Cleaner and Responsible Consumption 21 (2026) 100415

Contents lists available at ScienceDirect

Cleaner and Responsible Consumption

journal homepage: www.journals.elsevier.com/cleaner-and-responsible-consumption

The circular economy and the sustainable development goals: Strategies for consumer involvement in the textile industry

Fàtima Vidal-Ayuso [a,b,*], Carmen Jaca [c], Anna Akhmedova [a]

[a] Universitat Internacional de Catalunya, Barcelona, 08017, Spain
[b] UPF Barcelona School of Management, Barcelona, 08008, Spain
[c] Universidad de Navarra, TECNUN, San Sebastián, 20018, Spain

ARTICLE INFO

Keywords:
Circular economy
Sustainable consumption
Sustainable development goals (SDGs)
Textile industry
Consumer strategies

ABSTRACT

The textile industry, a globally significant sector, is increasingly adopting sustainable alternatives through corporate social responsibility (CSR), environmental, social and governance (ESG) criteria, circular economy (CE) principles, and implementation of the sustainable development goals (SDGs). A total of 60 companies from the textile sector were analysed using a fuzzy-set qualitative comparative analysis to assess the achievement of SDGs 6, 7, 8, 9, 12, 13, and 15, adopting CSR, ESG and CE principles. The analysis resulted in the identification of six strategic profiles reflecting different approaches to SDG implementation, which were classified according to the level of consumer engagement (low, moderate, or high). We argue that consumer involvement and co-creation is key to sustainable development.

The findings demonstrate that effective SDG implementation requires a balanced combination of policy structures, product innovation and active consumer participation. Our analysis contributes to the theoretical understanding of the role of consumer participation for achieving sustainability, providing managerial insights into fostering sustainable consumer behaviours. This research advances the discussion on corporate sustainability strategies and consumer agency in circular value chains.

1. Introduction

The textile industry is one of the most polluting industries in the world, negatively impacting the environment because of its enormous magnitude (Sahni and Chopra, 2020; Sedej and Toroš, 2023), the rise in clothing consumption (Sedej and Toroš, 2023) and water consumption (Gomes et al., 2024), and land use. In 2022, the textile industry was responsible for an estimated 0.879 gigatonnes (Gt) of carbon dioxide-equivalent (CO_2e) emissions, representing approximately 1.85% of total annual global greenhouse gas (GHG) emissions (Apparel Impact Institute, 2024). In light of this, and driven by the growing public awareness of sustainability issues, the textile industry is undergoing a transformation towards more sustainable business models (Sumo et al., 2022). These emerging models place consumers at the centre of the value chain, emphasising their crucial role in achieving circularity (Vidal-Ayuso et al., 2023). This shift is largely enabled by the adoption of processes and practices inspired by the principles of the circular economy (CE) (Barbu et al., 2018; Kopnina, 2019).

The transition towards more sustainable models within the textile industry is being driven by multiple factors, including heightened consumer awareness of environmental issues (Ghisellini et al., 2016; Mugge et al., 2017; Singhal et al., 2019) and the increasing adoption of the CE principles (Patwa et al., 2021). This shift also responds to the sector's significant environmental footprint, which, as noted by Aramendia--Muneta et al. (2022), has encouraged the integration of the SDGs into the textile industry. Consequently, companies are increasingly seeking to align their strategies with the 17 SDGs (United Nations, 2024). However, despite the SDGs' clear vision and comprehensive scope, many companies still face substantial challenges in operationalising and embedding them into their strategic frameworks (UNGC, 2025). Moreover, the link between SDG disclosure and companies' actual sustainability performance remains unclear, indicating the need for further research (Nicolo' et al., 2024).

The interrelation between the CE and the SDGs is key to determining consumer involvement in the textile industry, a fundamental part of the CE and the eternally forgotten factor (Lieder and Rashid, 2016; Machado et al., 2019). Consumers play a pivotal role in the business ecosystem as the key to closing the loop in the CE (Vidal-Ayuso et al., 2023). Their

* Corresponding author. Universitat Internacional de Catalunya, 08017, Barcelona, Spain.
E-mail addresses: fatima.vidal@bsm.upf.edu (F. Vidal-Ayuso), cjaca@tecnun.es (C. Jaca), a.akhmedova@uic.es (A. Akhmedova).

https://doi.org/10.1016/j.clrc.2026.100415
Received 23 December 2025; Received in revised form 4 March 2026; Accepted 5 March 2026
Available online 7 March 2026

active participation and contribution in the initiatives undertaken by companies is crucial (Dominidiato et al., 2024), with the success of CE implementation ultimately depending on this consumer participation (Bączyk et al., 2024; Cruz and da Cruz, 2023). However, the well-known value-action gap (Ha and Janda, 2012; Prakash and Pathak, 2017) underscores the challenge in translating consumer values into sustainable actions. In light of the aforementioned considerations, the aim of this research is to conduct an analysis of companies in the textile industry, with a focus on the degree of consumer engagement efforts, including an examination of the strategies based on the SDGs and CE principles employed by companies to engage and encourage this participation. Although several recent studies have examined business strategies within the textile industry (Gosal et al., 2024; Hageman et al., 2024; Krywalski-Santiago, 2024; Zaman and Kusi-Sarpong, 2024), none have explicitly addressed the role of the SDGs or their direct link to consumer involvement as key variables. To address this gap, the present study adopts a theory-building approach (Eisenhardt, 1989) to develop an integrative framework that links CE principles, the implementation of SDGs and consumer engagement. Therefore, the research questions addressed in this article are:

1. What are the types of strategic profiles of the companies in the textile industry that adhere to the implementation of the SDGs?
2. What are the levels of consumer involvement across these strategic profiles?

The answers to the research questions make important contributions to this field of research. First, we identify various prevailing strategic profiles among textile companies that actively align their operations with the SDGs. Second, the research examines the levels of consumer involvement across these identified strategic profiles. By analysing consumer involvement and participation, three distinct levels can be identified, depending on the degree of involvement. Last, the research underscores the significance of companies incorporating consumer perspectives, emphasising the imperatives of consumer education and knowledge.

This paper is structured as follows. Following the introduction, Section 2 reviews the literature and establishes a framework for the research. Section 3 presents the research methods and dataset, and Section 4 contains the results of the study. Sections 5 and 6 present the discussion and conclusions, respectively.

2. Literature review

2.1. Sustainability through the sustainable development goals and the circular economy in the textile industry

With organisations facing growing pressure to address environmental, social and economic challenges, sustainability has become the priority in corporate strategies (Calciolari et al., 2024). This contemporary perspective builds on the long-standing definition of sustainable development introduced by Brundtland Report (WCED, 1987), which defined it as the balance between environmental protection, economic viability and social well-being (Edwards, 2005). This foundational view set the stage for later global frameworks, such as the launch of the United Nations 2030 Agenda for Sustainable Development, which establishes 17 SDGs that encompass 169 specific targets aimed at fostering an equitable, sustainable and economically viable future for all humanity (United Nations, 2024).

As sustainability has gained prominence, companies across different sectors have increasingly oriented their strategies towards contributing to these global goals (Singh and Rahman, 2021). Within this context, many industries are increasingly adopting sustainability-oriented strategies to align with the SDGs (KPMG, 2022; Pradhan et al., 2017; Rosati and Faria, 2019b; Van der Waal and Thijssens, 2020). Among them is the textile industry, which is undergoing significant transformation to reduce its environmental impact and improve the sustainability of its products and business models (Sumo et al., 2022). Fashion and clothing are among the products most consumed by users (Apparel Impact Institute, 2023), making this sector particularly critical for advancing the SDGs.

A key driver of this shift is the growing implementation of CE practices, which supports the achievement of several SDGs and reinforces companies' efforts towards sustainable development (Olofsson and Mark-Herbert, 2020). It has been demonstrated that the SDGs can be met through CE practices (Govindan, 2023), thereby strengthening and making more necessary the connection between the two concepts. Rahmat et al. (2024)'s bibliographic analysis confirms a direct and growing correlation between circular strategies and SDG achievement, demonstrating that CE does not operate in isolation but acts as a cross-cutting enabler driving the transition towards the SDGs. This systemic and multi-level perspective is further reinforced by recent research conceptualising CE transitions as territorially embedded processes (Booth et al., 2026). Likewise, Khajuria et al. (2025) further define CE as a powerful *SDG accelerator,* emphasising that efficient sustainable consumption is necessary to unlock its full potential.

In terms of the textile industry, there are seven SDGs that are particularly aligned with CE-related actions: SDG 6 (Clean water and sanitation), SDG7 (Affordable and clean energy), SDG8 (Decent work and economic growth, SDG9 (Industry, innovation, and infrastructure), SDG12 (Responsible consumption and production), SDG13 (Climate action), and SDG15 (Life on Land). Table 1 explains the importance of each SDG to this industry, as well as the relevance of these goals to the sector.

Recent studies have focused on how these SDGs are implemented within the textile industry and the effects of various sustainability measures on companies. However, to effectively harness these connections, it is essential that companies employ strategies to address the challenges and targets related to the SDGs, as well as incentivise consumers to participate in the CE loop (Amasawa et al., 2023; McNeill et al., 2020; Sharma et al., 2021; Shaw et al., 2024; Ullah et al., 2024; Zaman and Kusi-Sarpong, 2024). These recent works do not identify the strategic profiles that textile companies adopt in implementing the SDGs, nor how these strategies foster consumer involvement in circular practices. This gap highlights the need for further research on the interplay between corporate sustainability strategies, SDG implementation, and consumer participation within the textile industry.

