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Marques de Medeiros, J., Waisenberg Dicezare, A., Bertassini, A. et al (2025). Leadership Discourse and Sustainability Reporting in Fast Fashion: A Longitudinal Topic Modelling and KPI Analysis. Standards, 5(3): 22-. http://dx.doi.org/10.3390/standards5030022

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Leadership Discourse and Sustainability Reporting in Fast Fashion: A Longitudinal Topic Modelling and KPI Analysis

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Abstract

Corporate sustainability reporting is increasingly scrutinised as stakeholders' demand credible commitments to environmental and social performance, especially in sectors where unsustainable practices are pervasive. The aim of this research is to examine—drawing on a systematic literature review (SLR) of 48 articles—how leadership discourse in sustainability reports influences stakeholder engagement and reflects the adoption of sustainable development standards over time. A longitudinal analysis of six years (2018–2023) of sustainability reports from a leading fast fashion company was conducted, integrating Topic Modelling to identify dominant themes in leadership communication and comparing them with key performance indicators related to climate, materials, energy, water, waste, and packaging. The results reveal a gradual evolution in leadership narratives, from broad aspirational statements emphasising ethical supply chains and social justice to more technical, performance-oriented language highlighting circularity, operational transparency, and climate action. However, the analysis also uncovers inconsistencies between declared objectives and measurable outcomes, suggesting tensions between symbolic and substantive sustainability commitments. These findings indicate that, while leadership discourse can mobilise stakeholder expectations and signal strategic priorities, its credibility depends on alignment with transparent, consistent performance data. This study contributes to understanding how discourse and practice interact in sustainability transitions, offering insights for enhancing reporting integrity.

Keywords: sustainability reporting; leadership discourse; circular economy; fast fashion; stakeholder engagement; greenwashing; topic modelling

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Academic Editor: Peter Glavič

Received: 21 July 2025
Revised: 22 August 2025
Accepted: 25 August 2025
Published: 4 September 2025

Citation: de Medeiros, J.M.; Waisenberg Dicezare, A.C.; Bertassini, A.C.; Ribeiro Carpinetti, L.C.; Zanon, L.G. Leadership Discourse and Sustainability Reporting in Fast Fashion: A Longitudinal Topic Modelling and KPI Analysis. *Standards* **2025**, *5*, 22. https://doi.org/10.3390/standards5030022

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1. Introduction

Sustainability has long been a central concern for researchers and practitioners. Still, environmental degradation, social inequalities, and governance failure continue to grow [1]. Despite substantial efforts, many sustainability initiatives remain inadequate for effective implementation. Companies have often engaged in symbolic compliance and reputation management rather than implementing substantive transformations, which sustains a persistent gap between discourse and practice [2,3]. This gap fosters perceptions of greenwashing, eroding stakeholder trust. Overcoming this challenge requires reframing sustainability as a core strategic imperative embedded within systemic organisational change [4].

In this context, the role of leadership in advancing corporate sustainability has gained prominence in both research and practice. A sustainability-oriented leadership goes beyond transactional or technocratic approaches, embracing transformative practices that reflect the complexity of sustainability implementation (e.g., radical innovation, stakeholder collaboration, and systems thinking) [5,6]. Leaders are responsible for ensuring that sustainability goals are integrated into decision-making processes and daily operations, avoiding the risk of them remaining aspirational.

Leadership discourse, particularly as expressed in sustainability reports, plays a key role in shaping how organisations interpret and respond to sustainability challenges. Such discourse frames purpose, values, and commitments internally (by defining strategic priorities) and externally (by influencing stakeholder perceptions) [7]. Compelling narratives can encourage shared commitment and understanding among employees, consumers, and investors, creating a cohesive vision for sustainable progress [7]. However, while CEO letters increasingly mention environmental concerns, they often remain aspirational and lack actionable pathways [8]. Genuine transformation depends not only on what leaders say, but also on the alignment between these narratives and measurable sustainability outcomes.

The textile industry, and particularly the fast fashion segment, offers a critical lens for examining the gap between discourse and practice. Recognised as one of the world's most environmentally and socially impactful industries, it is characterised by ecological degradation, labour exploitation, mass production, short consumption cycles, and planned obsolescence [9]. In response to rising consumer awareness of environmental limits and the consequences of excessive resource use, companies are pressured to adopt circular production models, improve supply chain transparency, and comply with sustainability standards [10–12]. However, these changes often entail significant costs and operational complexity, raising questions about how such changes are communicated and justified to stakeholders [13].

Beyond greenwashing (misleading communication that masks unsustainable activities [14], emerging strategies such as greenhushing (withholding environmental information to avoid criticism or financial loss) and greenwishing (setting unrealistic sustainability objectives that are unattainable with existing resources) [15] have further complicated the assessment of genuine sustainability initiatives. These practices highlight the need to investigate leadership constructs and sustainability narratives, and to evaluate whether these narratives align with tangible performance indicators.

Although prior research has examined sustainability in the fashion industry [16,17] and the role of leadership in corporate sustainability [5–8], there is limited empirical research integrating a longitudinal analysis of leadership discourse in sustainability reports with measurable sustainability indicators. In addition, regarding the application of topic modelling, ref. [18] published a study using the approach for mapping the adoption of technologies to agricultural operations, but no study was found using it for addressing the alignment between leadership discourse and measurable sustainability outcomes. This represents a relevant research gap, as the integration of narrative analysis and performance metrics can provide deeper insights into the credibility and strategic alignment of corporate sustainability communication.

To address this gap, the research design included an initial systematic literature review (SLR) aimed at mapping the state of the art on leadership discourse in sustainability contexts and identifying the most relevant key performance indicators (KPIs) used to assess corporate sustainability performance. This SLR synthesised evidence from peer-reviewed studies to (i) clarify how leadership discourse has been conceptualised and operationalised in sustainability reporting, (ii) identify thematic and methodological trends in prior research,

and (iii) extract KPIs most frequently employed in evaluating the implementation of sustainability practices.

The SLR findings informed both the analytical framework for examining leadership narratives and the selection of KPIs in the subsequent empirical stage. Building on this foundation, we conduct a longitudinal analysis (2018–2023) of sustainability reports from a leading fast fashion company, applying computational text analytics (specifically Topic Modelling) to identify dominant themes and rhetorical strategies over time. This was integrated with a KPI analysis to assess the alignment between discourse and reported sustainability performance. The combination of these two stages ensures that the discourse analysis is theoretically grounded and empirically linked to measurable indicators.

The aim of this research is to examine the evolution of leadership discourse in sustainability reports and to evaluate its alignment with measurable sustainability performance, by integrating longitudinal Topic Modelling of a leading fast fashion company's reports (2018–2023) with analysis of KPIs covering climate, materials, energy, water, waste, and packaging.

Our findings reveal recurring narrative patterns, thematic shifts over time, and varying degrees of alignment between stated commitments and KPI trends. This study contributes to the literature by: (i) advancing the understanding of how leadership narratives evolve in response to sustainability pressures in a high-impact sector; (ii) introducing a methodological integration of longitudinal topic modelling with KPI analysis; and (iii) offering practical recommendations to enhance the credibility and effectiveness of sustainability communication in the fashion industry.

The remainder of this paper is structured as follows: Section 2 presents the theoretical background, Section 3 describes the materials and methods, Section 4 presents the results, Section 5 discusses the findings, and Section 6 concludes with implications for research and practice.

2. Theoretical Background

2.1. Sustainability in the Textile Industry

In the textile industry, sustainability is tied to corporate reputation and brand value that influences organisational competitiveness in a sector highly sensitive to stakeholders' concerns about environmental issues [19]. The fast fashion segment, specifically, is driven by accelerated consumption cycles, making it a driver of unsustainable practices and a key point for sustainable innovation. Beyond its reputational dimension, the sector is recognised as one of the largest contributors to global environmental degradation, responsible for 8–10% of global greenhouse gas emissions, 20% of wastewater pollution, and 35% of primary microplastic pollution worldwide [10]. Consumers have responded favourably to companies that establish long-term commitments to social and environmental responsibility, reinforcing the importance of transparent and credible sustainability communication [20]. This consumer sensitivity has created both opportunities and pressures for textile firms to align their business models with sustainability goals.

