

Knowledge Sharing and Customer Knowledge Management in the Context of Sustainability and CSR: A Case Study of the Fashion Industry in Poland

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Abstract: The fashion industry, long challenged by overproduction, unsustainable resource use, and labor issues, is increasingly pressured to adopt sustainable and ethical practices. Modern consumers expect brands to incorporate corporate social responsibility (CSR) into their operations and transparently communicate these efforts. Knowledge sharing (KS), understood as the internal and external exchange of information and best practices, is key in enhancing operational performance and strengthening consumer relationships. Transparent communication of CSR activities builds credibility, trust, and brand loyalty. Likewise, customer knowledge management (CKM), which refers to collecting, analyzing, and utilizing consumer data, enables companies to align marketing and CSR strategies with customer expectations. In fashion, this includes personalized messaging, eco-focused loyalty programs, and initiatives like clothing return schemes or recycling. This paper aims to examine the role of customer knowledge management and knowledge sharing in the fashion industry within the context of sustainability and corporate social responsibility. Specifically, it evaluates how fashion brands use their websites to implement these practices. A two-phase methodology was applied: (1) content analysis of selected fashion retailers' websites to assess the presence and quality of sustainability information, and (2) evaluation of consumer interaction through CSR engagement and educational content. The study, based on a proprietary evaluation tool, included both international and Polish brands. The results indicate wide variation in the communication of CSR and highlight the need for further research, given the importance of digital channels in shaping consumer awareness and behavior.

Keywords: Fashion industry, Retailers, Knowledge sharing, Customer knowledge management, e-Commerce, CSR

1. Introduction

Between 2000 and 2015, global textile production nearly doubled, and by 2030, clothing and footwear consumption is expected to grow by 63% (Ellen MacArthur Foundation, 2021; European Commission, 2022). In 2024 alone, the European fashion market reached USD 486.9 billion, with Poland emerging as a key regional player – generating USD 15.51 billion in revenue and serving as a distribution hub for Eastern Europe (Market Hub, 2024).

Currently, the average European consumer uses approximately 22 kg of textiles annually, of which around 11 kg are discarded (Adamkiewicz et al., 2022; European Commission, 2022). This contributes to the fashion industry's significant negative environmental impact – it is considered the second-largest polluting industry in the world, following the oil industry (Martínez-Martínez et al., 2024). Within the European Union, it is the fourth-largest contributor to climate change and environmental degradation, and the third-largest in terms of water consumption and wastewater production (European Commission, 2022). Globally, the fashion industry is responsible for 2–8% of greenhouse gas emissions, 20% of wastewater, and 9% of microplastic pollution in water bodies (Adamkiewicz et al., 2022).

On the other hand, there is a growing ecological and social awareness among consumers – especially millennials – who increasingly express a preference for environmentally friendly brands. According to research, 71% of millennials demand that brands be more eco-conscious and ethical, and 61% expect them to be engaged in social issues (Adamkiewicz et al., 2022). Moreover, 2 out of 5 consumers strive to purchase exclusively from socially responsible and environmentally friendly brands (Deloitte, 2023). As a result, fashion companies are being compelled to revise their practices and business strategies in response to this growing consumer awareness and evolving legal requirements (Da Giau et al., 2019; Thorisdottir & Johannsdottir, 2019; Daukantienė, 2022; Fuxman et al., 2020). Consequently, sustainability and corporate social responsibility have become key issues in modern business management in the apparel industry – including the Polish market, where one of the biggest challenges over the next three years will be aligning production with appropriate environmental standards due to regulatory pressures and customer preferences (PARP, 2023).

However, it is not enough for companies to adapt their production processes to sustainability and CSR standards – they must also effectively communicate these efforts to consumers. This is essential not only for shaping

consumer behavior but also for promoting a more sustainable future for the fashion industry (Han et al., 2017; Daukantienė, 2022). A crucial component of CSR in the fashion sector is transparency and honesty. Companies that engage in environmentally and socially responsible practices must demonstrate openness by providing consumers with accurate information about how clothing is produced, what raw materials are used, under what conditions garments are made, and where materials are sourced from. Transparency empowers consumers to make informed purchasing decisions based on the values of sustainability (White et al., 2019; Adamkiewicz et al., 2022; Mandarić et al., 2022).