2.2. Sustainable business strategies: synergies among corporate social responsibility, environment, social and governance criteria, and the circular economy

Corporate social responsibility (CSR) is a management philosophy and a framework for integrating social and environmental concerns into business operations (Fortunati et al., 2020a,b; Bonciu, 2023; Santiago et al., 2025, Caroll, 1991, Carroll and Shabana, 2010). It is heavily grounded in the notion that a company has responsibilities beyond maximising profit for shareholders, extending to all interrelated groups who can affect or be affected by the organisation's activities, including employees, customers, suppliers, governments and the community (Todaro and Torelli, 2024; Marcon et al., 2023; Bonciu, 2023; Morea et al., 2021). To this effect, it aims to balance the needs of sustainability with those of the company by addressing the concerns and interests of various stakeholders (Santiago et al., 2025). The European Commission initially defined CSR as a voluntary concept (European Commission, 2001), but later recognised it as a responsibility of companies in terms of their impact on society, involving integrating social, environmental, ethical and consumer concerns, as well as human rights, into their core strategies in collaboration with stakeholders.

The environmental, social and governance (ESG) criteria are a measurable and increasingly central set of factors for assessing corporate sustainability and performance, driven by investor demand and

Table 1
Justification for the importance of the SDGs in the textile industry.

SDG	Name	Importance in textile industry
SDG6	Clean water and sanitation	The textile industry is one of the largest consumers of water (Gomes et al., 2024), in terms of both the water used in the production of the raw materials, and the water required in the manufacture of the products (Hossain and Khan, 2020; de Oliveira Neto et al., 2021).
SDG7	Affordable and clean energy	The emerging technologies are of great importance for the textile industry, where there is a high amount of waste (Hasanbeigi and Price, 2015). An emerging technology such as energy recovery offers sustainable solutions, and as such is a very useful practice (Papamichael et al., 2024).
SDG8	Decent work and economic growth	The need for decent work in the textile industry is receiving increased attention due to the poor working conditions and the growing labour crises (Chen et al., 2017). This means that in the pursuit of sustainability, social issues are gaining relevance, as shown by the implementation of this SDG in the textile industry (Dzhengiz et al., 2023).
SDG9	Industry, innovation, and infrastructure	Innovation is important for the CE paradigm, helping to reduce barriers to adoption (Demirel and Danisman, 2019; Jesus and Jugend, 2021). The textile industry requires new ways of production, such as the use of recycled, reused, or upcycled material (Sandin and Peters, 2018). However, for this to be effective, green innovation needs to be improved (Coppola et al., 2023), and textile companies need to rethink their processes (Battesini Teixeira et al., 2023)
SDG12	Responsible consumption and production	This SDG plays an important role in the textile industry (Ponnambalam et al., 2023), particularly because consumption in this industry has increased in recent decades. The current situation requires urgent attention (Khairul Akter et al., 2022), and a shift in paradigm towards new ways of consumption (Pandey, 2023).
SDG13	Climate action	The textile industry supply chain is directly related to this SDG (Cai and Choi, 2020) as its main objective is to take action to combat climate change and its impacts, and to enhance resilience and the ability to adapt to climate-related risks (United Nations, 2024). Furthermore, as Garcia-Saravia Ortiz-de-Montellano et al. (2023) mentioned, SDG 13 can be implemented positively though CE strategies, due to its broad scope.
SDG15	Life of land	The textile industry impacts negatively on the environment due to the high level of pollution it causes (Sahni and Chopra, 2020; Sedej and Toroš, 2023). CE strategies such as reusing and recycling textiles can reduce the amount of solid waste in landfills and improve the land situation (Sandin and Peters, 2018; Todeschini et al., 2020).

regulatory mandates. ESG fundamentally relates to and often overlaps with CSR and CE initiatives. While CSR acts as a general philosophy or framework for sustainability planning, ESG is the set of quantifiable non-financial performance indicators derived from these values (Kaźmierczak, 2022; Bonciu, 2023). The widespread use of ESG factors has been driven by legal and regulatory frameworks such as the European Green Deal and the Corporate Sustainability Reporting Directive (CSRD), making the disclosure of non-financial information increasingly obligatory (Todaro and Torelli, 2024; Morea et al., 2023; Kaźmierczak, 2022).

CE represents a fundamental departure from the traditional linear model, and aims at decoupling economic growth from resource consumption and waste minimisation (Agyemang et al., 2025; Bonciu, 2023; Fortunati et al., 2020a,b). As a regenerative paradigm and innovative business model, CE stands as a vital conceptual foundation for sustainability, particularly when viewed alongside CSR and ESG criteria. Specifically, CE as an innovative business model for firms provides a practical vehicle for converting abstract CSR plans into concrete and measurable actions (Fortunati et al., 2020a,b; Hong et al., 2024; Santiago et al., 2025). Successfully implementing a circular approach means authentically altering company business models, thereby avoiding the "rhetoric of sustainability" or "greenwashing" often associated with merely symbolic sustainability engagement (Fortunati et al., 2020a,b). To achieve this transition, recent research has stressed the importance of measurable design-oriented metrics to translate circular principles into operational decision-making processes (Stevels, 2023).

ESG disclosure mandates often include CE topics. To this effect, CE disclosure related to energy efficiency, resource reduction, water efficiency and emission reduction is positively associated with improved ESG performance (Leggerini et al., 2025). The successful long-term application of CE practices such as eco-design and reverse logistics leads to significantly improved CSR/ESG performance by minimising resource use, reducing pollution and enhancing reputation (Agyemang et al., 2025; Leggerini et al., 2025; Hong et al., 2024).

Having said the above, the opposite is also true. Studies consistently show that environmental disclosure positively and significantly promotes CE practices (Agyemang et al., 2025). For example, environmental disclosure focuses on mitigating ecological footprints, lessening resource exploitation and reducing pollution, which directly encourages the responsible production behaviours required by the CE principles (e.g., waste reduction, recycling, product redesign) (Agyemang et al., 2025). Social disclosure also shows a positive and statistically significant link with CE practices (Agyemang et al., 2025). This link is attributed to how transparency in social issues fosters involvement from stakeholder groups such as local communities and employees that advocate for responsible consumption and production aligned with societal values, thereby promoting CE (Agyemang et al., 2025). In contrast to environmental (E) and social (S) disclosures, governance (G) disclosure has a complex relationship with CE adoption, which is often negative due to regulatory complexities and compliance inconsistencies (Agyemang et al., 2025).

The strongest strategic implication related to these findings is that adopting concrete CE practices reduces the risk of CSR-ESG-washing. Specifically, CE can serve as an *authenticity signal* since companies that engage in CE practices tend to be less controversial (i.e., they score lower on ESG controversies) and are less likely to exploit "washing" practices (Todaro and Torelli, 2024). Some empirical evidence suggests that to demonstrate sincerity in their sustainability actions (Todaro and Torelli, 2024) companies ought to shift away from vague or generic sustainability goals and instead adopt ambitious targets for a paradigm shift in production, such as those provided by the CE. The adoption of CE strategies is currently characterised by the implementation of a circular design, the reduction of packaging, and the promotion of customer awareness about recycling and reuse (Fortunati et al., 2020a,b; Morea et al., 2021). The viability of these strategies depends on robust traceability and digitalisation (Ismoilov, 2026). In this regard, the Digital Product Passport (DPP) established by the European Union (2024) emerges as a key technological mechanism for implementing transparency. By providing a verifiable data repository of a product's lifecycle, the DPP transforms abstract ESG commitments into tangible operational data, ensuring that circular strategies move beyond symbolic disclosures to effective implementation, while improving access to reliable product information (Becchi et al., 2026).

The fundamental challenge noted by some studies is the low level of consumer knowledge and the perception gap concerning corporate sustainability efforts, which creates an environment ripe for "washing" behaviours (Fortunati et al., 2020a,b). Consumers exhibit low to moderate understanding of both CSR and ESG concepts, despite their increasing prominence in business discussions (Fortunati et al., 2020a,

b). The lack of clarity and low consumer awareness creates space for companies to engage in misleading communication, necessitating authentic substantive action over mere symbolic disclosure. For example, high ESG scores are empirically shown to be positively correlated with high levels of ESG controversies, implying a risk of deceptive communication (ESG-washing) where high disclosure does not match actual performance (Todaro and Torelli, 2024).

3. Methodology

3.1. Method

This study follows a theory-building approach (Eisenhardt, 1989; Eisenhardt and Graebner, 2007), adopting an inductive and exploratory design to generate conceptual knowledge about textile companies that integrate CE practices and the SDGs. It combines qualitative reasoning with configurational analysis using fuzzy-set qualitative comparative analysis (fsQCA). This method (Ragin, 1987, 2006, 2008) is well suited to the theory-building approach as it operates under the assumption of complex causality, highlighting the importance of asymmetric relationships in identifying configurations that are sufficient and/or necessary for generating a specific outcome (Berbegal-Mirabent and Llopis-Albert, 2016; Meyer et al., 1993; Ragin, 2006; Rihoux and Ragin, 2009; Sendra-Pons et al., 2022).