However, achieving sustainability in the textile sector demands a continuous, lengthy process of radical transformation and innovations in business models. It includes moving beyond incremental improvements toward the adoption of strategies to reshape production processes, supply chains, technologies, and mindsets [21]. These transformations often require sustainability-oriented innovations, which encompass product (e.g., ecodesign, eco-labels, low-impact materials), process (e.g., cleaner production, waste recovery, enzymatic processing), and organisational measures (e.g., environmental management systems, cross-sector collaboration) [17]. These strategies operate across multiple levels: at the micro-level, companies adopt, for example, cleaner production techniques, eco-designed products, and

eco-efficiency measures; at the meso level, they implement reverse logistics, engage in supply chain improvement, and develop eco-industrial parks; and at the macro-level, they contribute to regional and national systems for sustainable resource optimisation [17].

A key framework guiding this change is the circular economy, which offers mechanisms to create sustainable value while decoupling economic growth from finite resource consumption [22]. Within the textile industry, CE strategies encompass carbon reduction, energy efficiency, waste minimisation, and product lifecycle optimisation through design for longevity, repair, and recycling [17]. Recent research emphasises that effective CE implementation must be supported by lifecycle thinking and hotspot identification to prevent unintended shifts of impacts, as environmental burdens can occur at multiple stages of the textile value chain [12]. This includes addressing pre-consumer waste from cutting rooms (often 90–95% of total fabric waste) and managing hazardous effluents from wet processes in ways that are both technologically and economically feasible [12]. Companies are also increasingly aligning their efforts with international standards such as the Greenhouse Gas Protocol (GHG Protocol) and integrating ecodesign principles, selecting materials that are organic, recyclable, and non-toxic, while considering end-of-life management [23].

However, given the recent and innovative nature of such circularity actions, they are not dissociated from negative environmental impacts, even if they are cultivated with good intentions. For example, while the substitution of virgin materials with recycled ones is often viewed positively, it does not inherently eliminate life cycle impacts. The textile industry is a major contributor to microplastic pollution. Synthetic and recycled synthetic fibres, such as polyester and recycled polyester, release microplastic fibres (MPFs) during washing, contributing to aquatic pollution and ecological harm [19]. This underscores the dual challenge faced by textile sustainability: on one hand, reducing the dependency on virgin resources, and on the other, ensuring that alternative materials or processes do not introduce new environmental hazards [24]. Addressing this requires a systemic approach that combines innovation, regulation, consumer awareness, and robust impact assessment tools like life cycle assessment (LCA) [10]. Such complexities highlight the importance of adopting a life cycle perspective and ensuring that sustainability interventions do not simply shift impacts from one thing to another.

2.2. Leadership Vision and Role

In navigating this complex context, leaders play a key role. Leaders need to articulate a compelling sustainability vision, foster organisational alignment to advance companies towards sustainability, and drive continuous sustainability-oriented innovation to remain competitive in the market [25]. Recent studies confirm that leadership vision serves as a central driver of sustainability transitions by aligning strategic priorities with operational capabilities and fostering organisational learning [26,27]. Leadership discourse, both internal communication and public sustainability reports, shapes how sustainability is prioritised throughout the company. In the textile industry, leaders face the challenge of balancing economic competitiveness with genuine commitments to social and environmental responsibility, translating strategic goals into actionable plans that enhance both brand value and societal impact [20]. As such, leadership communication constitutes a key mechanism through which sustainability transformations are initiated, legitimised, and evaluated by stakeholders.

The role of leaders is also important to guarantee and boost organisational transformation, while significantly influencing the continuity of innovation management, especially in the context of sustainability transitions [28]. Empirical evidence shows that leadership vision can serve as a predictor of organisational resilience, enabling firms to anticipate policy changes, respond proactively to market pressures, and maintain stakeholder trust in

volatile contexts [26,29]. By navigating regulatory and market challenges, leadership vision can anticipate changes in policy and market dynamics, positioning the organisation to capitalise on the growing demand for sustainable and circular products and services [30].

As one of the sustainability enablers, the accelerated implementation of digital technologies around the world brings with it requirements regarding the need for an integral transformation in management strategies; otherwise, companies will not keep up with the expected level of competitiveness in an increasingly digital and sustainability-driven market [31]. Digital leadership, when combined with circular economy practices, has been found to significantly enhance organisational performance, with technological innovation acting as a key moderating factor [26]. Thus, the survival of traditional business tends to become even more complicated [32]. Therefore, it is up to leadership to play a fundamental role in obtaining a competitive advantage, with leadership discourse serving as a crucial tool for the promotion and effective adoption of innovative practices.

In the field of circular economy implementation specifically, a rising number of studies highlight the importance of leadership involvement and commitment for a systemic and successful transition [33,34]. The literature suggests that leadership support fosters employee engagement in circular initiatives, facilitates inter-organisational collaboration, and ensures the alignment of sustainability goals with performance metrics [26,27]. Hence, ascertaining companies' accomplishments requires continuous monitoring of their statements and reports, as these reflect the company's commitments. Leaders are legally responsible for the message delivered to the public, since it also reflects their thoughts and attitudes, providing an overview of the organisational culture, corporate values, and discussing strategies for the future [35]. Such reports act as a materialisation of leadership vision, in addition to communicating the impact of the initiatives adopted.

It can be inferred from the discussion above that leadership vision is intrinsic to the leadership style assumed and, therefore, different styles foster different visions, which directly influence the company's performance. Beyond that, analysing the discourse of leaders from prominent companies in the fast fashion sector consists both in verifying the existence of circular and sustainable practices and in observing the temporal–longitudinal evolution of decision-making behavioural patterns in public disclosures, considering external factors such as corporate reactions to stakeholders' pressure. Prior studies have shown that periods of heightened stakeholder scrutiny often coincide with symbolic sustainability claims, increasing the risk of discrepancies between discourse and practice [36,37].

The recurrent engagement in greenwashing practices during moments of high external pressure for consolidation facilitates bias in report content, capable of distorting the corporate image according to the desired public impression. Furthermore, such practices also endorse unfair competition, as they mislead consumers and investors by promoting an exaggerated or false sustainability image while obscuring verifiable information [2,38]. This not only erodes stakeholder trust but also undermines long-term competitiveness, as confirmed by recent evidence linking perceived greenwashing to reduced investor confidence and customer loyalty [36,37]. Such strategies can also undermine stakeholder trust, diminish the credibility of the company's overall sustainability agenda and potentially erode long-term relationships with key stakeholder groups.

Then, good reporting practices must include providing material and relevant information, granting access and ensuring that reporting is comparable and consistent over time, as a means of confidentiality with all stakeholders, in addition to demonstrating the company's openness and willingness towards society, by assuming responsibility for its actions and impacts [39]. Best practices in sustainability reporting also emphasise integration with governance structures, assurance processes, and performance-linked incentives for executives [27,37].

Given this context, it becomes essential to systematically analyse leadership discourse in sustainability reports. Accordingly, this study brings up the following hypotheses:

H1: *Leadership discourse in sustainability reports is positively associated with the adoption of sustainability and circular economy practices.*

H2: *Sustainability and circular economy practices mediate the relationship between leadership discourse and organisational sustainability performance.*

3. Materials and Methods

The present paper is positioned as quantitative, axiomatic, and normative research, focusing on the development of measures to improve the results found in the existing literature [40]. Figure 1 illustrates the research process. It seeks to identify the most effective method for analysing companies' commitment to sustainability and tracking changes in their narrative concerning the stated objectives and goals. Methodologically, and in accordance with Figure 2, we proceeded in four steps: (i) a systematic literature review (SLR) of 48 peer-reviewed articles to delineate constructs, identify the gap in mapping leadership discourse, and frame debates on the transition to a circular economy; (ii) data-source compilation, comprising the retrieval of the company's annual ESG/sustainability reports (2018–2023) and the extraction of reported KPIs (climate, materials, energy, water, waste, and packaging); (iii) text analysis, involving corpus construction, pre-processing, and Latent Dirichlet Allocation (LDA) topic modelling implemented in Python (version 3.10.12) to identify dominant themes; and (iv) synthesis and evaluation, in which LDA-derived themes were triangulated with KPI trajectories to assess the alignment between leadership discourse and sustainability performance over time. Operational details on pre-processing, model parameterisation, and validation are provided in the subsequent subsections. It began with positioning the research problem by identifying a gap in mapping leadership discourse, supported by an SLR and analysis of articles on the transition to the circular economy. Sustainability reports and KPIs served as the primary data sources, which were then analysed using Python-based big data processing, Latent Dirichlet Allocation (LDA), and topic classification. The main results highlight the use of renewable energy, reduction of scopes 1 and 2 emissions, employment of recycled materials, and improved water use efficiency.

