality	Frequency	Percentage
High	29	45.3%
Medium	35	54.7%
Low	0	0.0%

Note: The unit of analysis is the company-year observation (N = 64). Reporting quality was assessed using the PwC SDG Reporting Challenge framework. Percentages are based on the total number of company-year observations (N = 64), with each observation classified into a single reporting quality category.

5. Conclusion

This study shows that corporate sustainability reporting exhibits a structured but uneven evolution between 2021 and 2024. Rather than adopting a comprehensive approach to the SDGs, companies selectively prioritize those goals most closely aligned with their material sustainability issues, particularly those related to climate change, energy transition, circular economy and governance.

The quantitative evidence indicates a clear concentration of reporting on a limited subset of SDGs, namely SDG 12 (65.6%) and SDG 13 (65.6%), followed by SDG 9 (57.8%) and SDG 8 (50.0%). While this pattern is broadly consistent with existing literature on materiality-driven sustainability disclosure, the findings add a more critical nuance: SDG selection is not merely a reflection of sectoral exposure, but also of organizational capability to translate material issues into measurable sustainability outcomes.

A key insight that extends prior research is that differences in SDG reporting quality are not primarily driven by sector or disclosure frameworks, but by internal materiality maturity and organizational capacity. More advanced companies are able to operationalize material issues through coherent sustainability strategies supported by KPIs, quantified targets and monitoring systems. In contrast, less mature reporting remains largely symbolic or descriptive, with weak integration between materiality assessments, SDG prioritization and performance measurement. This highlights that the central divide is not between adopters and non-adopters of the SDGs, but between firms that use SDGs as a strategic management mechanism and those that treat them as a reporting exercise.

Importantly, the results challenge the implicit assumption in parts of the literature that SDG adoption necessarily implies substantive integration. Instead, the evidence suggests a persistent structural gap between disclosure and operationalization. In this sense, SDG reporting may simultaneously function as a tool for accountability and a mechanism for symbolic alignment, reinforcing concerns about SDG-washing when materiality is not translated into measurable outcomes.

From a theoretical perspective, the findings refine existing explanations. While stakeholder and institutional pressures account for convergence in SDG selection, they are insufficient to explain differences in reporting depth. These differences are better captured through a capability-based lens, particularly the resource-based view, which highlights the importance of internal competencies in converting sustainability priorities into decision-useful information.

Empirically, the study also provides evidence that reporting quality is strongly associated with the degree of integration between materiality, strategy and performance measurement. Companies such as EDP, GALP, REN, Navigator, Altri and Corticeira Amorim illustrate this integrated approach, whereas others remain predominantly descriptive, reinforcing heterogeneity within the same regulatory and institutional context.

From a practical and regulatory perspective, the findings reinforce the relevance of frameworks such as the CSRD and the ESRS. However, the study also highlights a critical limitation of such frameworks: their effectiveness depends not only on disclosure requirements, but on firms' ability to embed sustainability into internal decision-making and value creation processes. The study is limited to publicly available reporting data and does not assess internal implementation processes. As such, the findings should be interpreted in light of the reliance on corporate disclosures and the heterogeneity of reporting practices across sectors.

6. Future Research Perspectives

The results of this study suggest progress in the integration of materiality, in the prioritization of SDGs, and in the quality of reporting, but also reveal methodological, sectoral, and strategic gaps that may suggest future academic investigations and corporate practices. Research perspectives are:

1. Strategic Integration and Effectiveness of the Materiality, SDGs, and Reporting Cycle

Although leading companies such as EDP, GALP, and Navigator have a strong integration cycle, many other companies still exhibit partial integration. Future research could explore:

a) How does materiality maturity impact the effectiveness of SDG reporting? A longitudinal investigation could assess whether companies with more mature materiality show better results in social, environmental, and governance indicators (Khan et al., 2016; Bebbington & Unerman, 2018).

b) The role of dual materiality as a mechanism to transform reporting into an instrument for strategic decision-making and risk mitigation. Future studies could assess how the full implementation of dual materiality influences financial and reputational performance (Eccles & Krzus, 2018; PwC, 2021).