The fsQCA allows the identification of cross-case patterns that provide deeper insights into the variable at play (Escott, 2018; Sendra-Pons et al., 2022). This method is useful when the data samples are small to medium-sized, like the one used in this study, because it permits the extrapolation of findings and implications to broader populations (Fiss, 2011).

The conditions of the model represent the strategies adopted by companies, while the outcome refers to the implementation of the SDGs linked to CE, such as SDG 6 (Clean water and sanitation), SDG7 (Affordable and clean energy), SDG8 (Decent work and economic growth, SDG9 (Industry, innovation, and infrastructure), SDG12 (Responsible consumption and production), SDG13 (Climate action), and SDG15 (Life on Land).

$$\text{Model}: \text{SDG}\ (7\ \text{SDGs}) = f\ (\text{ESG}, \text{CSR}, \text{LAB}, \text{PACK}, \text{PROD}, 2\text{HA}, \text{REC})$$

3.2. Sample

The sample for this study was extracted from the LSEG Workplace database, formerly known as Refinitiv Eikon. This database is a leading financial markets data and infrastructure provider that collects reliable and verified data from over 30,000 companies across more than 180 countries. In addition to financial data, it offers extensive analytical tools to assess business performance and commitment in relation to the SDGs, using publicly available and audited information (Refinitiv, 2023). This database has been used in several recent studies (Bătae et al., 2021; Demers et al., 2021; Hernandez-Vivanco and Bernardo, 2022; Pozzoli et al., 2022), so it was considered appropriate for extracting data on SDG implementation and the variables associated with corporate governance. The companies selected for analysis were therefore identified through this database.

The initial sample included 1977 companies operating in the textile industry in 2022. However, to gain a comprehensive understanding of the textile industry and its relationship with consumers, only two subsectors were considered, Apparel Manufacturing, and Clothing, Clothing Accessories, Shoe, and Jewellery Retailers (a total of 441 companies). These two subsectors were chosen to concentrate the research on Business-to-Consumer (B2C) companies, which are the ones that directly engage with consumers, thereby allowing analysis of their impact on the company's operations and processes.

After refining the sample to include only companies that reported information on SDGs, the final sample consisted of 60 companies. To ensure the reliability and comparability of the data related to SDG implementation, only companies providing audited information were included in the sample. These companies originated from Asia (27), Europe (16), and North America (17). Table 2 shows the main descriptive statistics of the sample, which consists in large international companies with a global presence.

3.3. Data collection

The data used in this research were extracted from two different databases. First, secondary data were extracted from the LSEG Workplace database, which provides audited financial and environmental information on listed companies worldwide (Refinitiv, 2023). Data collection was carried out during the second semester of 2023. During the company selection process, data on the SDGs and CE practices relevant to this study were simultaneously extracted, as shown in Table 3.

Second, complementary data were gathered from companies' sustainability reports, a standardised and widely recognised source of corporate sustainability information (Lozano, 2015; Rosati and Faria, 2019a; Siebenhüner and Arnold, 2007; Tsalis et al., 2020). As these reports are publicly available and often audited, they enhance the reliability and comparability of the information used in this study. As the preceding studies demonstrate (Bătae et al., 2021; Demers et al., 2021; Hernandez-Vivanco and Bernardo, 2022; Lozano, 2015; Pozzoli et al., 2022; Rosati and Faria, 2019b; Siebenhüner and Arnold, 2007), both databases, LSEG Workplace and the sustainability reports, are pertinent to the existing literature and can be considered suitable for this research.

To ensure data quality and methodological rigor, the information from the sustainability reports was manually extracted following a structured approach. The research team defined a set of predefined keywords, including "second-hand", "recollection" and "eco-labelling", based on their direct relevance to circularity strategies within the textile industry. These terms were selected to identify whether the chosen companies explicitly implemented, referenced, or reported on such practices. These keywords were then systematically applied across the available company sustainability reports, including impact reports and annual reports. To maintain consistency, all searches followed identical filters, selection criteria and time frames. The information is presented in Table 4.

4. Results

Considering the model, the results obtained were subjected to analysis. However, due to the methodology employed, the following sequence of actions was undertaken:

4.1. Data calibration

For the non-binary variables, it was necessary to perform a calibration process, which meant converting the conditions into fuzzy sets. To do so, three thresholds had to be considered, which represented three values in the data. The three thresholds went from full membership (1) to full non-membership (0). The crossover point (0.5) signifies a position that is neither within nor outside the set (Ragin, 2008). Table 5 shows

Table 2
Main descriptive statistics of the sample.

	Market Cap ($)	Total Assets ($)	Employees (n)	Revenues ($)
Min	9.263,33	0,00	144,00	32.472,37
Median	777.825,75	1.201.463,25	4.866,50	1.152.597,53
Mean	13.049.699,18	7.191.394,31	17.156,25	4.313.810,21
Max	411.548.064,63	144.098.886,99	175.000,00	72.999.795,38
St. Dev	56.058.105,08	25.576.176,99	34.313,81	13.092.043,98

Table 3
Conditions extracted from the LSEG Workplace database.

Conditions	Code	Description
Sustainable Development Goals	SDG	Refers to whether the company implements the SDGs.
Environmental Innovation Score	ESG	Part of the broader ESG criteria, this measures a company's ability to reduce environmental impact and costs for its customers. It also indicates the firm's potential to open new market avenues through innovative eco-friendly technologies, processes and products.
CSR Sustainable Committee	CSR	Involves whether the company has a CSR committee focused on the most important sustainability issues and stakeholder relations.
Sustainable packaging policy	PACK	Refers to the company's policies and implementing strategies aimed at enhancing sustainable packaging solutions. This includes the adoption of sustainable processes and procedures to minimise packaging waste, usage of environmentally friendly and energy-efficient materials, and the incorporation of green, returnable and biodegradable packaging options.
Eco-design products	PROD	Assesses whether the company actively reports on products designed with sustainability in mind, and specifically products designed for reuse or recycling, or for minimising the environmental impact. This entails the explicit consideration of environmental concerns during the product design phase, and may include products that can be recycled, reused, or disposed of in an environmentally benign manner.

Table 4
Conditions extracted from companies' sustainability reports.

Conditions	Code	Description
Eco-friendly labelling	LAB	When the company has sustainable products for sale and are labelled as such. A product is considered as sustainable when the company has used sustainable practices in its manufacture, the product is made from recycled fibres, or if the company sells recycled products and the reasons why they are sustainable are mentioned in their labelling. A product was considered to be eco-friendly when the company itself advertised it as such in its reports or on its website.
Second-hand sales	2HA	When the company sells second-hand clothing. A product was counted as sustainable when the company sells second-hand clothing, be it its own brand or others.
Clothes recollection	REC	When the company collects used clothing either for later use in other types of clothing, or for recycling or donation.

the calibration performed.

4.2. Analysis of necessary conditions

Before proceeding with the configurational analysis, the conditions necessary for companies to implement SDGs related to the CE were examined. A condition can be considered necessary when the consistency exceeds 0.9 (Greckhamer et al., 2018; Rihoux and Ragin, 2009; Schneider and Wagemann, 2010). Once the consistency and coverage values for all antecedent conditions were compared, it was established that none of the variables was a necessary condition to produce the outcome. The detailed consistency and coverage values for each antecedent condition are presented in Table 6.

4.3. Truth table creation

The truth table organises the data into a matrix space that features logical combinations of causal factors. The matrix occupies a space defined by 2^k, where k represents the number of antecedent conditions (Fiss, 2011). The configurations are presented in Table 6, where black circles (●) indicate the presence of a condition, white cirles (o) the absence of the condition, and blank cells ambiguous conditions (Fiss, 2011). Furthermore, large circles highlight that a condition is core to a given configuration, while small circles signify that the condition has a peripheral role. A condition is considered core when it has a strong causal relationship with the outcome, while a peripheral condition has a contributing role (Fiss, 2011).

Table 7 presents the intermediate solution for the model. According to Ragin (2008), a valid solution must have a coverage value greater than 0.45. The obtained solution meets this criterion, with a coverage of 0.528, indicating that more than 50% of the cases are represented by these six configurations. This number of configurations provide

Table 5
Calibration of variables.

Antecedent condition	Code	Membership threshold values		
		Full non-membership	Crossover point	Full membership
Sustainable Development Goals	7CE SDG	6	3	0
CSR Sustainable Committee[a]	CSR	1		0
Environmental Innovation Score	ESG	10	4	1
Eco-friendly labelling[a]	LAB	1		0
Sustainable packaging policy[a]	PACK	1		0
Eco-design products[a]	PROD	1		0
Second-hand sales[a]	2HA	1		0
Clothes collection[a]	REC	1		0

[a] Variables expressed in crisp set terms.

Table 6
Analysis of necessary conditions.

Conditions tested	Consistency	Coverage
ESG	0.790	0.605
~ESG	0.341	0.359
CSR	0.807	0.524
~CSR	0.092	0.175
LAB	0.670	0.524
~LAB	0.329	0.337
PACK	0.792	0.570
~PACK	0.207	0.239
PROD	0.575	0.527
~PROD	0.424	0.364
2HA	0.125	0.668
~2HA	0.874	0.423
REC	0.248	0.600
~REC	0.751	0.408

Table 7
Sufficient configuration of conditions for the achievement of 7 CE SDGs.