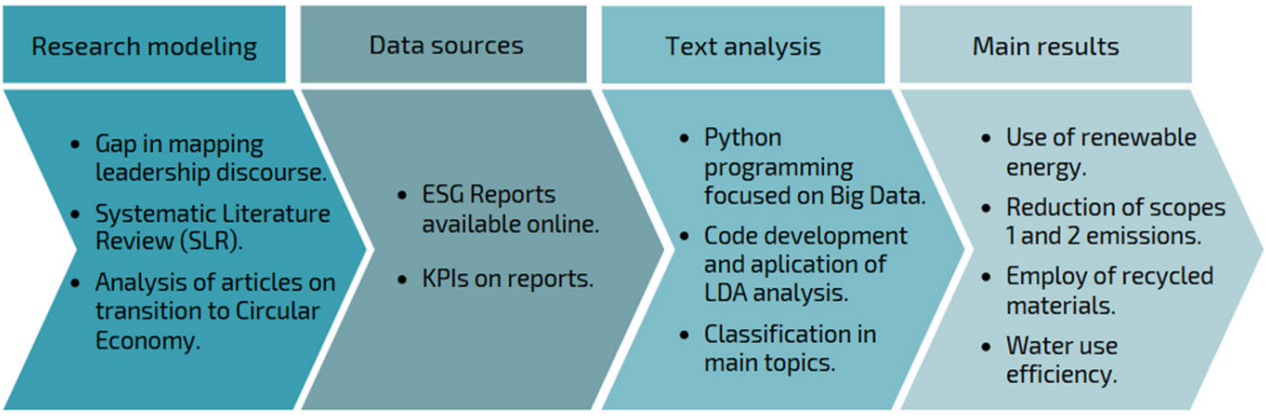

Figure 1. Sequence of methodology steps.

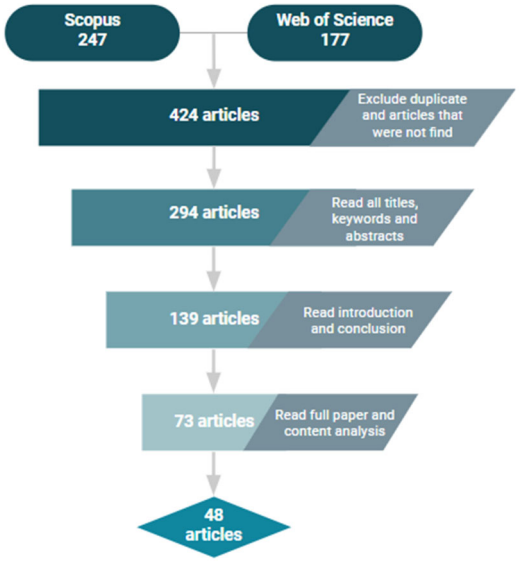

Figure 2. Systematic literature review procedure.

3.1. Systematic Literature Review (SLR)

The SLR aimed to identify how leadership discourse has been studied in the context of corporate sustainability and to determine the most relevant KPIs for evaluating sustainability practices. The review followed PRISMA guidelines, as shown in Figure 2, and included the following steps:

i. Databases and search strategy

Searches were performed in Scopus and Web of Science (WoS) in February 2024. The search string combined terms related to leadership discourse and sustainability reporting, as well as sector-specific keywords, using Boolean operators and truncations

The string used was as follows: article title (leaders 2 OR "leadership" OR "top management" OR "executives" OR "CEO" OR "decision makers" OR "manager") and article title ("circular economy" OR "circular business model" OR "sustainab*" OR "ESG" OR "recycling" OR "remanufacturing" OR "product-as-a-service" OR "sharing economy") and ("vision" OR "speech" OR "CEO letter" OR "sensemaking" OR "strategy").

ii. Inclusion and Exclusion criteria

Studies were included if they: (i) were peer-reviewed journal articles or systematic reviews, (ii) were written in English, (iii) were published between 2010 and 2024, (iv) addressed leadership discourse or executive communication in the context of sustainability, and (v) explicitly discussed performance measurement (KPIs, metrics, or sustainability standards).

Studies were excluded if they: (i) focused solely on financial reporting, (ii) did not involve any leadership communication component, or (iii) did not mention measurable sustainability outcomes.

iii. Selection Process

Two researchers independently screened titles and abstracts, followed by full-text assessment. Disagreements were resolved by consensus. The final sample consisted of 48 articles.

iv. Data Extraction and Synthesis

For each article, we recorded the following: author(s), year, journal, sector focus, country/region, study type (empirical/theoretical), methodological approach, key findings, and KPIs mentioned. We conducted a content analysis [41] to synthesise the studies and map the main conceptualisation of leadership discourse in sustainability contexts; recurrent rhetorical strategies, leadership and sustainability/circularity practices, leadership types;

whether the studies used sustainability reports as a data source and whether some kind of text analytics approach was used to analyse these reports and to assess the presence of leadership discourse within them; and most frequently reported KPIs in prior research.

v. Output connection and Empirical stage

The KPIs selected for this study were the most frequently reported and discussed across the 48 studies identified in the SLR, encompassing nine indicators across six thematic areas, as shown in Table 1. They were chosen because they are widely recognised in corporate sustainability reporting and the circular economy and the sustainability literature, align with established frameworks such as the GHG Protocol, and are applicable across sectors in the fashion industry. Other possible indicators were excluded when they appeared only sporadically in the literature, lacked standardised definitions, or were context-specific in ways that would limit comparability. The selected KPIs formed the initial list for the KPI analysis in the second stage of the study. Similarly, the thematic categories derived from the literature guided the interpretation of topics generated by the Topic Modelling of sustainability reports, ensuring theoretical alignment and methodological coherence across both stages.

Table 1. Definitions of the analysed indicators.

	KPI	Definition
Climate	Scope emission	GHG Protocol classification for GHG emissions according to the origin.
	Absolute reduction in scope	Effective decrease in total GHG emissions.
Materials	Recycled cotton or other sustainable sources	Material in second use, not a virgin one.
	Recycled materials or other renewable sources	Recycling of materials to produce new, included raw materials.
	Tones of collected clothes	Clothes collected in stores to recycle.
Packaging	Recycled materials in packaging	Substitution of virgin plastic in packaging production.
	Recycled material or the other renewable sources	Innovation in choice for raw materials, prioritising renewable sources.
Waste	Recycling system waste in stores	Technique that disassembles old clothes and transforms in new.
Energy	Intensity of electricity change	Variation in quantity of GHG emissions associated with electric consumption by unity of production.
	Renewable energy	Energetic substitution for renewable sources.
Water	Water use efficiency	Tinting technology that saves water.

3.2. Text Analysis

We started this step by collecting the sustainability reports to be analysed. We conducted a longitudinal analysis, covering the period from 2018 to 2023, for H&M Group. H&M is a Swedish multinational and one of the largest fast fashion retailers globally. The

choice of this company was motivated by its extensive public disclosure of sustainability reports, global market presence, and relevance in both academic research and public debates on sustainability in the fashion industry. The selected time frame (2018–2023) corresponds to the most recent consecutive six-year period for which sustainability reports are publicly available. In addition, this period was deliberately chosen to capture the contrasting phases of corporate sustainability discourse before, during, and after the COVID-19 pandemic. Specifically, the years 2018–2019 reflect a period of continuous evolution in sustainability reporting; 2020–2021 encompass the pandemic context, when companies increasingly disclosed statements on the need for systemic change and sustainability transformation; and 2022–2023 illustrate whether companies consolidated those commitments into measurable progress or reverted to pre-pandemic practices. This temporal framing allows a richer longitudinal interpretation of leadership discourse in relation to both internal strategies and external global disruptions. We opted to focus on a single company to enable a detailed longitudinal examination of KPIs and leadership discourse evolution and thematic trends over time, ensuring consistency in data sources and comparability across years. The sustainability reports were obtained from the company website, specifically from the 'investors' section, which contains a dedicated area for reports and presentations.