In light of these developments, it is important to explore how fashion brands are leveraging tools not only to implement but also to communicate their sustainability and CSR practices. This study aims to analyze the extent to which customer knowledge management (CKM) and knowledge sharing (KS) are used by fashion retailers on their websites to support environmental and social responsibility goals. The goal is to evaluate the accessibility, quality, and interactivity of sustainability-related content provided to consumers online. The paper begins by examining how customer knowledge management and knowledge sharing support responsible branding in fashion. This is followed by an overview of best practices for communicating sustainability in online retail environments. It then presents the study's methodology, key findings on sustainability communication in e-commerce, and implications for future research and practice.

2. Customer Knowledge Management and Knowledge Sharing in Building Responsible Fashion Brands

Customer knowledge management (CKM) and knowledge sharing (KS) are essential for fashion brands aiming to ensure transparency, responsibility, and ethical engagement with both the environment and stakeholders. CKM refers to the process of collecting, analyzing, and utilizing knowledge about customers, as well as delivering knowledge to customers, with the aim of better understanding and meeting their needs, preferences, and expectations. It constitutes an important asset in online commerce (Rowley, 2002; Chaithanapat & Rakthin, 2020; Mikuła, 2023). In the fashion industry, managing such knowledge has become crucial in the context of sustainability and CSR, as it enables companies to align their products and marketing strategies with the growing interest of consumers in environmentally friendly, ethical, and transparent practices. Fashion companies that can successfully integrate customer knowledge with CSR activities can develop more effective marketing strategies, better tailor their offerings, and communicate sustainability initiatives more effectively.

Knowledge sharing is the process by which organizations exchange information, experiences, and resources among stakeholders, including consumers. Internally, it promotes integration between departments such as design, production, and marketing, enhancing the organization's understanding of CSR-related requirements and supporting the development of innovative solutions. This makes companies more resilient to changing market and regulatory conditions. In the context of CSR and sustainability, KS plays a critical role, as it enables companies to communicate their actions transparently while raising consumer awareness of responsible production, environmental protection, and ethical standards. This type of transparency provides consumers with a more comprehensive view of corporate efforts, empowering them to make informed decisions aligned with their values (Han et al., 2017; Lee et al., 2020; Daukantienė, 2022). Moreover, open reporting helps prevent greenwashing and contributes to building long-term, trust-based relationships (White et al., 2019; Adamkiewicz et al., 2022; Mandarić et al., 2022).

In the fashion sector, KS can take various forms – from educational campaigns to sustainability reports. What matters is that fashion companies not only declare ecological and ethical values but also provide consumers with accessible, relevant information to support conscious purchasing decisions (Chan et al., 2020; Mandarić et al., 2022). A brand's ability to effectively share knowledge with consumers directly impacts purchase decisions. When companies communicate their sustainable practices – such as the use of organic materials, reduced water consumption, or textile recycling – consumers are more likely to choose their products. This transparency enhances brand authenticity and credibility, which in turn fosters trust and consumer loyalty. Consumers feel more connected to brands when they know their purchases contribute positively to the environment and society (Ceylan, 2019; Lee et al., 2020; Mandarić et al., 2022).

Moreover, this approach not only strengthens consumer relationships but also helps raise ethical and ecological standards across the fashion industry. Transparent and honest communication builds consumer trust, supports public education, and fosters the development of innovative solutions within organizations. It also promotes the exchange of best practices between companies, thereby driving sector-wide improvements and enhancing the effectiveness of global sustainability efforts. CKM and KS are therefore essential for building responsible and

eco-conscious fashion brands. As consumer expectations grow and sustainability becomes one of the main criteria for evaluating companies, brands that successfully implement CKM and KS strategies gain not only consumer loyalty but also a competitive edge (Han et al., 2017; White et al., 2019; Chan et al., 2020; Mandarić et al., 2022).

3. Informing Consumers in e-Commerce About Sustainability and CSR Activities

The growing availability of smartphones and mobile devices has significantly influenced how consumers make purchasing decisions (Fang, 2020) – including in the fashion industry. The dynamic development of technology has contributed to the popularization of e-commerce, which is now one of the main sales channels for clothing and accessories (Gemius, 2024). In this context, the way information is presented on fashion brand websites is of particular importance. As Papatla (2011) notes, the layout and form of content presented on an online store's website affects not only purchasing decisions but also the effectiveness of marketing communication. Śpiewak (2023) emphasizes that if users cannot easily access the information they are looking for – both about the product and the brand's activities – the likelihood of purchase significantly decreases. Therefore, it is essential to ensure the appropriate presentation of information and adapt it to consumer shopping styles (Papatla, 2011).