Antecedent conditions	Achievement of 7 CE SDGs					
	1	2	3	4	5	6
CSR Sustainable Committee (CSR)	●	•	•	○	•	•
Environmental Innovation Score (ESG)	●	•	•	•	⚬	•
Eco-Friendly labelling (LAB)	●	•	⚬	•	•	⚬
Sustainable policy packaging (PACK)		•	•	●	•	•
Eco-design products (PROD)	⚬	⚬		●	○	○
Second-hand sales (2HA)	⚬	⚬	⚬	⚬	•	•
Clothes recollection (REC)	○		⚬	⚬	●	●
Raw coverage	0.122	0.116	0.319	0.035	0.060	0.035
Unique coverage	0.041	0.035	0.239	0.035	0.060	0.035
Consistency	0.672	0.732	0.690	1.000	0.847	1.000
Overall solution coverage	0.528					
Overall solution consistency	0.755					

Note: ● Core causal condition (present). • Peripheral causal condition (present). ○ Core causal condition (absent). ⚬ Peripheral causal condition (absent). Blank spaces indicate "do not care" (condition can be either present or absent).

sufficient conditions for explaning the implementation of SDGs in conjunction with the CE within the textile sector companies.

The first casual configuration (#1) results from the presence of CSR, ESG and LAB as a core conditions, followed by the absence of PROD, 2HA and REC. The core condition implies a substantial causal relationship with the implementation of SDGs in conjunction with the CE in the textile sector. The second causal configuration (#2) consists of the presence of CSR, ESG, LAB and PACK, followed by the absence of PROD and 2HA. The third causal configuration (#3) explains the presence of CSR, ESG and PACK, and the absence of LAB, 2HA and REC. This configuration is notable because of its substantial coverage (0.319), meaning that almost 32% of the sample is represented through this configuration. It is also worth mentioning that this configuration comprises companies such as Christian Dior SE, LVMH Moet Hennessy Louis Vuitton SE, Hugo Boss AG and Moncler SpA, among other, which are considered luxury brands.

The fourth causal configuration (#4) represents the presence of ESG, LAB, PACK and PROD, and the abscense of CSR, 2HA and REC. This configuration displays a unique condition among the configurations, as it is the sole instance where PACK and PROD are core conditions. The fifth causal configuration (#5), which closely resembles #4, explains the presence of CSR, LAB, PACK, 2HA and REC, and the absence of ESG and PROD. Last, the sixth configuration (#6) consists of the presence of CSR, ESG, PACK, 2HA and REC, and the absence of LAB and PROD. It can be highlighted that REC is a core condition, which underscores a significant causal relationship in the implementation of SDGs.

5. Discussion

5.1. What are the types of strategic profiles of the companies in the textile industry that adhere to the implementation of the SDGs?

The analysis identifies six distinct strategic profiles that represent different configurations of how textile companies implement the SDGs. Following a theory-building approach (Eisenhardt, 1989; Eisenhardt and Graebner, 2007), these categories emerged from configurational evidence that provided the empirical basis for theorising about the relationship between SDG implementation, CE practices, and consumer engagement. The profiles can be categorised into three overarching groups: policy-focused, product-focused and consumer-focused, which, taken together, reveal different levels of sustainability integration (Fig. 1).

Policy-focused group: This group includes strategic profiles 1 and 2, (Configurations #1 and #2). These companies prioritise strategic profiles as their primary approach to sustainability. While implementing robust governance structures in terms of social responsibility and innovation, their sustainability efforts are largely confined to superficial strategies such as packaging and labelling, as opposed to engaging directly with product sustainability and consumer involvement. Despite lacking concrete sustainable development actions in their reports, these companies emphasise sustainability rhetoric, stakeholder engagement and long-term sustainability planning. From the theoretical perspective, this configuration represents a form of Institutional Compliance, where companies pursue sustainability primarily to satisfy institutional expectations and gain legitimacy rather than to achieve systemic transformation.

Product-focused group: Strategic profiles 3 and 4 (Configurations #3 and #4) reflect companies where the product itself plays a central role in the sustainability strategies. In strategic profile 3, product-related sustainability measures may be present in the strategies to implement the SDGs, while strategic profile 4 places eco-design and innovation at the centre, establishing a strong causal link with SDG implementation. Notably, strategic profile 3 is one of the most statistically significant profiles, encompassing companies that are actively committed to sustainability and eco-design. Meanwhile, strategic profile 4 emphasises innovation, labelling and packaging as key sustainability drivers. This group embodies what can be defined as operational integration, where sustainability is no longer peripheral but integrated into organisational routines and value creation processes (Olofsson and Mark-Herbert,

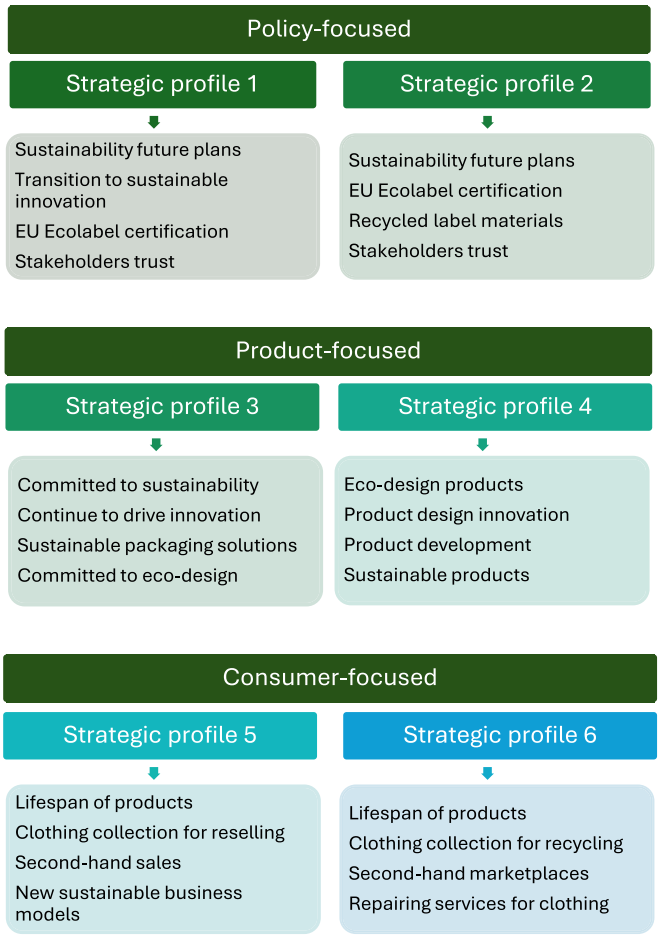

Fig. 1. Description of strategic profiles.

2020; Govindan, 2023). This perspective is consistent with recent contributions emphasising the role of design-based circular metrics in embedding sustainability into core production systems (Stevels, 2023).

Consumer-focused group: Strategic profiles 5 and 6 (Configurations #5 and #6) are characterised by consumer engagement as a key driver of sustainability. These companies implement strategies such as clothing collection for recycling and second-hand sales, promoting sustainable consumption while strengthening their SDG implementation efforts. Strategic profile 5 represents companies that partially integrate circular business models, focusing on designing durable clothing and extending product lifespan through programmes like clothing collection and resale. Strategic profile 6 closely aligns with profile 5 but places greater emphasis on product longevity, utilising high-quality materials, timeless designs and repair services. These configurations illustrate the stage of collaborative circularity, where companies and consumers co-create value and close material loops, aligning behavioural change with CE and SDG implementation (Vidal-Ayuso et al., 2023; Dominidiato et al., 2024).

Taken together, these configurations illustrate a theoretical continuity from institutional compliance to operational integration, and ultimately to collaborative circularity, reflecting increasing levels of sustainability integration and alignment between CE practices and SDG implementation.

5.2. What are the levels of consumer involvement across these strategic profiles?

While the previous section (5.1.) examined how textile companies configure sustainability strategies at the corporate level, this section explores the behavioural dimensions, or in other words, how consumers engage with and influence these configurations. When related to consumer decision-making, low involvement is primarily associated with the pre-purchase stage, moderate involvement with the purchase stage, and high involvement with the post-purchase stage.

The low involvement level refers to the strategic profiles that have a robust ESG or CSR policy structure, with consumers playing a largely passive role with limited direct interaction with the company and minimal influence on its governance (Guedes et al., 2017; Schmeltz, 2017). However, these companies still consider consumer expectations when formulating policies that may indirectly affect engagement and participation (Contini et al., 2020; Currás-Pérez et al., 2018). This level therefore reflects the stage of institutional compliance, where consumer influence is mediated through policy and reputation management rather than direct engagement.

The moderate involvement level characterises strategic profiles that incorporate labelling or packaging initiatives, while actively pursuing eco-design products. Within this context, companies intentionally integrate consumer preferences and environmental considerations into their product development processes. While consumers significantly influence product design and information dissemination, their involvement remains moderate due to limited direct interaction with companies. Nevertheless, their preferences and purchasing decisions shape the sustainability initiatives and strategies adopted by companies within this profile. From the theoretical perspective, this level corresponds to operational integration, where companies translate sustainability commitments into tangible product-level actions, and consumers begin to participate as informed decision-makers within the CE framework.