The text analysis of the selected sustainability reports was aided by the Topic Modelling technique, a natural language processing (NLP) method designed to handle large volumes of text. In this sense, the collected reports were pre-processed and subsequently subjected to Latent Dirichlet Allocation (LDA) analysis to extract the main topics from each year's report.

Topic Modelling is a widely used technique for text analysis, treating documents as a collection of topics, with each topic represented by a set of words associated with a specific probability of appearance [42]. Common models include the LDA, which is a fundamental tool for text mining. Through this approach, it is possible to identify the latent topics present in the analysed documents, enabling the analysis of large volumes of data and the identification of thematic patterns [43].

In the context of Big Data, the application of this model supports detailed analyses of sustainability reports and contrasts with the inherent subjectivity of experts' judgment, by allowing the data itself to reveal the concerns and priorities of reporting companies [44]. This provides an impartial and in-depth comprehension of the industry and enables comparisons across specific aspects [45,46].

The effectiveness of Topic Modelling was demonstrated by applying the LDA algorithm to identify and characterise topics in scientific publications [45]. Figure 3 shows an LDA flowchart, with the input of a large volume of documents and the sequence of processes that estimate the probability distributions of underlying topics and associate them with the occurrence of related words.

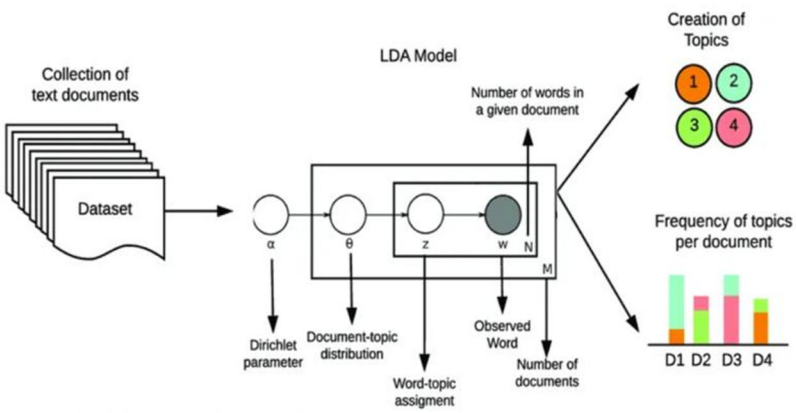

Figure 3. LDA model [47].

There is flexibility in LDA in handling different types of text and providing significant insights [35]. In this modelling approach, a joint probability distribution is established between the hidden and observed variables involved in the data generation process. The analysis is then performed using this joint distribution to calculate the conditional distribution of the hidden variables, given the observed set of variables. This conditioned distribution is nominated as posteriori distribution [45], expressed in Equation (1):

$$\rho(\beta_{1:K}, \theta_{1:D}, Z_{1:D}, w_{1:D}) = \prod_{i=1}^{K} \rho(\beta i) \prod_{d=1}^{D} \rho(\theta_d) \\ (\prod_{n=1}^{N} \rho(Z_{d,n}|\theta_d)\rho(w_{d,n}|\beta_{1:K})) \quad (1)$$

In the LDA framework, topics are denoted by $\beta_{1:K}$, where each β_K is a distribution of vocabulary [46]. The proportions of topics in a d document are indicated by θ_d, with $\theta_{d,k}$ representing the proportion of k topic in the d document. The topic attributions for the d document are represented for z_d and $z_{d,n}$ which indicates the topic attribution to the n-th word in the d document. Lastly, the observed words in the d document are w_d, being $w_{d,n}$ the n-th word in the d document, selected through a fixed vocabulary.

This distribution establishes several dependencies. For example, the topic attribution $z_{d,n}$ depends on the topic's proportions by document θ_d. Furthermore, the observed word $w_{d,n}$ is related both to the topic attribution $z_{d,n}$ and to the set of topics $\beta_{1:K}$. In practice, this relationship is determined by first identifying the topic which $z_{d,n}$ is referred to, and then, ascertaining and calculating the probability that the word $w_{d,n}$ belongs to this topic.

Finally, Figure 4 shows the calculation of the posteriori distribution in LDA, where each node is a random variable and is labelled according to its role in the generative process. The hidden nodes, that represent the topics' proportion, topic attributions, and topics themselves, are unshaded. Conversely, the observed variables, the words in the documents, are shaded. The rectangles represent the plate notion, which indicates the replication. The plate 'N' denotes the collection of words contained within each document, with plate 'D' representing the collection of documents within the collection.

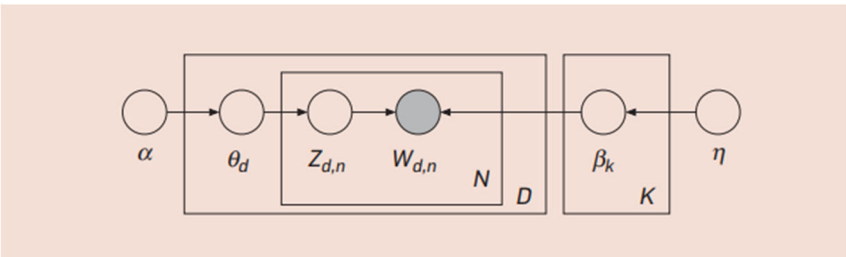

Figure 4. Graphical model for LDA. Adapted [46].

This probabilistic modelling approach enables the identification of latent thematic structures in the sustainability reports analysed in this study, offering a basis for assessing leadership discourse over time.

Hence, the results presented in this study are derived from an integrated longitudinal–temporal analysis of the main topics extracted through Topic Modelling, combined with a comparison of these topics with the KPIs reported.

4. Results

This section presents the results of the integrated longitudinal–temporal analysis conducted on the sustainability reports of H&M Group (2018–2023). While the topic modelling and KPI analyses were applied exclusively to these reports, the interpretation of the findings systematically draws upon the insights from the 48 articles obtained through

the systematic literature review. The analysis aims to uncover the dominant leadership discourse themes over the six-year period (2018–2023) and to evaluate the extent to which these narratives align with the company's stated sustainability objectives and measurable outcomes. In addition, the evolution of these themes is examined to assess potential shifts in leadership emphasis, stakeholder engagement strategies, and alignment with circular economy principles. This integration allows us to relate the empirical evidence from the company's sustainability disclosures to the broader theoretical and empirical debates in the literature.

4.1. Results for Topic Modelling Analysis

This study identified the two main topics present in each sustainability report and grouped their respective tokens, as presented in Tables 2–7. The terms associated with each topic were extracted using the topic visualisation capabilities of the pyLDAvis tool, specifically employing its network visualisation mode. As an example, Topic 1 of the 2018 sustainability report is illustrated in Figure 4.

Table 2. Main topics from the 2018 report.

Ano	Topic	Top Words	Topic Label	Weight (%)
2018	1	Change, fashion, human, material, new, renewable, sustainable, vision, work.	Sustainable fashion and ethical practices in the supply chain.	94.3
	2	Cotton, impact, issue, key, make, overview, supply, textile, water.	Operational dares and sustainability in the textile industry.	5.7

Table 3. Main topics from 2019 report.

Ano	Topic	Top Words	Topic Label	Weight (%)
2019	1	Customer, data, goal, including, industry, strategy, supplier, vision.	Supplier and customer relationship management aligned strategies.	72.6
	2	Emission, future, packaging, people, use, wage, worker, working	Social justice and circular sustainability.	27.4

Table 4. Main topics from the 2020 report.

Ano	Topic	Top Words	Topic Label	Weight (%)
2020	1	Business, change, circular, emission, global, industry, since, supplier, sustainability, sustainable, transparent, worker.	Sustainability and change management in the fashion and manufacturing industry.	97.1
	2	Brand, climate, fashion, group, impact, including, increase, packaging, production, strategy, system, waste, water.	Marketing, branding and environmental impacts of production.	2.9

Table 5. Main topics from the 2021 report.