2. Measurement and Reporting of Social and Governance SDGs

This study showed that social and governance SDGs are still reported descriptively, with few clear KPIs, especially in companies such as Jerónimo Martins, Sonae, CTT, NOS, and BCP. Future research could study:

- a) Development of standardized and comparable indicators for social and governance SDGs, allowing comparison between companies and sectors (Heras-Saizarbitoria et al., 2022; Van der Waal & Thijssens, 2020).
- b) Impact of measuring social SDGs on corporate strategy, including how companies can align social objectives with financial or reputational outcomes (Clark, Feiner & Viehs, 2015).

3. Influence of Sectoral, Cultural, and Institutional Factors

The results indicate clear performance differences between sectors: energy and pulp and paper demonstrate greater maturity, while retail, services, and finance are still very descriptive. Building on these results, future studies could address:

- a) The role of sectoral characteristics, including natural resource intensity, environmental regulation, and stakeholder pressure on the adoption of ESG and SDG criteria (Bebbington et al., 2020; Van Zanten & Van Tulder, 2018).

4. Technologies, Innovation, and Digital Reporting

The integration of SDGs and materiality can be strengthened by the use of digital tools and reporting technologies. Future research could explore:

- a) The use of big data, artificial intelligence, and blockchain to monitor and report SDGs in real time, increasing transparency, reliability, and comparability (Van der Waal & Thijssens, 2020).
- b) Integrating ESG into corporate management systems, allowing reports to be not only external but also instruments of governance and strategic decision-making.

5. Impact Assessment and Value Created by ESG Reports

A gap in the literature and in the PSI Index results is the empirical assessment of the value created by ESG reports:

- a) How does the alignment between materiality, SDGs, and reporting influence financial performance, reputation, and stakeholder relationships? Research can combine ESG data with financial performance metrics to empirically validate the strategic value of reports (Clark et al., 2015; Eccles & Krzus, 2018).

b) Long-term studies can explore whether companies that adopt advanced ESG practices and reporting demonstrate greater resilience in practice during crises or regulatory changes.

Bibliography

- Adams, C. AESG. (2017). *The Sustainable Development Goals, integrated thinking and the integrated report*. International Integrated Reporting Council (IR), Institute of Chartered Accountants of Scotland (ICAS) & Green Economy Coalition.
<https://www.integratedreporting.org/wp-content/uploads/2017/09/SDGs-and-the-integrated-report-full17.pdf>
- Adams, C. A. (2020). Sustainable development goals, integrated thinking and the integrated report. *Sustainability Accounting, Management and Policy Journal*, 11(3), 411-427.
<https://dx.doi.org/10.1108/SAMPJ-09-2018-0258>
- Adams, C. A., & Abhayawansa, S. (2022). Connecting the COVID-19 pandemic, environmental, social and governance (ESG) investing and calls for ‘harmonisation’ of sustainability reporting. *Critical Perspectives on Accounting*, 82, 102309.
<https://dx.doi.org/10.1016/j.cpa.2021.102309>
- Aguilera, R. V., Williams, C. A., Conley, J. M., & Rupp, D. E. (2007). Corporate governance and social responsibility: A comparative analysis of the UK and the US. *Corporate Governance: An International Review*, 14(3), 147-158.
<https://dx.doi.org/10.1111/j.1467-8683.2006.00510.x>
- APEE. (2022). *Relatório de Sustentabilidade Empresarial em Portugal*. Associação Portuguesa de Ética Empresarial.
- Barney, J. (1991). Firm Resources and Sustained Competitive Advantage. *Journal of Management*, 17(1), 99-120.
<https://dx.doi.org/10.1177/014920639101700108>
- Barth, M. E., Cahan, S. F., Chen, L., & Venter, E. R. (2017). The Economic Consequences Associated with Integrated Report Quality: Capital market and Real Effects. *Accounting, Organizations and Society*, 62, 43-64.
<https://dx.doi.org/10.1016/j.aos.2017.08.005>
- Battiston, S., Mandel, A., Monasterolo, I., Schütze, F., & Visentin, G. (2017). A Climate Stress-Test of the Financial System. *Nature Climate Change*, 7, 283-288.
<https://dx.doi.org/10.1038/nclimate3255>
- Baumüller, J., & Sopp, K. (2022). Double Materiality And The Shift From Non-Financial To European Sustainability Reporting: Review, outlook and implications. *Journal of Applied Accounting Research*, 23(1), 8-28.
<https://dx.doi.org/10.1108/JAAR-04-2021-0114>
- BCSD Portugal. (2020). *Sustainable Development Goals: A business perspective*. Business Council for Sustainable Development Portugal.
- Bebbington, J., Larrinaga, C., & Moneva, J. M. (2020). Corporate Reporting and Sustainable Development Goals. *Sustainability Accounting, Management and Policy Journal*, 11(5), 823-846.
<https://dx.doi.org/10.1108/SAMPJ-02-2020-0030>
- Bebbington, J., Larrinaga, C., & O'Dwyer, B. (2020). Sustainability accounting and accountability in times of crisis. *Accounting, Auditing & Accountability Journal*, 33(8), 2015-2033.
<https://dx.doi.org/10.1108/AAAJ-05-2020-4554>
- Bebbington, J., & Unerman, J. (2018). Achieving the United Nations Sustainable Development Goals. *Accounting, Auditing & Accountability Journal*, 31(1), 2-24.
<https://dx.doi.org/10.1108/AAAJ-05-2017-2929>