The high involvement level describes strategic profiles that engage directly with consumers. This interaction occurs through initiatives such as collecting used clothing for resale as second-hand items or for recycling. Greater consumer participation enables individuals to make decisions that significantly influence corporate sustainability strategies and outcomes. Notably at this level, consumers act simultaneously as suppliers and clients, reinforcing their active role in CE models (Gopalakrishnan and Matthews, 2018). The measures companies adopt to engage consumers in the CE loop are crucial for the effective implementation of the SDGs. This level embodies collaborative circularity, where sustainabiility is co-created and consumer engagement serves as the mechanism that closes material and behavioural loops between production and consumption. Fig. 2 illustrates the key elements of consumer involvement in corporate sustainability efforts.

The three levels of involvement closely correspond to the strategic profiles identified above: low involvement aligns with policy-focused strategies (Configurations #1 and #2), moderate involvement with product-focused strategies (Configuration #3 and #4), and high involvement with consumer-focused strategies (Configuration #5 and #6). Taken together, these results show that consumer participation evolves in parallel with the integration of corporate sustainability, from indirect influence though institutional structures to active participation in collaborative circular systems. Fig. 3 shows the different scenarios in which these strategies can be observed.

5.3. Theoretical and practical contributions

In summary, the findings from the data analysis support the proposal of the following theoretical and practical contributions.

5.3.1. Theoretical contributions

Building on the three theoretical categories identified, institutional compliance, operational integration and collaborative circularity, this study advances a theoretical framework that explains how corporate sustainability strategies and consumer involvement co-evolve within the textile industry.

This study contributes to CE research by shifting the focus from firm-centric strategies to consumer-driven circularity. The six strategic profiles provide a novel framework for understanding how companies engage consumers in sustainable transitions, building on existing frameworks.

By adopting a theory-building methodology (Eisenhardt, 1989; Eisenhardt and Graebner, 2007), this research develops a grounded model linking SDG implementation, CE principles and consumer involvement. The literature shows that companies employ distinct strategies to address SDG-related challenges and targets (McNeill et al., 2020; Sharma et al., 2021; Shaw et al., 2024; Zaman and Kusi-Sarpong, 2024), but prior studies have lacked a comprehensive classification integrating strategic orientation and behavioural participation.

This study advances the field by providing a structured framework to understand the different strategic profiles aligned with the SDGs and the CE found in the textile industry. The framework categorises companies into policy-focused, product-focused and consumer-focused profiles, corresponding respectively to the theoretical stages of institutional compliance, operational integration, and collaborative circularity.

Furthermore, the research identifies three key groups based on varying levels of consumer involvement (low, moderate, high) in the textile industry companies. By categorising consumer involvement into these levels, the study adds a behavioural dimension to strategic continuity, illustrating how consumer participation evolves alongside corporation maturity. It demonstrates how companies can tailor their strategic approaches to effectively influence consumer decision-making, requiring an integrated framework that leverages the strengths of the strategic profiles. The identified levels corroborate the arguments put forward by Grębosz-Krawczyk and Siuda (2019), Guedes et al. (2017), and Schmeltz (2017) regarding consumer participation and the need for strategies centered on consumer engagement.

In addition, in line with previous studies by Lieder and Rashid (2016) and Vidal-Ayuso et al. (2023), this research reinforces the fundamental role of consumers in the implementation of the CE, highlighting the need to continue empirically exploring consumer behaviour, habits and participation in CE practices. By positioning consumers as an active as opposed to passive player, the proposed framework bridges the perspective of the CE and the SDGs, demonstrating that the transformation towards sustainability is both strategic and behavioural. From

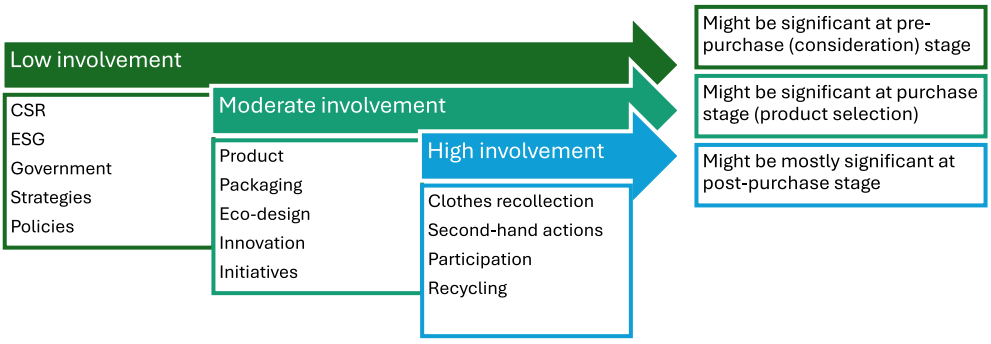

Fig. 2. Key elements of consumer involvement in textile industry companies].

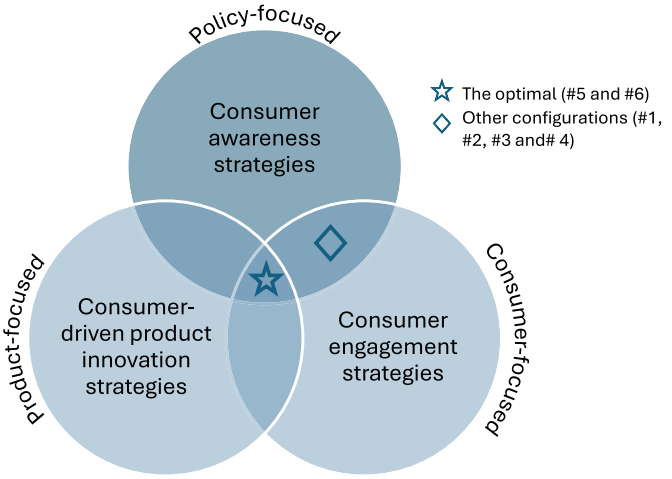

Fig. 3. Optimal scenario of strategic profiles.

a theory-building perspective, this model offers a flexible yet structured basis for future theoretical elaboration and cross-sector validation.

5.3.2. Practical contributions

The present research uncovers a significant interest among companies in adopting sustainable practices. It is crucial for companies to continue focusing on consumers as key enablers in the execution of sustainable actions. Nevertheless, engaging consumers requires a lengthy and complex process.

Table 8 outlines strategic pathways for advancing corporate sustainability and consumer engagement within the three identified strategic profiles, policy-focused, product-focused and consumer-focused.

Aside from the detected improvements that could be made in each strategic profile, cross-cutting strategies and specific actions for sustainable engagement can also be identified. Table 9 highlights practical approaches that complement and enhance the strategic profiles, supporting the transition from institutional compliance to operational integration, and ultimately to collaborative circularity.

6. Conclusions, limitations, and future research directions

This research contributes to theory building in the field of corporate sustainability by conceptualising the different degrees of sustainability integration within textile companies, and by highlighting the crucial role of consumers in this process. By identifying six strategic profiles grouped into three orientations, policy-focused, product-focused and consumer-focused, the study reveals the growing trend in the textile industry toward adopting sustainable business models aligned with the SDGs and CE principles. The findings demonstrate that consumer involvement acts as a key mechanism through which companies

Table 8
Potential avenues for enhancement in the different strategic profiles.

Strategic profile	Potential avenues for enhancement	Examples of implementation
Policy-focus	- Strengthen consumer involvement through new sustainability policies and stakeholder engagement - Implement innovation approaches to enhance sustainability in key business areas such as product lifecycle, packaging and design	- Establish corporate sustainability certifications that reward businesses for meeting CE benchmarks - Introduce extended producer responsibility policies where companies are accountable for post-consumer waste
Product-focus	- Emphasise the integration of sustainability in products - Initiate deeper consumer involvement to transition toward a consumer-focused profile	- Develop new clothes collections using biodegradable or recycled textiles to reduce the environmental impact - Implement a repair-and-return scheme where consumers can return worn-out clothing for renovation
Consumer-focus	- Empower consumers to actively participate in joint sustainability initiatives - Foster the consumer-brand relationship to drive consumer-centric innovation	- Launch loyalty programmes that reward sustainable behaviours such as recycling, reusing and upcycling clothes - Create digital platforms where consumers can track the lifecycle of their purchased products

translate their sustainability commitments into concrete actions. The three levels of consumer participation identified (low, moderate, and high) correspond to distinct strategic orientations, suggesting that the effective implementation of the SDGs requires a balanced combination of policies, product innovation and consumer collaboration.

Taken together, these findings highlight that the successful translation of corporate sustainability strategies into tangible outcomes depends not only on firm-level actions, but also on consumer-related mechanisms. The effectiveness of corporate strategies ultimately depends on consumer awareness and understanding of sustainable principles. Consumer education plays a crucial role in fostering meaningful engagement between individuals and companies across all levels of involvement. Therefore, it is essential to recognise consumer education as a key element in promoting active and informed participation in sustainability efforts. Strengthening consumer education is crucial to enhancing the effectiveness and scalability of sustainability initiatives. In this context, the upcoming implementation of the DPP emerges as a pivotal tool to bridge the information gap, providing consumers with the transparent and traceable data necessary to transition from passive to active education.

Despite the theoretical and practical contributions, this research presents several limitations which, in turn, open new avenues for

Table 9
Cross-cutting strategies and actions for consumer engagement.