Ano	Topic	Top Words	Topic Label	Weight (%)
2021	1	Business, climate, data, emission, equal, lead, management, material, product, production, recycled, reporting, wage, year.	Data analysis, management and reporting in circular business.	99.6
	2	Assurance, cotton, customer, environmental, factory, goal, issue, new, progress, reduction, right, social, support, sustainable, transparency.	Sustainability and transparency in operations.	0.4

Table 6. Main topics from 2022 report.

Ano	Topic	Top Words	Topic Label	Weight (%)
2022	1	Circular, circularity, impact, lead, reporting, water.	ESG management with focus on emissions and circularity.	64.1
	2	Customer, leading, progress, right, since, wage, worker.	Law, equity, and social sustainability.	35.9

Table 7. Main topics from the 2023 report.

Ano	Topic	Top Words	Topic Label	Weight (%)
2023	1	Across, approach, chain, data, emission, factory, page, product, social, textile, wage.	Material impact and operational transparency integration.	60.5
	2	Employee, increase, lead, nature, packaging, process, production, reporting, resource, right, waste.	Nature, waste and resources eco-efficiency.	39.5

The preponderance of the selected topic, which accounts for 94.3% of all tokens, is illustrated by its size and the estimated frequency of its terms, as compared to their general frequency within the corpus, following the caption of Figure 5. All extracted information was compiled and is accompanied by a label representing the content of each topic, derived from the most frequent terms.

The classification performed by the researchers disregarded repetitions; that is, words appearing in both topics within a given report, which were deliberately omitted to facilitate the comprehension of the most important aspects and to differentiate the topics from one another. In addition to enhancing the readability of the results, this approach also contributed to the assignment of topic labels, which were designed to capture the thematic similarities among the main components of each topic, thereby providing meaningful interpretations of their content.

As shown in Table 2, the first main topic extracted from the 2018 sustainability report encompasses key terms that allude to recurring themes in the field of study, such as sustainability and ethical practices in the supply chain. The assigned label for Topic 1, "*Sustainable fashion and ethical practices in the supply chain*", reflects this thematic focus. It is

worth noting that these terms are interrelated, as ethical practices are essential for building a sustainable supply chain, aligning particularly with the social pillar of sustainability. Furthermore, Topic 1 is the most dominant in the document, representing 94.3% of the total token weight.

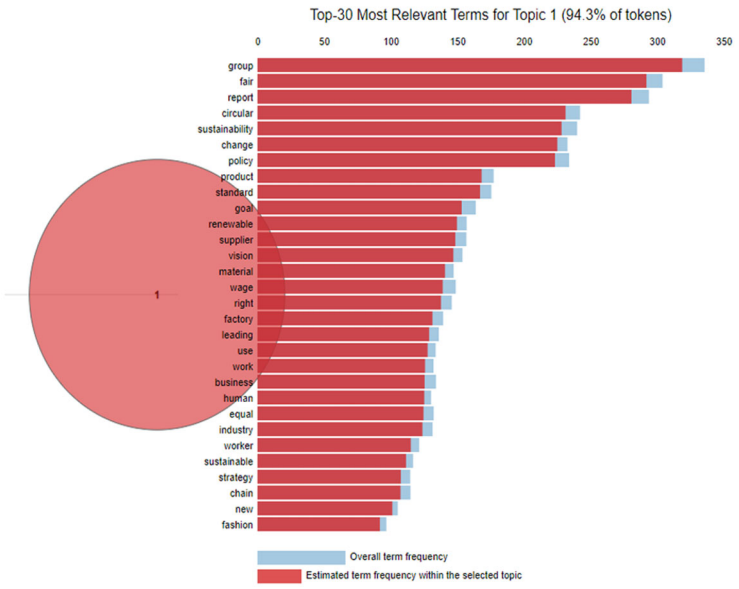

Figure 5. Topic 1 from the 2018 report.

Topic 2, whose main terms include *impact*, *issue*, *and overview*, focuses on operational challenges and goals within the textile value chain. Hence, the chosen label for this topic is "*operational dares and sustainability in the textile industry*". It is important to note, however, that this topic carries a significantly lower weight in the report, representing only 5.7% of the total token distribution.

As shown in Table 3, the most relevant terms of Topic 1 in the 2019 sustainability report indicate a focus on corporate strategies, objectives, and the industry's strategic vision, which justifies the assigned label "*Supplier and customer relationship management aligned strategies*". This label is consistent with the association of the extracted terms with elements of corporate planning and relationship management.

Topic 2 focuses on the social and environmental dimensions of sustainability, with particular emphasis on working conditions and social justice, challenges that are sensitive to the textile industry, and even more to the fast fashion sector [14]. Accordingly, the assigned label is "*Social justice and circular sustainability*". In this topic, terms such as *work*, *worker*, *working*, *people*, *and wage* reflect its social dimension, while *emission and future* are related to environmental sustainability concerns.

Together, the two main topics in 2019 report highlight a shift in emphasis toward relationship management strategies and social sustainability challenges, reflecting the constant evolving discourse within the company's leadership narratives.

As shown in Table 4, Topic 1 from the 2020 sustainability report is strongly centred on corporate and operational aspects, with an emphasis on circularity practices and transparency as key elements in pursuing sustainable development. In that way, it was labelled as "*Sustainability and change management in the fashion and manufacturing industry*". It is worth noting that this topic carries a major weight in the analysed report, representing 97.1% of the total token distribution.

Topic 2 encompasses terms related to both the environmental domain (waste, impact, climate, water, and packaging) and the productive and operational domain (fashion, production, brand, strategy). This combination suggests a greater focus on responsible

production and corporate branding, which led to the assigned label "*Marketing, branding and environmental impacts of production*". It can be inferred that the 2020 report places a significant emphasis on the impacts of production processes, highlighting a business priority on the transition toward more responsible operational practices.

Together, the topics in the 2020 report reflect a leadership discourse that integrates sustainability ambitions with operational transparency and responsible production narratives.

As shown in Table 5, the emphasis of the 2021 report is on circular business models. In Topic 1, this is evident through the presence of terms such as *production*, *recycled*, *material*, and *emission*, which are frequently associated with the circular economy [8]. Based on this thematic focus, the chosen label is "*Data analysis, management and reporting in circular business*". The weight of 99.6% indicates that this topic is almost unanimous in the 2021 report, dominating its discourse.

In several aspects, Topic 2 differs significantly from Topic 1, both in its very low weight and in the distinct thematic content it represents. Topic 2 emphasised aspects within the operational and technical scope, incorporating terms related to sustainable materials, corporate reporting, and social responsibility. The topic presents a mix of terms across environmental, social, and reporting domains.

In this sense, Topic 2 can be viewed as an extension of Topic 1, as it translates the logic of sustainability into a more practical and measurable framework. Terms such as goals, reduction, assurance, and transparency reflect this orientation. The promotion of positive corporate sustainable performance has been increasingly associated with the role of disclosure and transparency, alongside the influence of international reporting standards such as the GRI framework [33].

Thus, the label selected for Topic 2 is "*Sustainability and transparency in operations*". Overall, the 2021 report appears to refine the themes addressed in previous years, advancing toward a more explicit focus on strategic management, organisational transparency, and the adoption of circular business models.

The overall structure of the 2021 report thus suggests a maturing leadership discourse, emphasising circularity, transparency, and performance-driven sustainability narratives.

As shown in Table 6, Topic 1 from the 2022 report, with a weight of 64.1%, demonstrates a strong thematic concentration around ESG principles, with a particular focus on circularity, as the chosen label. Nevertheless, it must be mentioned that this topic shows a more systematic and technical characterisation compared to the themes presented in the reports of previous years.

Topic 2, while representing a smaller share of tokens (35.9%), still addresses several important themes, hence the reduced number of main words listed. However, the distinct nuance between the emphases of the two topics is illustrated by the presence of terms such as wage, worker, customer, progress, and right, which correspond to legal, social, and labour issues, and reflect underlying normative values. Accordingly, the label assigned to Topic 2 is "*Law, equity, and social sustainability*".