Modern online commerce presents companies with new challenges, especially regarding transparency in communicating sustainability and CSR-related actions. To support businesses in responsibly providing environmental information, independent organizations under the leadership of the United Nations Environment Programme developed a document that outlines a set of best practices in this area.

According to the guidelines developed under the Consumer Information Programme of the 10-Year Framework of Programmes on Sustainable Consumption and Production, for environmental information about goods and services offered in online commerce to be of high quality and to effectively support consumers in engaging in sustainable consumption, it must meet five key principles that define the minimum requirements (Polanía Giese & Mützel, 2022). These are:

- reliability – providing consumers with accurate, substantiated, and scientifically backed information, as well as offering third-party certified products (e.g., GOTS certification),
- relevance – making all relevant data about products and their impact on sustainability available to consumers, and presenting the benefits of purchasing a given product,
- clarity – avoiding vague or ambiguous information, using clear visual communication methods, and offering consumers guidance that helps improve their shopping behavior,
- transparency – ensuring consumers have access to sufficient relevant information about products and their sustainability aspects, and tailoring messages to the needs and interests of consumers,
- accessibility – ensuring easy access to environmental information and increasing its visibility.

In addition to these minimum requirements, the document lists five additional guidelines aimed at improving how information providers communicate with consumers. These relate to engaging consumers and interacting with them to better understand their information needs. These are:

- three dimensions of sustainability – informing consumers about social, environmental, and economic benefits; providing comprehensive information,
- behavior change and longer-term impacts – engaging consumers and encouraging them to take actions that reduce environmental impact, such as product reuse,
- multi-channel and innovative approach – engaging and communicating with consumers through various channels, delivering complementary information via multiple platforms,
- collaboration – involving other stakeholders to increase consumer acceptance and trust in the information; using inclusive language,
- comparability – helping consumers choose between similar products by enabling product comparisons.

The rapid growth of e-commerce in the fashion sector creates new challenges in communicating sustainability and CSR efforts. As consumer awareness rises, the quality, accessibility, and clarity of information become critical for building trust. From a knowledge management perspective, presenting such content online constitutes a form of knowledge sharing that enhances transparency and supports informed choices. Aligning messages with consumer expectations reflects CKM principles, yet the topic remains underexplored. This study addresses this gap by evaluating how selected fashion brands in the Polish market apply these principles in their online communication.

4. Methodology

To address the research objective, a heuristic content audit was conducted – one of the most established methods for assessing online store usability and business-to-consumer communication (Kamhawi & Weaver, 2003; Krippendorff, 2013). Three experts independently evaluated each website using a custom assessment sheet, and final scores were calculated as the average of individual ratings. Two of the evaluators are also the authors of this paper. A preliminary calibration on two pilot stores (not included in the final ranking) ensured consistency in interpreting evaluation criteria.

The study was divided into two parts. In the first stage, an analysis of the key features of sustainability and CSR claims and their related attributes was conducted. This part of the research aimed to evaluate the content of fashion e-commerce websites, focusing on the presence and quality of information related to sustainability and CSR. In this study, the heuristics were developed by the *Guidelines for Providing Product Sustainability Information in E-Commerce*, published by UNEP (Polanía Giese & Mützel, 2022). Each feature was operationalized using four specific assessment attributes, resulting in a total of 20 evaluated indicators. A model set of website features and their respective attributes is presented in Table 1.

Table 1: A framework of sustainability and CSR-related characteristics of an online store and their defining attribute

Feature	Attributes defining the feature
Reliability	<ul style="list-style-type: none"> Information is supported by evidence. The store presents certifications. The sources, data, and information used to formulate claims are trustworthy. Information goes beyond labels and includes detailed descriptions.
Relevance	<ul style="list-style-type: none"> The provided information concerns key aspects affecting the product's sustainability. Statements present a complete picture of the product's impact, not focusing solely on its positive aspects nor omitting areas where it performs poorly. The product exceeds legal sustainability requirements in the countries of production and sale. The store offers filtering criteria for sustainable products.
Clarity	<ul style="list-style-type: none"> Information is presented clearly and concisely. Information is easily accessible at various stages of the shopping journey. Pages include infographics or visualizations that are clear, unambiguous, and help convey key information. The language used in communication is simple, understandable, and free of overly technical terminology.
Transparency	<ul style="list-style-type: none"> Consumers can verify who and how the information was developed. Information is tailored to the needs and expectations of consumers – from general and easy to understand to more complex and detailed messages where needed. The store provides detailed information on the methods, data sources, and assumptions used to formulate the claims. Consumers can verify the credibility of certifications and ecological labels.
Accessibility	<ul style="list-style-type: none"> Information is easily accessible from the homepage or a dedicated section. Information is visible and uniformly presented for all products. Information is available in various formats (e.g., text, infographics, video) to meet different user preferences. Access to information is not restricted by technical or navigational barriers.