Topic	Description	Actions
Educate consumers	Provide clear information on sustainability initiatives and consumer contribution	- Provide sustainability information and incentives through digital tools - Use QR codes on labels to disclose environmental impact and recycling options - Implement awareness initiatives to support informed purchasing
Innovate across all stages	Integrate circular solutions throughout the product lifecycle	- Design modular and repairable clothes - Collaborate with designers and internal teams on redesign and second-hand initiatives - Use biodegradable or recyclable materials in product development
Develop multi-level engagement strategies	Address different levels of consumer involvement	- Reward reuse, repair and recycling through loyalty programmes - Organise physical and virtual activities focused on repair and reuse - Encourage user-generated sustainability practices via social media
Gradually transition	Shift from policy-focused to consumer-focused strategies	- Incrementally introduce sustainability-focused product lines - Improve transparency through environmental product labelling - Promote sustainable purchasing through targeted awareness actions
Integrate all three strategic profiles	Combine policy, product, and consumer strategies	- Provide centralised digital access to sustainability information - Enable consumer feedback and participation mechanisms - Encourage involvement in company-led initiatives to reduce production waste
Boost technology	Use digital technologies to facilitate engagement and traceability	- Analyse consumption patterns using digital tools - Develop brand-integrated second-hand digital marketplaces - Align data management systems with DPP
Collaborate across value chain	Coordinate supply chain actors to enable circular systems	- Provide in-store recycling and collection points - Partner with recycling and waste management companies - Source from suppliers committed to sustainable manufacturing
Incentivise participation	Encourage consumer participation in sustainable practices	- Offer incentives for sustainable behaviours - Provide access to educational and participatory programmes - Organise clothing swap and resale initiatives
Measure and communicate impact	Communicate environmental and social impacts of consumer choices	- Display environmental impact information in-store - Compare impacts of conventional and sustainable products through labelling
Foster community engagement	Promote collective actions and shared responsibility	- Collaborate with NGOs on donation, repair and recycling initiatives - Create consumer communities for information exchange - Host expert-led events and debates on circular fashion

research. The first is limitation by sample, where the relatively small sample size may limit the generalisability of the findings. Furthermore, while the totality of the listed companies provided audited information in relation to the SDGs, only companies that actively implemented the SDGs were considered, which may not be representative of the practices and perspectives of the sector in general. To gain a more comprehensive understanding of the subject matter, it would be beneficial for future research to include a sample of companies of similar sizes, as well as companies that do not implement the SDGs. This would allow for a more nuanced examination of the difference between these groups and how they affect consumers.

Second, there is limitation by sector, with the companies selected from the textile industry all in the Apparel Manufacturing and Clothing subsectors. Third, this study has limitation by geography. The companies selected are from different parts of the world, and it was not possible to draw conclusions from certain regions. Considering these two limitations, future research could consider a more expansive sample of the sector to include other sectors, or even specific regions, with a view to identifying the discrepancies in the performance of each area.

Fourth and last, there is limitation by method, given the several limitations inherent to the QCA method, including logical remainders and sensitivity conditions (Schneider and Wagemann, 2010). In this regard, the existence of logical remainders was not a major issue, since the data set was relatively large for the number of antecedent conditions investigated (Krogslund and Michel, 2014). Some conditions that may have impacted the results were not considered in order to avoid problems with the sensitivity of the model. The overall solution coverage (0.528) and overall solution consistency (0.755) were considered adequate according to fsQCA standards (Schneider and Wagemann, 2010; Fiss, 2011), although they indicate that there may be other combinations of conditions not yet captured by the model. In addition, a series of robustness checks were carried out to guarantee the stability of the QCA, including adjustments to thresholds pertaining to the raw data calibration to set membership, and the frequency of cases connected to the configurations (Ordanini et al., 2014; Skaaning, 2011; Thiem, 2014). Similar results were obtained, demonstrating the consistency of our conclusions. In terms of future research, the use of other complementary methods such as PLS-SEM could be considered, or the time variable introduced, with the aim of setting up a QCA panel to identify when changes occur in companies and how they react to them. Furthermore, to gain a more holistic understanding of the consumer-company dynamic, future research could employ a triangulation methodology, whereby data is collected from both consumers and companies through surveys and interviews.

CRediT authorship contribution statement

Fàtima Vidal-Ayuso: Conceptualization, Formal analysis, Methodology, Writing – original draft. **Carmen Jaca:** Conceptualization, Supervision, Writing – review & editing. **Anna Akhmedova:** Conceptualization, Software, Supervision, Writing – review & editing.

Declaration of competing interest

The authors declare that they have no known competing financial

interests or personal relationships that could have appeared to influence the work reported in this paper.

Acknowledgement

The authors thank Sarah Davies for English language editing.

Data availability

Data will be made available on request.

References

Agyemang, A.O., Osei, A., Kongkuah, M., 2025. Exploring the ESG-Circular economy nexus in emerging markets: a systems perspective on governance, innovation, and sustainable business models. Bus. Strat. Environ.

Amasawa, E., Brydges, T., Henninger, C.E., Kimita, K., 2023. Can rental platforms contribute to more sustainable fashion consumption? Evidence from a mixed-method study. Clean. Responsib. Consum. 8, 100103. https://doi.org/10.1016/j.clrc.2023.100103.

Apparel Impact Institute, 2023. Taking Stock of Progress Against the Roadmap to Net Zero.

Apparel Impact Institute, 2024. Taking Stock of Progress Against the Roadmap to Net Zero - 2024.

Aramendia-Muneta, M.E., Ollo-López, A., Simón-Elorz, K., 2022. Circular fashion: cluster analysis to define advertising strategies. Sustainability 14 (20), 13365. https://doi.org/10.3390/su142013365.

Barbu, C.M., Florea, D.L., Ogarcă, R.F., Răzvan Barbu, M.C., 2018. From ownership to access: how the sharing economy is changing the consumer behavior. Amfiteatru Economic 20 (48), 373–387. https://doi.org/10.24818/EA/2018/48/373.

Teixeira, T.G.B, de Medeiros, J.F, Kolling, C., Duarte Ribeiro, J.L, Morea, D., 2023. Redesign in the textile industry: Proposal of a methodology for the insertion of circular thinking in product development processes. J. Clean. Prod. 397, 136588. https://doi.org/10.1016/j.jclepro.2023.136588.

Bączyk, M., Tunn, V.S.C., Worrell, E., Corona, B., 2024. Consumer behavior in circular business models: unveiling conservation and rebound effects. Sustain. Prod. Consum. 52, 283–298. https://doi.org/10.1016/j.spc.2024.09.010.

Becchi, B., Cascavilla, A., D'Adamo, I., Grosso, C., 2026. Digital product passports for cleaner production: economic evidence from producers and consumers in the fashion industry. J. Clean. Prod. 545. https://doi.org/10.1016/j.jclepro.2026.147792. Article 147792.

Berbegal-Mirabent, J., Llopis-Albert, C., 2016. Applications of fuzzy logic for determining the driving forces in collaborative research contracts. J. Bus. Res. 69 (4), 1446–1451. https://doi.org/10.1016/j.jbusres.2015.10.123.

Bonciu, F., 2023. Circular economy and ESG – a European perspective for sustainable development and mitigation of climate change effects. Rom. J. Eur. Aff. 23 (2).

Booth, L.G., Antunes, P., de Jesus, A., 2026. Circular economy strategies in European capitals. Journal of Circular Economy 4 (1). https://doi.org/10.55845/joce-2026-4167.

Bătae, O.M., Dragomir, V.D., Feleagă, L., 2021. The relationship between environmental, social, and financial performance in the banking sector: a European study. J. Clean. Prod. 290, 125791. https://doi.org/10.1016/j.jclepro.2021.125791.

Calciolari, S., Cesarini, M., Ruberti, M., 2024. Sustainability disclosure in the pharmaceutical and chemical industries: results from bibliometric analysis and AI-based comparison of financial reports. J. Clean. Prod. 447, 141511. https://doi.org/10.1016/j.jclepro.2024.141511.

Contini, M., Annunziata, E., Rizzi, F., Frey, M., 2020. Exploring the influence of corporate social responsibility (CSR) domains on consumers' loyalty: an experiment in BRICS countries. J. Clean. Prod. 247, 119158. https://doi.org/10.1016/j.jclepro.2019.119158.

Cruz, E.F., da Cruz, A.R., 2023. Digital solutions for engaging end-consumers in the circular economy of the textile and clothing value chain-A systematic review. Cleaner and responsible consumption 11, 100138. https://doi.org/10.1016/j.clrc.2023.100138.

Currás-Pérez, R., Dolz-Dolz, C., Miquel-Romero, M.J., Sánchez-García, I., 2018. How social, environmental, and economic CSR affects consumer-perceived value: does perceived consumer effectiveness make a difference? Corp. Soc. Responsib. Environ. Manag. 25 (5), 733–747. https://doi.org/10.1002/csr.1490.

Demers, E., Hendrikse, J., Joos, P., Lev, B., 2021. ESG did not immunize stocks during the COVID-19 crisis, but investments in intangible assets did. J. Bus. Finance Account. 48 (3–4), 433–462. https://doi.org/10.1111/jbfa.12523.

Demirel, P., Danisman, G.O., 2019. Eco-innovation and firm growth in the circular economy: evidence from European small- and medium-sized enterprises. Bus. Strat. Environ. 28 (8), 1608–1618. https://doi.org/10.1002/bse.2336.

Dominidiato, M., Guercini, S., Milanesi, M., Tunisini, A., 2024. Supplier-customer relationships for sustainability-led innovation in the textile industry. J. Bus. Ind. Market. 39 (13), 15–26. https://doi.org/10.1108/JBIM-01-2023-0060.