As shown in Table 7, the 2023 sustainability report represents a more balanced distribution between the two main topics compared to previous years. While Topic 1 continues to dominate the company's discourse, with a weight of 60.5%, it maintains continuity with prior internal narratives, but it adopts a broader approach by addressing sustainability from an operational perspective with a governance profile. Accordingly, this topic was labelled as "*Material impact and operational transparency integration*".

Topic 2, which complements Topic 1, contributes to a more technical and operational refinement of the company's sustainability discourse. It focuses on improvements in production processes, efficiency, and the rational use of resources, as reflected in the label "*Nature, waste and resources eco-efficiency*". This topic underscores the company's

increasing attention to operationalising sustainability principles within its core production and resource management strategies.

Overall, the 2023 report reflects a more integrated leadership discourse that balances strategic sustainability considerations with operational transparency and resource efficiency, suggesting a further maturation of the company's sustainability narrative.

The longitudinal analysis of the sustainability reports from 2018 to 2023 reveals a progressive evolution in the company's leadership discourse. The earlier reports emphasised broad themes such as sustainable fashion, ethical practices, and social justice, while the later reports increasingly integrated technical, operational, and performance-driven language. Over time, there is a clear trend toward greater alignment between strategic sustainability priorities, circular economy principles, and transparent reporting practices. This suggests a maturing leadership narrative that seeks to balance corporate ambition with operational accountability and stakeholder expectations.

4.2. Results for KPIs Analysis

Based on the analysis of the KPIs presented in the company's sustainability reports for the period 2018–2023, the main themes identified were Climate, Materials, Clothing, Waste, Packaging, Water, and Energy. It is worth noting that, as previously mentioned, occasional and non-recurring indicators disclosed in certain reports were excluded from the longitudinal analysis. The definitions of the specific indicators analysed were presented in Table 1.

For the Climate indicators presented in Table 8, the 2018 report established an initial goal of becoming "climate positive" by 2040. In 2019, this target was adjusted to state that climate positivity should be achieved by 2040 at the latest, a subtle but notable change that reflects a more flexible target. From 2021, the climate positivity goal was removed entirely, and reporting focused on year-to-year changes in scopes 1 and 2. In 2023, a quantitative target was introduced: an absolute reduction of 56% in all climate-related indicators by 2030, using 2019 as the base year. As of 2023, the reported absolute reduction was 29%. Considering this, H1 is accepted with caution, as the presence of climate-related targets and monitoring indicates alignment between leadership discourse and circular practices, but the removal of the initial "climate positive" commitment weakens the strength of this association. H2 is accepted with reservations, as the introduction of a measurable target supports a mediation effect between discourse and performance, though interim reductions are insufficient to confirm full achievement potential.

Table 8. Climate KPIs.

Climate	2018	2019	2020	2021	2022	2023
Changes in emissions of scopes 1 and 2	−11%	8%	15%	−32%	18%	−15%
		Compared with the previous year.				
Changes in emissions of scopes 1 and 2	−11%	−3%	14%	–	–	–
			Compared with 2017.			
Absolute reduction in scopes 1 and 2	–	base	15%	−22%	−8%	−24%
			Compared with 2019.			
Absolute reduction in scope 3	–	base	−14%	−9%	−11%	−9%
			Compared with 2019.			
Changes in scope 3	–	−3%	−8%	5%	−4%	–
			Compared with 2019.			
Absolute reduction in scope 3 (without use)	–	base	−8%	−3%	−7%	−22%
			Compared com 2019.			

As shown in Table 9, the materials' KPIs reveal a generally positive trend. The goal of 100% recycled cotton or other sustainable sources was achieved in 2020. Recycled cotton or other sustainable sources increased from 95% in 2018 to 100% in 2020 and remained at that level through 2023. The proportion of recycled materials rose from 57% in 2018 to 85% in 2023. Recycled content increased from 1.4% in 2018 to 25% in 2023. Among the

materials' KPIs, the collection of used clothes for recycling is also monitored, as shown in Table 9. In a public press release, the company stated its intention to "close the fashion cycle," aiming to preserve the added value of textiles. Initially, the company set a target of collecting 25,000 pieces annually; however, full compliance was only achieved in 2019. The 2019 report updated this target to a goal of annual increases in the quantity of items collected, a target that has not been consistently met in subsequent years.

Table 9. Materials' KPIs.

Materials	2018	2019	2020	2021	2022	2023
Recycled cotton or other sustainable sources (mass fraction)	95%	97%	100%	100%	100%	100%
Recycled materials or other sustainable sources (mass fraction)	57%	57%	64.5% commercial goods	80%	84%	85%
Recycled materials that appeared in 2020 (mass fraction)	1.4%	2.2%	5.8% commercial goods	17.9%	23%	25%
Tones of collected clothes (mass)	20,649	29,005	18,800	15,944	14,768	16,855

H1 is partially accepted, as the strong improvement in material sourcing aligns with leadership discourse, but the declining trend in clothing collection contradicts the stated ambition to "close the fashion loop." H2 is partially accepted, since sourcing improvements could enhance performance, but inconsistent results in collection volumes limit the mediation effect.

Regarding packaging KPIs shown in Table 10, the original goal of achieving 100% recycled packaging materials by 2030 was present until the 2020 report, but was subsequently removed. The target of 100% recycled or renewable materials by 2030 remained, with values of 68% in 2021, 71% in 2022, and 79% in 2023. Discrepancies were found in reported values (e.g., 71% for 2022 in the 2023 report versus 85% in the 2022 report). In this sense, H1 is weakly supported, as leadership discourse continues to reference a 2030 packaging goal but with diminished ambition and data inconsistencies. H2 is weakly supported, as partial progress is recorded, yet conflicting data undermine confidence in a mediation effect.

Table 10. Packaging KPIs.

Packaging	2018	2019	2020	2021	2022	2023
Recycled in total material used for packaging (mass fraction)	base	40%	50%	–	–	–
Recycled material or other sustainable sources (mass fraction)	–	–	–	68%	71%	79%

Another material indicator, specifically linked to the product, deals with the collection of used clothes for the recycling initiative promoted by the brand, shown as waste KPIs in Table 11. Regarding the implementation of the in-store clothing recycling system, which enables the disassembly of old garments for the creation of new products, coverage remained relatively stable at around 63–64% during the first three years of the analysis (2018–2020), though no data were reported for subsequent years. H1 is not supported, as there is no evidence that leadership discourse sustained or expanded waste-related circular practices beyond the initial years. H2 is rejected due to the absence of recent data, preventing any confirmation of mediation between leadership discourse and performance.

Table 11. Waste KPIs.

Waste	2018	2019	2020	2021	2022	2023
Recycling system for waste in stores (mass fraction)	63%	62%	64%	–	–	–

For the energy consumption KPIs presented in Table 12, once again, the goal changed over the studied period. Electricity intensity (kWh/m^2) decreased by 29% in 2023 compared to 2017, surpassing the original 25% reduction target set for 2025. Renewable energy use in operations remained between 90% and 96% during the period analysed, with a target of 100% by 2030. In this case, H1 is supported, as consistent reporting and achievement of energy goals reflect alignment with leadership discourse. H2 is supported, as measurable improvements in energy indicators suggest a mediation effect between discourse and sustainability performance.

Table 12. Energy KPIs.

Energy	2018	2019	2020	2021	2022	2023
Intensity of electricity change	−8.2%	−10.1%	−17%	−16.8%	−23%	−29%
	in kwh/m^2 compared with 2017					
Renewable energy in own operations (fraction of the total)	96%	96%	90%	95%	92%	94%

Lastly, regarding water KPIs presented in Table 13, they focus primarily on water consumption efficiency. Initially, the company aimed to achieve 100% implementation of water-efficient technologies by 2020. However, by the target date, only 85% implementation has been reached, and this KPI no longer appeared in subsequent reports. The second water KPI, recycled water used in production, showed steady progress, reaching 21% in both 2012 and 2022, though no value was reported for 2023. H1 is weakly supported, as early improvements indicate some alignment with leadership discourse, but the discontinuation of reporting limits confirmation. H2 is weakly supported, with some mediation evidence in the early years but insufficient longitudinal data to confirm a sustained effect.