- Bebbington, J., Unerman, J., & O'Dwyer, B. (2014). *Sustainability Accounting and Accountability* (2nd ed.). Routledge.
- Boiral, O. (2013). Sustainability Reporting and Impression Management. *Accounting, Auditing & Accountability Journal*, 26(3), 472-500.
<https://dx.doi.org/10.1108/AAAJ-04-2012-00998>
- Boiral, O., & Henri, J.-F. (2017). Is Sustainability Performance Comparable? *Business & Society*, 56(2), 283-317.
<https://dx.doi.org/10.1177/0007650315576134>
- Boiral, O., Heras-Saizarbitoria, I., & Brotherton, M.-C. (2021). Assessing biodiversity reporting. *Business Strategy and the Environment*, 30(1), 246-264.
<https://dx.doi.org/10.1002/bse.2629>
- Bolton, P., Després, M., Pereira da Silva, L. A., Samama, F., & Svartzman, R. (2021). *The Green Swan: Central Banking and Financial Stability in the Age of Climate Change*. Bank for International Settlements. <https://www.bis.org/publ/othp31.htm>
- Branquinho, A. (2024). *Sustentabilidade empresarial em Portugal*. Universidade Católica Portuguesa.
- Busch, T., & Friede, G. (2021). Harmonizing Sustainability Reporting in Europe. *European Accounting Review*, 30(4), 789-812.
<https://dx.doi.org/10.1080/09638180.2020.1768389>
- Busch, T., Bruce-Clark, P., Derwall, J., Eccles, R. G., Hebb, T., Hoepner, A., & Weber, O. (2022). Impact investments. *Journal of Sustainable Finance & Investment*, 12(1), 1-22.
<https://dx.doi.org/10.1080/20430795.2021.1968533>
- Calabrese, A., Costa, R., Ghiron, N. L., & Menichini, T. (2019). Materiality Analysis: A Bibliometric and Content Analysis. *Technological and Economic Development of Economy*, 25(5), 1016-1038.
<https://dx.doi.org/10.3846/tede.2019.10550>
- Cambridge University Press. (2023). *EFRAG–GRI Cooperation on Materiality*. Cambridge University Press.
- Cho, C. H., Laine, M., Roberts, R. W., & Rodrigue, M. (2015). Organized Hypocrisy, Organizational Façades, and Sustainability Reporting. *Accounting, Organizations and Society*, 40(1), 78-94.
<https://dx.doi.org/10.1016/j.aos.2014.12.003>
- Christensen, H. B., Hail, L., & Leuz, C. (2021). Mandatory CSR and Sustainability Reporting: Economic Analysis and Literature Review. *Review of Accounting Studies*, 26(3), 1176-1248.
<https://dx.doi.org/10.1007/s11142-021-09609-5>
- Cici, C., & D'Isanto, D. (2017). Integrating Sustainability Into Core Business. *Symphonya. Emerging Issues in Management*, (1), 50-65.
<https://dx.doi.org/10.4468/2017.1.05cici.disanto>
- Clark, G. L., Feiner, A., & Viehs, M. (2015). *From the Stockholder to the Stakeholder*. University of Oxford.
- Cini, A. C., & Ricci, C. (2018). CSR as a Driver Where ESG Performance Will Ultimately Matter. *Symphonya. Emerging Issues in Management*, (1), 68-75.
<https://dx.doi.org/10.4468/2018.1.05cini.ricci>
- Deloitte. (2023). *2023 CxO Sustainability Report: Accelerating the Green Transition*. Deloitte.
<https://www.deloitte.com/nz/en/services/audit-assurance/research/2023-deloitte-cxo-sustainability-report.html>
- Dias, R. (2022). *Materiality and Stakeholder Engagement in Oil Companies* (Dissertação). Universidade de Lisboa.
- DiMaggio, P. J., & Powell, W. W. (1983). The Iron Cage Revisited: Institutional Isomorphism and Collective Rationality in Organizational Fields. *American Sociological Review*, 48(2), 147-160.
<https://dx.doi.org/10.2307/2095101>