Edwards, A.R., 2005. The Sustainability Revolution: Portrait of a Paradigm Shift. New Society Publishers, Gabriola.

Eisenhardt, K.M., 1989. Building theories from case study research. Acad. Manag. Rev. 14 (4), 532. https://doi.org/10.2307/258557.

Eisenhardt, K.M., Graebner, M.E., 2007. Theory building from cases: opportunities and challenges. Acad. Manag. J. 50 (1), 25–32. https://doi.org/10.5465/amj.2007.24160888.

Escott, M. del P., 2018. "Introduccion al analisis cualitativo comparativo como tecnica de investigacion," Revista DIGITAL CIENCIA@UAQRO. Universidad de Chile 51 (1). https://doi.org/10.5354/0716-1077.2013.27436.

European Commission, 2001. Green Paper: Promoting a European Framework for Corporate Social Responsibility. Commission of the European Communities.

European Union, 2024. *Regulation (EU) 2024/1781 of the European Parliament and of the Council of 13 June 2024 establishing a framework for the setting of ecodesign requirements for sustainable products, amending directive (EU) 2020/1828 and regulation (EU) 2023/1542 and repealing directive 2009/125/EC* (OJ L 1781, 28.6.2024). https://eur-lex.europa.eu/eli/reg/2024/1781/oj.

Fiss, P.C., 2011. Building better causal theories: a fuzzy set approach to typologies in organization research. Acad. Manag. J. 54 (2), 393–420. https://doi.org/10.5465/amj.2011.60263120.

Fortunati, S., Martiniello, L., Morea, D., 2020a. The strategic role of the corporate social responsibility and circular economy in the cosmetic industry. Sustainability 12 (12), 5120. https://doi.org/10.3390/su12125120.

Fortunati, S., Morea, D., Mosconi, E.M., 2020b. Circular economy and corporate social responsibility in the agricultural system: cases study of the Italian agri-food industry. Agricultural Economics – Czech 66 (11), 489–498. https://doi.org/10.17221/343/2020-AGRICECON.

Ghisellini, P., Cialani, C., Ulgiati, S., 2016. A review on circular economy: the expected transition to a balanced interplay of environmental and economic systems. J. Clean. Prod. 114, 11–32. https://doi.org/10.1016/j.jclepro.2015.09.007.

Gomes, K., Caucci, S., Morris, J., Guenther, E., Miggelbrink, J., 2024. Sustainability transformation in the textile industry—The case of wastewater management. Bus. Strategy Dev. 7 (1). https://doi.org/10.1002/bsd2.324.

Gopalakrishnan, S., Matthews, D., 2018. Collaborative consumption: a business model analysis of second-hand fashion. J. Fash. Mark. Manag.: Int. J. 22 (3), 354–368. https://doi.org/10.1108/JFMM-05-2017-0049.

Gosal, G.A., Jaury, C., Jason, S., Ananda, A.S., 2024. Perceived consumer values of green packaging as antecedents of attitude toward fashion brand. Quality - Access to Success 25 (199), 291–298. https://doi.org/10.47750/QAS/25.199.32.

Govindan, K., 2023. How digitalization transforms the traditional circular economy to a smart circular economy for achieving SDGs and net zero. Transport. Res. E Logist. Transport. Rev. 177, 103147. https://doi.org/10.1016/j.tre.2023.103147.

Grębosz-Krawczyk, M., Siuda, D., 2019. Attitudes of Young European Consumers Toward Recycling Campaigns of Textile Companies. Autex Res. J. 19 (4), 394–399. https://doi.org/10.1515/aut-2018-0057. (Accessed 4 December 2019).

Greckhamer, T., Furnari, S., Fiss, P.C., Aguilera, R.V., 2018. Studying configurations with qualitative comparative analysis: best practices in strategy and organization research. Strateg. Organ. 16 (4), 482–495. https://doi.org/10.1177/1476127018786487.

Guedes, G., Ferreira, F., Urbano, L., Marques, A., 2017. Corporate social responsibility: competitiveness in the context of textile and fashion value chain. Environmental Engineering and Management Journal 16 (5), 1193–1202. https://doi.org/10.30638/eemj.2017.125.

Ha, H., Janda, S., 2012. Predicting consumer intentions to purchase energy-efficient products. J. Consum. Market. 29 (7), 461–469. https://doi.org/10.1108/07363761211274974.

Hageman, E., Kumar, V., Duong, L., Kumari, A., McAuliffe, E., 2024. Do fast fashion sustainable business strategies influence attitude, awareness and behaviours of female consumers? Bus. Strat. Environ. 33 (2), 1081–1098. https://doi.org/10.1002/bse.3545.

Hernandez-Vivanco, A., Bernardo, M., 2022. Are certified firms more prone to eco-product innovation? The moderating role of slack resources. J. Clean. Prod. 377, 134364. https://doi.org/10.1016/j.jclepro.2022.134364.

Hong, T., Ou, J., Jia, F., Chen, L., Yang, Y., 2024. Circular economy practices and corporate social responsibility performance: the role of sense-giving. Int. J. Logist. Res. Appl. 27 (11), 2208–2237. https://doi.org/10.1080/13675567.2023.2237914.

Ismoilov, U., 2026. Environmental policies as a path to the development of circular economy-the EU perspective. Journal of Circular Economy 4 (1). https://doi.org/10.55845/joce-2026-4187.

Kaźmierczak, M., 2022. A Literature Review on the Difference Between CSR and ESG, vol. 162. Scientific Papers of Silesian University of Technology: Organization and Management Series.

Akter, M.M.K, Haq, U.N, Islam, M.M, Uddin, M.A, 2022. Textile-apparel manufacturing and material waste management in the circular economy: A conceptual model to achieve sustainable development goal (SDG) 12 for Bangladesh. Clean. Environ. Syst. 4, 100070. https://doi.org/10.1016/j.cesys.2022.100070.

Khajuria, A., Verma, P., Vella, A., Zanini-Freitag, D., Xin, H., Murthy, I.K., et al., 2025. The SDG accelerator: circular economy solutions through efficient sustainable consumption. Circular Economy 4 (2), 100140. https://doi.org/10.1016/j.cec.2025.100140.

Kopnina, H., 2019. Green-washing or best case practices? Using circular economy and cradle to cradle case studies in business education. J. Clean. Prod. 219, 613–621. https://doi.org/10.1016/j.jclepro.2019.02.005.

KPMG, 2022. Big shifts, small steps. Survey of Sustainability Reporting 2022. https://assets.kpmg.com/content/dam/kpmg/xx/pdf/2022/10/ssr-small-steps-big-shifts.pdf.

Krogslund, C., Michel, K., 2014. A Larger-N, fewer variables problem? The counterintuitive sensitivity of QCA. Qualitative & Multi-Method Research 12 (1), 25–33.