Table 13. Water KPIs.

Water	2018	2019	2020	2021	2022	2023
Water-efficient technologies (fraction of the total)	64%	67%	85%	–	–	–
Recycled water used in production (volume fraction)	–	13%	18%	21%	21%	–

Overall, the longitudinal analysis of KPIs reveals fluctuating levels of ambition, consistency, and transparency across different sustainability dimensions, providing valuable context for interpreting the evolving leadership discourse identified in the company's sustainability reports. Regarding the hypothesis, H1 is fully supported only for Climate and Energy, partially supported for Materials, and weakly or not supported for Packaging, Waste, and Water. H2 is supported for Energy, cautiously accepted for Climate, partially supported for Materials, weakly supported for Packaging and Water, and rejected for Waste.

4.3. Results for Leadership Practices Analysis

Based on the analytical framework of leadership practices in transition contexts towards circular economy, drawn from the final sample of the SLR, the company's sustainability reports were evaluated. The analysis verified the presence of several of these leadership practices, with particular emphasis on practices 1, 4, and 5, as presented in Table 14. Other practices were also present to varying degrees but were less prominently reflected in the discourse. The leadership practices listed in Table 14 were identified from the systematic literature review (SLR), which mapped 48 peer-reviewed studies on leadership discourse in sustainability contexts. These practices were extracted and consolidated based

on their recurrence and theoretical relevance in transition management, circular economy implementation, and sustainable leadership frameworks [45–60].

Table 14. Leadership practices.

References	Leadership Practices
[48–50]	1. Efficient stakeholder management, focusing on promoting more relevant CSR disclosures to favour their engagement and success.
[51–53]	2. Support employees to work sustainably, developing their green creativity, to motivate them to contribute towards sustainable business goals. It is essential to make sure that employees share the values and understand the company vision.
[51,52,54–56]	3. Management that prioritises mechanisms for promoting initiatives to achieve sustainable development goals of the organisation, balancing profitability and sustainability, and maintenance of the culture of creativity, ethics, and green innovation.
[57,58]	4. Relationships building with their subordinates, show empathy, relationships governance, mediate motivation and sustainability strategy, sharing orientation on organisational sustainability.
[58–60]	5. Shape opportunities that generate value for the business and stakeholders, beyond developing the local community.
[53,59]	6. Thinking multifaceted to identify business opportunities and potential threats, to better risk management, engaging groups on dynamic changes intraorganisational and interorganisational, to overcome dares and keen competition. Leaders can reinforce internal resources to solve social and environmental challenges.
[61–63]	7. Consensual decision-making, low on power inequality, actively encourages others to seek cooperation, articulating information, exploring possibilities, to reach group power through collaboration.

To verify their presence in the company's reports, we conducted a content analysis guided by the topics identified in the topic modelling stage. This enabled us to examine whether the discourse contained explicit or implicit references to each leadership practice. The practices emphasised in the results (1, 4, and 5) were those most consistently reflected in the narratives of the analysed reports, either through repeated mention of related terms or through alignment with the rhetorical strategies identified.

In this sense, the application of topic modelling helped to guide the reading of the reports and direct the investigation of which leadership practices were being implemented. Having gained an overview of the company's priorities and the tendencies within its leadership discourses, the reports were then fully read, and content analysis was carried out to identify which leadership practices were explicitly referenced.

Recent studies point to the fundamental role that leaders play in the process of preparing high-quality financial and sustainability information, which greatly influences corporate transparency [64]. Moreover, effective communication with diverse audience adds value to business and strengthens stakeholders' trust.

5. Discussion

By integrating the data collected, the information disclosed in the reports, and the results obtained through natural language processing techniques [65], this study enables a critical analysis of the presence of circular and sustainable actions implemented and communicated by the company studied. As shown in Tables 1–6, this presence is strongly evident by the topic labels attributed to the main topics extracted from each report.

The labels encompass key sustainability dimensions in the fast fashion industry, addressing practices related to the supply chain, operational challenges, relationships with suppliers and customers, stakeholder components, the importance of social sphere, and the consistent emphasis on management roles [66].

Over the reported KPIs, manufacturing companies should measure various dimensions of products' prolonged life cycle, and disclose more information about their reuse, recycling, and recovery in the reports [41]. In Table 8, this shift from an aspirational climate-positive goal to a focus on monitoring scopes 1 and 2 emissions can be interpreted as a strategic recalibration of ambition in response to the growing recognition of the technical and systemic challenges associated with achieving climate positivity or net zero within the original timeframe.

Moving from broad symbolic commitments toward measurable and auditable emissions reductions reflects a shift from symbolic to operational legitimacy [2] and aligns with patterns of goal deflation observed in corporate sustainability discourse when initial ambitions prove difficult to implement [46]. Furthermore, this change likely anticipates increasing stakeholder scrutiny and the heightened risk of greenwashing accusations, which have led many companies to adopt more conservative and verifiable forms of climate communication [47].

On one hand, clear and consistent messaging around circular economy practices, supply chain transparency, and employee well-being serves to engage stakeholders and reinforce expectations of progressive sustainability action [67]. On the other hand, inconsistencies in goal setting and KPI reporting, such as shifting climate targets or removal of certain indicators, risk undermining stakeholder trust and confidence [67]. Through visionary framing, progress narratives, and alignment with global standards such as the SDGs, the leadership discourse helps position the company as a sustainability leader [68]. However, the use of defensive discourse strategies, including the replacement of specific targets with generalised statements, illustrates ongoing tensions between ambition and practical implementation [69]. The dominant themes that characterise this discourse (circularity, transparency, social justice, operational efficiency, and climate action) reflect the strategic priorities conveyed to stakeholders but also highlight areas where further alignment between discourse and action is needed to support long-term stakeholder engagement and credibility [67].

Although the company's leadership style appeared to be generally aligned with the requirements for circular economy implementation, with the sustainability report serving as a materialisation of this discourse [69], the analysis of the KPIs revealed notable inconsistencies between the discourse and measurable performance. As shown in Tables 7–13, the reports demonstrated recurrent discontinuities between established goals and the result achieved. This inconsistency suggests a degree of reactive decision-making, where goals are not formulated with a coherent long-term horizon and therefore require frequent revisions and deadline adjustments [68]. Moreover, the analysis revealed a pattern of indicator substitution and, in some cases, the replacement of specific objectives with more general ones. From a longitudinal perspective, this complicates the ability to track corporate performance over time [70], a pattern shown in Table 10.

This observation reinforces the need to develop analytical models to systematically measure progress and evaluate the content disclosed in sustainability reports [68]. In this research, the constructed theoretical basis included comparison parameters for effective circular economy implementation [71]. These parameters were previously tested in an analysis of a company already operating with a circular system. In the present study, the application of topic modelling [65] revealed that, while certain concerns and priorities exist in the discourse, there remain significant dichotomies between discourse and actual practices implemented [66].

In addition, the ongoing improvement in the quality of reports is beneficial for stakeholder decision-making and motivates companies to enhance their sustainable development practices, thereby providing richer and more reliable material for future disclosures [61]. Research results show the drive for independent and significant sustainability assurance comes from the need to build trust and credibility in sustainability reporting [65]. Achieving this requires rigorous reporting standards [72], improvements in internal management systems, strengthened auditing, and the adoption of computational analysis tools to reduce subjectivity interpretation [73].

In this context, good practices for reporting include providing relevant and accessible information, ensuring broad access to disclosure, and maintaining comparability and consistency over time [72]. Such practices intentionally move away from problematic behaviours like greenwashing, greenhushing, and even greenwishing [14,15], as discussed earlier in this study.

Hence, sustainability reports should be viewed as a tool for accountability toward all stakeholders [67,72]. They also serve to demonstrate the company's transparency and willingness to engage with society by taking responsibility for its actions and impacts [74,75]. These findings underscore the importance of aligning leadership discourse with transparent and consistent sustainability practices, particularly in sectors like fast fashion where stakeholder expectations are continuously increasing [16,17].