- Dumay, J., La Torre, M., Farneti, F., & Guthrie, J. (2023). Integrated Reporting and Accountability. *Accounting, Auditing & Accountability Journal*, 36(2), 459-486.
<https://dx.doi.org/10.1108/AAAJ-08-2021-5416>
- Eccles, R. G., Ioannou, I., & Serafeim, G. (2014). The Impact of Corporate Sustainability on Organizational Processes and Performance. *Management Science*, 60(11), 2835-2857.
<https://dx.doi.org/10.1287/mnsc.2014.1984>
- Eccles, R. G., & Krzus, M. P. (2018). *The Nordic Model: An Analysis of Leading Practices in ESG Disclosure* (Nordic Council of Ministers Report No. TN2018-540). Nordic Council of Ministers.
- Eccles, R. G., Krzus, M. P., Rogers, J., & Serafeim, G. (2012). Sector-Specific Materiality. *Journal of Applied Corporate Finance*, 24(2), 65-71.
<https://dx.doi.org/10.1111/j.1745-6622.2012.00380.x>
- European Financial Reporting Advisory Group. (2021). *Proposals for a Relevant and Dynamic EU Sustainability Reporting Standard-Setting* (Project Task Force on preparatory work for the elaboration of EU non-financial reporting standards). European Financial Reporting Advisory Group. https://www.efrag.org/sites/default/files/sites/webpublishing/SiteAssets/EFRAG%20PTF-NFRS_MAIN_REPORT.pdf
- ElAlfy, A., Palaschuk, N., El-Bassiouny, D., Wilson, J., & Weber, O. (2020). CSR Research in the SDG Era. *Sustainability*, 12(14), 5544.
<https://dx.doi.org/10.3390/su12145544>
- European Commission; European Parliament; & Council of the European Union. (2022). *Directive (EU) 2022/2464 of the European Parliament and of the Council of 14 December 2022 on Corporate Sustainability Reporting (CSRD)*. *Official Journal of the European Union*, L 322, 15-80. <https://eur-lex.europa.eu/eli/dir/2022/2464/oj/eng>
- Faria, M., Monterio, S., & Roque, V. (2024). The Impact of the Quality of Sustainability Reporting on the Financial Performance of Large Companies Operating in Portugal. *Journal of Business, Economics and Finance*, 13(2), 80-87.
<https://dx.doi.org/10.17261/Pressacademia.2024.1942>
- Ferreira, L. F. (2024). Matrices de Materialidade: Evidências da Divulgação nos Relatórios Integrados e de Sustentabilidade de Empresas do PSI20. *Lusíada Economia & Empresa*, 35, 63-111.
<https://dx.doi.org/10.34628/QNVY-4D10>
- Fornasari, T., & Traversi, M. (2024). The Impact of the CSRD and the ESRS on Non-Financial Disclosure. *Symphonya. Emerging Issues in Management*, (1), 113-126.
<https://dx.doi.org/10.4468/2024.1.07fornasari.traversi>
- Freeman, R. E. (1984). *Strategic Management: A stakeholder Approach*. Pitman.
- Freeman, R. E., Harrison, J. S., Wicks, A. C., Parmar, B. L., & de Colle, S. (2010). *Stakeholder Theory: The State of the Art*. Cambridge University Press.
- Friede, G., Busch, T., & Bassen, A. (2015). ESG and Financial Performance: Aggregated Evidence from more than 2000 Empirical Studies. *Journal of Sustainable Finance & Investment*, 5(4), 210-233.
<https://dx.doi.org/10.1080/20430795.2015.1118917>
- García-Sánchez, I. M., Rodríguez-Ariza, L., Aibar-Guzmán, B., & Aibar-Guzmán, C. (2020). Institutional Investors and SDG Transparency. *Business Strategy and the Environment*, 29(5), 2019-2036.
<https://dx.doi.org/10.1002/bse.2485>
- Göttsche, M., Griffin, P. A., Habermann, F., Schiemann, F., & Spandel, T. (2025). A Double-Edged Sword: Materiality Classifications of Sustainability Topics. *Review of Accounting Studies*, 30, 3596-3639.
<https://dx.doi.org/10.1007/s11142-025-09908-1>