Krywalski-Santiago, J., 2024. Navigating sustainable transformation in the fashion industry: the role of circular economy and ethical consumer behavior. J. Intercult. Manag. 16 (3), 5–36. https://doi.org/10.2478/joim-2024-0009.
Leggerini, C., Percuoco, M., Ricciardi, I., Prisco, A., 2025. Circular economy disclosure and ESG performance: Signal, substance, or symbol? Bus. Strat. Environ. https://doi.org/10.1002/bse.70334.
Lieder, M., Rashid, A., 2016. Towards circular economy implementation: a comprehensive review in context of manufacturing industry. J. Clean. Prod. 115, 36–51. https://doi.org/10.1016/j.jclepro.2015.12.042.
Lozano, R., 2015. A holistic perspective on corporate sustainability drivers. Corp. Soc. Responsib. Environ. Manag. 22 (1), 32–44. https://doi.org/10.1002/csr.1325.
Machado, M.A.D., Almeida, S.O., Bollick, L.C., Bragagnolo, G., 2019. Second-hand fashion market: consumer role in circular economy. J. Fash. Mark. Manag. 23 (3), 382–395. https://doi.org/10.1108/JFMM-07-2018-0099.
Marcon, M., Provensi, T., Sehnem, S., Campos, L.M.S., Queiroz, A.A.F.S.L., 2023. The internalisation of the circular economy and ESG in Brazilian B corps from the perspective of the stakeholder theory. Sustain. Dev. 31 (5), 3513–3527. https://doi.org/10.1002/sd.2601.
McNeill, L.S., Hamlin, R.P., McQueen, R.H., Degenstein, L., Garrett, T.C., Dunn, L., Wakes, S., 2020. Fashion sensitive young consumers and fashion garment repair: emotional connections to garments as a sustainability strategy. Int. J. Consum. Stud. 44 (4), 361–368. https://doi.org/10.1111/ijcs.12572.
Meyer, A.D., Tsui, A.S., Hinings, C.R., 1993. Configurational approaches to organizational analysis. Acad. Manag. J. 36 (6), 1175–1195. https://doi.org/10.5465/256809.
Morea, D., Fortunati, S., Cappa, F., Oriani, R., 2023. Corporate social responsibility as a catalyst of circular economy? A case study perspective in agri-food. J. Knowl. Manag. 27 (7), 1787–1809. https://doi.org/10.1108/JKM-06-2022-0451.
Morea, D., Fortunati, S., Martiniello, L., 2021. Circular economy and corporate social responsibility: towards an integrated strategic approach in the multinational cosmetics industry. J. Clean. Prod. 315, 128232. https://doi.org/10.1016/j.jclepro.2021.128232.
Mugge, R., Jockin, B., Bocken, N., 2017. How to sell refurbished smartphones? An investigation of different customer groups and appropriate incentives. J. Clean. Prod. 147, 284–296. https://doi.org/10.1016/j.jclepro.2017.01.111.
Nicolo', G., Zampone, G., De Iorio, S., Sannino, G., 2024. Does SDG disclosure reflect corporate underlying sustainability performance? Evidence from UN global compact participants. J. Int. Financ. Manag. Account. 35 (1), 214–260. https://doi.org/10.1111/jifm.12194.
Olofsson, L., Mark-Herbert, C., 2020. Creating shared values by integrating UN sustainable development goals in corporate communication—the case of apparel retail. Sustainability 12 (21), 8806. https://doi.org/10.3390/su12218806.
Ordanini, A., Parasuraman, A., Rubera, G., 2014. When the recipe is more important than the ingredients. J. Serv. Res. 17 (2), 134–149. https://doi.org/10.1177/1094670513513337.
Patwa, N., Sivarajah, U., Seetharaman, A., Sarkar, S., Maiti, K., Hingorani, K., 2021. Towards a circular economy: an emerging economies context. J. Bus. Res. 122, 725–735. https://doi.org/10.1016/j.jbusres.2020.05.015.
Pozzoli, M., Pagani, A., Paolone, F., 2022. The impact of audit committee characteristics on ESG performance in the european union member states: empirical evidence before and during the COVID-19 pandemic. J. Clean. Prod. 371, 133411. https://doi.org/10.1016/j.jclepro.2022.133411.
Pradhan, P., Costa, L., Rybski, D., Lucht, W., Kropp, J.P., 2017. A systematic study of sustainable development goal (SDG) interactions. Earths Future 5 (11), 1169–1179. https://doi.org/10.1002/2017EF000632.
Prakash, G., Pathak, P., 2017. Intention to buy eco-friendly packaged products among young consumers of India: a study on developing nation. J. Clean. Prod. 141, 385–393. https://doi.org/10.1016/j.jclepro.2016.09.116.
Ragin, C., 1987. The Comparative Method: Moving Beyond Qualitative and Quantitative Strategies. University of California Press, Berkeley.
Ragin, C.C., 2006. Set relations in social research: evaluating their consistency and coverage. Polit. Anal. 14 (3), 291–310. https://doi.org/10.1093/pan/mpj019.
Ragin, C.C., 2008. Redesigning Social Inquiry: Fuzzy Sets and Beyond.
Rahmat, A.F., Bujdosó, Z., Dávid, L.D., 2024. "What is going on in global goals projects, is agenda filled?" highlighting circular economy literature within sustainable development goals–review-based. Discover Sustainability 5 (1), 399. https://doi.org/10.1007/s43621-024-00621-8.
Refinitiv, 2023. Refinitiv Eikon Financial Solutions available at: https://www.refinitiv.com/en.
Rihoux, B., Ragin, C., 2009. Configurational Comparative Methods: Qualitative Comparative Analysis (QCA) and Related Techniques, 2455 Teller Road. SAGE Publications, Inc., Thousand Oaks California 91320 United States https://doi.org/10.4135/9781452226569.
Rosati, F., Faria, L.G.D., 2019a. Business contribution to the sustainable development agenda: organizational factors related to early adoption of SDG reporting. Corp. Soc. Responsib. Environ. Manag. 26 (3), 588–597. https://doi.org/10.1002/csr.1705.
Rosati, F., Faria, L.G.D., 2019b. Addressing the SDGs in sustainability reports: the relationship with institutional factors. J. Clean. Prod. 215, 1312–1326. https://doi.org/10.1016/j.jclepro.2018.12.107.
Sahni, H., Chopra, N., 2020. CSR and SDG Mapping in Fashion & Textile Industry: Identifying Potential Challenges in the Wake of Isolationism, pp. 221–245. https://doi.org/10.1108/S2043-052320200000016012.
Sandin, G., Peters, Greg M., 2018. Environmental impact of textile reuse and recycling – A review. J. Clean. Prod. 184, 353–365. https://doi.org/10.1016/j.jclepro.2018.02.266.
Santiago, B.S., Scavarda, L.F., Gusmão Caiado, R.G., Santos, R.S., Mattos Nascimento, D. L.d., 2025. Corporate social responsibility and circular economy integration framework within sustainable supply chain management: building blocks for industry 5.0. Corp. Soc. Responsib. Environ. Manag. 32 (1), 269–290. https://doi.org/10.1002/csr.2949.
Schmeltz, L., 2017. Getting CSR communication fit: a study of strategically fitting cause, consumers and company in corporate CSR communication. Public Relat. Inq. 6 (1), 47–72. https://doi.org/10.1177/2046147X16666731.
Schneider, C.Q., Wagemann, C., 2010. Standards of good practice in qualitative comparative analysis (QCA) and fuzzy-sets. Comp. Sociol. 9 (3), 397–418. https://doi.org/10.1163/156913210X12493538729793.
Sedej, T., Toroš, J., 2023. Awareness of the environmental impact of clothing production and consumption among Slovenian women customers. Tekstilec 66, 1–11. https://doi.org/10.14502/tekstilec.66.2023001.
Sendra-Pons, P., Comeig, I., Mas-Tur, A., 2022. Institutional factors affecting entrepreneurship: a QCA analysis. Eur. Res. Manag. Bus. Econ. 28 (3), 100187. https://doi.org/10.1016/j.iedeen.2021.100187.
Sharma, S., Prakash, G., Kumar, A., Mussada, E.K., Antony, J., Luthra, S., 2021. Analysing the relationship of adaption of green culture, innovation, green performance for achieving sustainability: mediating role of employee commitment. J. Clean. Prod. 303, 127039. https://doi.org/10.1016/j.jclepro.2021.127039.
Shaw, M., Majumdar, A., Govindan, K., 2024. How are the barriers of social sustainability perceived in a multi-tier supply chain? A case of textile and clothing industry. Oper. Manag. Res. 17 (1), 91–113. https://doi.org/10.1007/s12063-023-00406-8.
Siebenhüner, B., Arnold, M., 2007. Organizational learning to manage sustainable development. Bus. Strat. Environ. 16 (5), 339–353. https://doi.org/10.1002/bse.579.
Singh, A.P., Rahman, Z., 2021. Integrating corporate sustainability and sustainable development goals: towards a multi-stakeholder framework. Cogent Bus. Manag. 8 (1). https://doi.org/10.1080/23311975.2021.1985686.
Singhal, D., Jena, S.K., Tripathy, S., 2019. Factors influencing the purchase intention of consumers towards remanufactured products: a systematic review and meta-analysis. Int. J. Prod. Res. 57 (23), 7289–7299. https://doi.org/10.1080/00207543.2019.1598590.
Skaaning, S.-E., 2011. Assessing the robustness of crisp-set and fuzzy-set QCA results. Socio. Methods Res. 40 (2), 391–408. https://doi.org/10.1177/0049124111404818.
Stevels, A., 2023. The challenge of introducing design for the circular economy in the electronics industry: a proposal for metrics. Circular economy 2 (3). https://doi.org/10.1016/j.cec.2023.100051.
Sumo, P.D., Ji, X., Cai, L., 2022. SWOT framework based on fuzzy logic, AHP, and fuzzy TOPSIS for sustainable retail second-hand clothing in Liberia. Fibres Text. East. Eur. 30 (6), 27–44. https://doi.org/10.2478/ftee-2022-0050.
Thiem, A., 2014. Membership function sensitivity of descriptive statistics in fuzzy-set relations. Int. J. Soc. Res. Methodol. 17 (6), 625–642. https://doi.org/10.1080/13645579.2013.806118.
Todaro, D.L., Torelli, R., 2024. From greenwashing to ESG-washing: a focus on the circular economy field. Corp. Soc. Responsib. Environ. Manag. 31 (5), 4034–4046. https://doi.org/10.1002/csr.2786.
Tsalis, T.A., Malamateniou, K.E., Koulouriotis, D., Nikolaou, I.E., 2020. New challenges for corporate sustainability reporting: United nations' 2030 agenda for sustainable development and the sustainable development goals. Corp. Soc. Responsib. Environ. Manag. 27 (4), 1617–1629. https://doi.org/10.1002/csr.1910.
United Nations, 2024. The 17 Goals.
United Nations Global Compact, 2025. Turning the Key: Unlocking the next era of sustainability leadership. 15th CEO Study. https://www.accenture.com/content/dam/accenture/final/accenture-com/document-4/2025-UNGC-CEO-Study-Digital.pdf.
van der Waal, J.W., Thijssens, T., 2020. Corporate involvement in sustainable development goals: exploring the territory. J. Clean. Prod. 252, 119625. https://doi.org/10.1016/j.jclepro.2019.119625.
Vidal-Ayuso, F., Akhmedova, A., Jaca, C., 2023. The circular economy and consumer behaviour: literature review and research directions. J. Clean. Prod. 418, 137824. https://doi.org/10.1016/j.jclepro.2023.137824.
Zaman, S.I., Kusi-Sarpong, S., 2024. Identifying and exploring the relationship among the critical success factors of sustainability toward consumer behavior. J. Model. Manag. 19 (2), 492–522. https://doi.org/10.1108/JM2-06-2022-0153.