6. Implications of Findings

The findings of this study carry significant implications for theory, practice, and policy, as illustrated by Figure 6. From a theoretical standpoint, the integration of topic modelling and KPI analysis with insights derived from the systematic literature review advances the scholarly understanding of leadership discourse in sustainability reporting. This study contributes by demonstrating how leadership narratives evolve across different temporal contexts—before, during, and after the COVID-19 pandemic—highlighting the dynamic and adaptive nature of sustainability communication. In addition, the methodological approach adopted, which combines longitudinal text analysis with evidence synthesis from prior studies, provides a novel contribution that can be replicated in future research on corporate discourse and sustainability reporting.

In terms of practical implications, the results offer managers and practitioners concrete insights into the role of leadership practices in shaping sustainability narratives. By identifying the leadership practices that are recurrently emphasised in sustainability reports and linking them with the performance outcomes captured through KPIs, this study provides evidence-based guidance for companies aiming to improve their sustainability communication strategies. This strengthens the alignment between discourse and measurable outcomes, enabling organisations to design more transparent, consistent, and credible reporting practices that resonate with both internal and external stakeholders.

Finally, this study also entails broader societal and policy implications. The analysis reveals a gap between leadership discourse and effective transformation, particularly in the post-pandemic years, where expectations for sustainable change were not always matched by substantive action. This underscores the importance of establishing stronger governance and accountability mechanisms to ensure that sustainability commitments are translated into practice. For policymakers and regulatory bodies, the findings highlight the necessity of promoting standardised frameworks for sustainability reporting and reinforcing monitoring systems that enhance credibility, comparability, and verifiability of disclosed information.

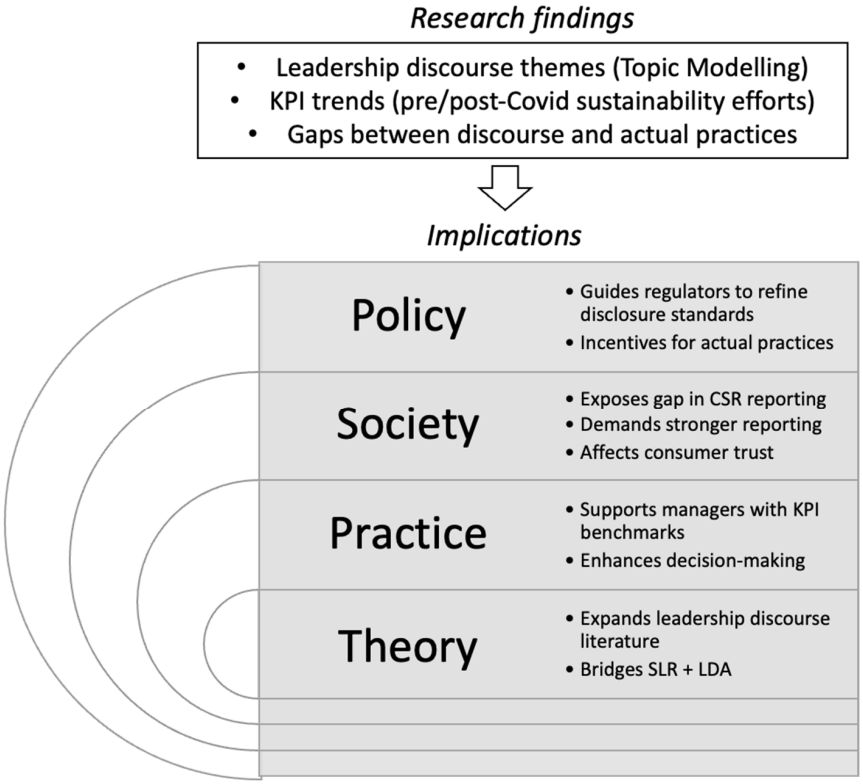

Figure 6. Multidimensional research findings.

7. Conclusions

The research explored the leadership discourse of a prominent company in the fast fashion sector through the text analysis approach of Topic Modelling of its sustainability reports, complemented by a longitudinal examination of key performance indicators (KPIs). This study aimed to answer the following research question: In which ways does leadership discourse in sustainability reports shape stakeholder engagement and the adoption of sustainable development standards, and what main themes and rhetorical strategies characterise this discourse?

The findings indicate that leadership discourse in the analysed reports have a paradoxical role. It supports stakeholder engagement by emphasising themes aligns with circular economy, supply chain transparency, and social sustainability, but also contains discourse inconsistencies and changing targets that risk undermining stakeholder trust. The identified gap between stated goals and measured progress through KPIs suggests that leadership narratives, while aspirational, are not always matched by consistent or transparent operational performance. Although companies are satisfied with the adequacy of the reported performance, society expects more and is pressing for greater transparency and access to quality information on social and ecological impacts.

In this sense, the research question was effectively addressed. The analysis revealed the main themes (circularity, operational transparency, social justice, climate action) and narrative strategies (visionary framing, stakeholder alignment, progress narratives, and defensive vagueness) that characterise the company's leadership discourse. It also demonstrated how this discourse both engages stakeholders and, at times, creates gaps in credibility when misaligned with performance outcomes.

While leadership discourse remains a powerful tool for shaping stakeholder engagement and guiding corporate sustainability narratives, it must be continuously aligned with transparent, consistent, and verifiable performance outcomes to meaningfully advance the adoption of sustainable development standards in the fast fashion industry.

From a theoretical perspective, this study contributes to the literature on leadership in sustainability transitions, corporate sustainability reporting, and circular economy transition by applying a combination of Topic Modelling and longitudinal KPI analysis to assess the alignment between leadership discourse and progress toward sustainable development. It highlights the importance of integrating discourse analysis with performance metrics to gain a more nuanced understanding of sustainability practices.

From a managerial perspective, the findings underscore the need for leaders to adopt more consistent and transparent communication practices, grounded in a genuine commitment to sustainability. Visionary leadership must be accompanied by clear, stable, and measurable targets, as well as transparent reporting that fosters stakeholder trust over time. Companies should also recognise that circular economy implementation requires systemic and innovative change, beyond individual localised solutions. Leadership should therefore drive holistic organisational transformation, supported by collaborative business ecosystems rather than incremental or disconnected efforts.

Finally, this study suggests avenues for future research, including the application of similar methodologies to broader industry samples, comparative analyses between companies or sectors, and the exploration of how evolving regulatory frameworks (such as the CSRD and ESRS) influence leadership discourse and reporting practices over time.

Author Contributions: Conceptualisation: J.M.d.M., A.C.W.D., A.C.B. and L.G.Z.; Methodology: J.M.d.M., A.C.W.D. and L.G.Z.; Software: A.C.W.D. and L.G.Z.; Validation: A.C.B. and L.G.Z.; Formal analysis: J.M.d.M. and A.C.W.D.; Investigation, J.M.d.M. and A.C.W.D.; Data curation: A.C.W.D.; Writing—original draft preparation: J.M.d.M. and A.C.W.D.; Writing—review and editing: J.M.d.M., A.C.B. and L.G.Z.; Visualisation: A.C.B. and L.G.Z.; Supervision: L.G.Z. and L.C.R.C.; Project administration: L.G.Z. All authors have read and agreed to the published version of the manuscript.

Funding: This work was supported by the Brazilian Coordination for the Improvement of Higher Education Personnel (CAPES) [grant number 001], by the Brazilian National Council for Scientific and Technological Development (CNPq) [grant number 408104/2023-6] and by the University of São Paulo PUB Scholarship [grant number 2023-5511].

Institutional Review Board Statement: Not applicable.

Informed Consent Statement: Not applicable.

Data Availability Statement: The data presented in this study is available upon request from the corresponding author.

Conflicts of Interest: The authors declare no conflicts of interest.

Abbreviations

The following abbreviations are used in this manuscript:

CEO	Chief Executive Officer
CE	Circular Economy
GHG	Greenhouse Gas
MPFs	Microplastic Fibers
SLR	Systematic Literature Review
KPI	Key Performance Indicator
NPL	Natural Processing Language
LDA	Latent Dirichlet Allocation
GRI	Global Reporting Initiative
ESG	Environmental Social Governance
CSRD	Corporate Sustainability Reporting Directive
ESRS	European Sustainability Reporting Standards

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