- GRI - Global Reporting Initiative. (2021). *GRI Standards 2021*. Global Reporting Initiative.
<https://www.globalreporting.org/standards/>
- Gray, R. (2010). Is Accounting for Sustainability Actually Accounting for Sustainability? *Accounting, Organizations and Society*, 35(1), 47-62.
<https://dx.doi.org/10.1016/j.aos.2009.04.006>
- Hahn, R., & Kühnen, M. (2013). Determinants of Sustainability Reporting: A Review of Results, Trends, Theory and Opportunities in an Expanding Field of Research. *Journal of Cleaner Production*, 59, 5-21.
<https://dx.doi.org/10.1016/j.jclepro.2013.07.005>
- Hart, S. L. (1995). A Natural-Resource-Based View of the Firm. *Academy of Management Review*, 20(4), 986-1014.
<https://dx.doi.org/10.5465/amr.1995.9512280033>
- Hart, S. L., & Dowell, G. (2011). A Natural-Resource-Based View of the Firm: Fifteen Years After. *Journal of Management*, 37(5), 1464-1479.
<https://dx.doi.org/10.1177/0149206310390219>
- Heras-Saizarbitoria, I., Urbieto, L., & Boiral, O. (2022). Organizations' Engagement with Sustainable Development Goals: From Cherry-Picking to SDG-washing? *Corporate Social Responsibility and Environmental Management*, 29(2), 316-328.
<https://dx.doi.org/10.1002/csr.2202>
- Hörisch, J., Johnson, M. P., and Schaltegger, S. (2015). Implementation of Sustainability Management and Company Size: A Knowledge-Based View. *Business, Strategy and the Environment*, 24, 765-779.
<https://dx.doi.org/10.1002/bse.1844>
- Ioannou, I., & Serafeim, G. (2017). The Consequences of Mandatory Corporate Sustainability Reporting. *Strategic Management Journal*, 38(2), 1-24.
<https://dx.doi.org/10.1002/smj.2564>
- Jørgensen, S., Mjøs, A., & Pedersen, L. J. T. (2022). Sustainability Reporting and Approaches to Materiality: Tensions and Potential Resolutions. *Sustainability Accounting, Management and Policy Journal*, 13(2), 341-361.
<https://dx.doi.org/10.1108/SAMPJ-01-2021-0009>
- Khan, M., Serafeim, G., & Yoon, A. (2016). Corporate Sustainability and Materiality: Evidence from the Field. *The Accounting Review*, 91(6), 1697-1724.
<https://dx.doi.org/10.2308/accr-51383>
- Kotsantonis, S., & Serafeim, G. (2019). Four Things No One Will Tell You About Esg Data. *Journal of Applied Corporate Finance*, 31(2), 50-58.
<https://dx.doi.org/10.1111/jacf.12346>
- KPMG. (2020). *The Time Has Come: The KPMG Survey of Sustainability Reporting 2020* (Executive summary). KPMG. <https://home.kpmg/content/dam/kpmg/xx/pdf/2020/12/the-time-has-come-executive-summary.pdf>
- KPMG. (2022). *The KPMG Survey of Sustainability Reporting 2022*. KPMG.
<https://kpmg.com/lk/en/home/insights/2022/10/survey-of-sustainability-reporting-2022.html>
- Loureiro, A., Monteiro, S., Aibar Guzmán, B., Ribeiro, V., & Lemos, K. (2024). What Are the Drivers Behind Portuguese Companies' Reporting on Sustainable Development Goals? *ESIC Market*, 55(3), e354.
<https://dx.doi.org/10.7200/esicm.55.354>
- Maniora, J. (2017). Is Integrated Reporting Really the Superior Mechanism for the Integration of Ethics Into the Core Business Model? An Empirical Analysis. *Accounting Forum*, 41(3), 234-251.
<https://dx.doi.org/10.1016/j.accfor.2017.04.001>

- Maniora, J. (2017). Is Integrated Reporting Really the Superior Mechanism for the Integration of Ethics Into the Core Business Model? An Empirical Analysis. *Journal of Business Ethics*, 140(4), 755-786.
<https://dx.doi.org/10.1007/s10551-015-2874-z>
- Martínez-Ferrero, J., & Lozano, M. B. (2021). The Determinants Of Sustainability Reporting in IBEX-35 Companies. *Spanish Accounting Review*, 24(1), 1-17.
<https://dx.doi.org/10.6018/rcsar.394831>
- Mervelskemper, L., & Streit, D. (2017). Enhancing Market Valuation of ESG Performance: Is Integrated Reporting Keeping Its Promise? *Business Strategy and the Environment*, 26(4), 536-549.
<https://dx.doi.org/10.1002/bse.1935>
- Michelon, G., Pilonato, S., & Ricceri, F. (2015). CSR Reporting Practices: A Longitudinal Analysis. *Critical Perspectives on Accounting*, 33, 59-78.
<https://dx.doi.org/10.1016/j.cpa.2014.10.003>
- Mitchell, R. K., Agle, B. R., & Wood, D. J. (1997). Toward a Theory of Stakeholder Identification and Salience. *Academy of Management Review*, 22(4), 853-886.
<https://dx.doi.org/10.5465/amr.1997.9711022105>
- Mio, C., & Fasan, M. (2013). Materiality Disclosure in Integrated and Sustainability Reporting: A Paradigm Shift? *Corporate Social Responsibility and Environmental Management*, 20(4), 231-245.
<https://dx.doi.org/10.1002/csr.1300>
- Monciardini, D., Massaroni, E., & Nardo, M. (2023). The Concept of Dual Materiality in EU Sustainability Reporting Regulation. *European Business Law Review*, 34(6), 841-866.
<https://dx.doi.org/10.54648/ebler2023043>
- Monteiro, S., Roque, V., & Faria, M. (2024). Does Sustainability Reporting Impact Financial Performance? Evidence from the Largest Portuguese Companies. *Sustainability*, 16(15), 6448.
<https://dx.doi.org/10.3390/su16156448>
- Moneva, J. M., Archel, P., & Correa, C. (2006). GRI and the Camouflaging of Corporate Unsustainability. *Accounting Forum*, 30(2), 121-137.
<https://dx.doi.org/10.1016/j.accfor.2006.02.001>
- Patten, D. M. (2015). An Insider's Reflection on Quantitative Research in The Social and Environmental Disclosure Domain. *Critical Perspectives on Accounting*, 32, 45-50.
<https://dx.doi.org/10.1016/j.cpa.2015.04.006>
- Penrose, E. (1959). *The Theory of the Growth of the Firm*. Oxford University Press.
- Pizzi, S., Caputo, F., Corvino, A., & Venturelli, A. (2021). Management Research and the SDGs: A Bibliometric Review. *Journal of Cleaner Production*, 276, 124033.
<https://dx.doi.org/10.1016/j.jclepro.2020.124033>
- Porter, M. E., & Kramer, M. R. (2011). Creating shared value. *Harvard Business Review*, 89(1-2), 62-77.
- PwC. (2018). *From Promise to Reality: Does Business Really Care About the SDGs?* PwC.
<https://www.pwc.com/gx/en/sustainability/SDG/sdg-reporting-2018.pdf>
- PwC. (2021). *Measuring Up: Methodology for Assessing Corporate SDG Reporting Quality*. PwC.
- Rodrigues, G. M. P. (2023). *O Relato Não Financeiro e os Objetivos de Desenvolvimento Sustentável: Estudo de Caso Múltiplo de Empresas Portuguesas Cotadas no PSI*. Instituto Politécnico do Porto.
- Rosati, F., & Faria, L. G. D. (2019). Early Adoption of SDG Reporting. *Corporate Social Responsibility and Environmental Management*, 26(3), 588-597.
<https://dx.doi.org/10.1002/csr.1705>

- Salvioni, D. M., & Almici, A. (2022). How Boards Can Help Sustainability Transformations. *Symphonya. Emerging Issues in Management*, (1), 20-39.
<https://dx.doi.org/10.4468/2022.1.04salvioni.almici>
- Scheyvens, R., Banks, G., & Hughes, E. (2016). The Private Sector and the SDGs. *Sustainable Development*, 24(6), 371-382.
<https://dx.doi.org/10.1002/sd.1623>
- Schoenmaker, D. (2021). From Risk to Opportunity: ESG and Sustainable Finance. *Oxford Review of Economic Policy*, 37(4), 755-774.
<https://dx.doi.org/10.1093/oxrep/grab023>
- Schumpeter, J. (1934). *The Theory of Economic Development*. Harvard University Press.
- Scott, W. R. (2014). *Institutions and Organizations: Ideas, Interests, and Identities* (4th ed.). Sage.
- Seuring, S., & Müller, M. (2008). Sustainable Supply Chain Management — Review and Research Directions. *Journal of Cleaner Production*, 16(15), 1699-1710.
<https://dx.doi.org/10.1016/j.jclepro.2008.04.020>
- SDG Observatory. (2023). *Relatório do Observatório dos ODS em Portugal*. Católica Lisbon. Available online: <https://www.observatorio-ods.com/relat%C3%B3rio-2023> (accessed on 10th June 2026).
- Soundararajan, V., Brown, J. A., & Wicks, A. C. (2019). Multi-Stakeholder Initiatives on Sustainability: A Cross-Disciplinary Review and Research Agenda for Business Ethics. *Business Ethics Quarterly*, 29(4), 619-649.
<https://dx.doi.org/10.1017/beq.2019.10>
- S&P Global. (2025, February 12). *The State of Double Materiality in Corporate Reporting*. S&P Global Sustainable. Available online: <https://www.spglobal.com/sustainable1/en/insights/special-editorial/double-materiality-is-gaining-traction-in-corporate-reporting> (accessed on 10th June 2026).
- Stubbs, W., & Higgins, C. (2014). Integrated Reporting and Internal Mechanisms of Change. *Accounting, Auditing & Accountability Journal*, 27(7), 1068-1089.
<https://dx.doi.org/10.1108/AAAJ-03-2013-1279>
- Suchman, M. C. (1995). Managing Legitimacy: Strategic and Institutional Approaches. *Academy of Management Review*, 20(3), 571-610.
<https://dx.doi.org/10.5465/amr.1995.9508080331>
- Teece, D. J. (2018). Business Models and Dynamic Capabilities. *Long Range Planning*, 51(1), 40-49.
<https://dx.doi.org/10.1016/j.lrp.2017.06.007>
- UN Global Compact. (2018). *Integrating the SDGs Into Corporate Strategy*. United Nations Global Compact Office.
- van der Waal, J. W. H., & Thijssens, T. (2020). Corporate Involvement in Sustainable Development Goals: Exploring the Territory. *Journal of Cleaner Production*, 252, 119625.
<https://dx.doi.org/10.1016/j.jclepro.2019.119625>
- Van Zanten, J. A., & Van Tulder, R. (2018). Multinational Enterprises and the Sustainable Development Goals: An Institutional Approach to Corporate Engagement. *Journal of International Business Policy*, 1(3-4), 208-233.
<https://dx.doi.org/10.1057/s42214-018-0008-x>