Source: Own elaboration based on Polanía Giese & Mützel (2022).

Each attribute was evaluated on a scale from 0 to 2 points, where: 0 – criterion not met, 1 – criterion partially met, and 2 – criterion fully met. The results were used to create a ranking of stores in terms of the availability of information regarding sustainability and CSR. The maximum possible score was 40 points, and the minimum was 0 points. The higher the score, the better the availability and quality of information about sustainable products in the online store.

In the second stage, an evaluation of consumer interaction was carried out, focusing on two areas:

- incentives for engagement in sustainability and CSR activities – covering the availability of mechanisms allowing consumers to actively participate in pro-social and pro-environmental initiatives offered by the store,
- consumer education – including both the forms of delivering knowledge on ecology and ethics in fashion, and the possibilities of interaction, asking questions, and participating in dialogue with the brand.

The aim of the analysis was to determine the extent to which brands engage consumers in pro-social and pro-environmental activities, and whether they support them in making informed purchasing decisions through appropriate educational content and interactive tools. Detailed criteria assessed in this stage are presented in Table 2.

Table 2: Areas of evaluating consumer interaction in the online store

Area	Criterion
Engagement	<ul style="list-style-type: none"> • The store promotes the possibility of participating in social or charitable activities (e.g., clothing drives for people in need). • The store promotes participation in pro-environmental activities (e.g., recycling). • The store presents incentives for sustainable choices (e.g., loyalty programs). • The store promotes consumer actions beyond the purchase itself (e.g., repairing, reusing).
Education	<ul style="list-style-type: none"> • The store conducts educational campaigns or offers permanent educational content (e.g., blog, guide) on sustainable fashion. • The FAQ section includes answers to questions about sustainable fashion. • The store provides a way to contact them regarding sustainability and CSR issues (e.g., via chat or form), and consumers receive responses to their questions. • The store informs about the environmental and social impact of its operations.

The evaluation of consumer interaction was also conducted using a 2-point scale. In this case, the maximum possible score was 16 points. The higher the score, the greater the store's involvement in engaging consumers in CSR activities and disseminating knowledge about sustainable fashion.

The study examined 10 of the most popular fashion e-commerce websites in Poland (as of 2024) (Gemius, 2024), focusing solely on single-brand stores. Marketplaces were excluded due to limited control over content consistency and credibility, as the information on these platforms may originate from various vendors. Brand-owned websites offer clearer and more standardized sustainability communication, making them better suited to the adopted evaluation criteria. The analyzed stores are listed in Table 3.

Table 3: The list of stores included in the research

Retailer's brand name	Website address	Store owner
H&M	https://www2.hm.com/pl_pl/index.html	H&M Hennes & Mauritz AB
Sinsay	https://www.sinsay.com/pl/pl/	LPP S.A.
Reserved	https://www.reserved.com/pl/pl/	LPP S.A.
Zara	https://www.zara.com/pl/	Inditex S.A.
Bonprix	https://www.bonprix.pl/	bonprix Sp. z o.o.
Cropp	https://www.cropp.com/pl/pl/	LPP S.A.
House	https://www.housebrand.com/pl/pl/	LPP S.A.
Bershka	https://www.bershka.com/pl/	Inditex S.A.

Retailer's brand name	Website address	Store owner
Mohito	https://www.mohito.com/pl/pl/	LPP S.A.
Nike	https://www.nike.com/pl/	Nike, Inc.

5. Results

Due to the lack of consent from the owners of the respective brands to conduct the study, the stores were anonymized and coded from A to J. Preliminary analysis revealed that out of the 10 selected stores, 3 did not communicate or present any information related to sustainability or CSR. Even at this early stage, the results demonstrate significant diversity in the ways companies share knowledge about CSR and sustainability.

Based on the total scores awarded by the evaluation team, Store D received the highest score. Similar scores were obtained by Stores E, B, F, and A. These stores achieved at least 50% of the maximum possible score, which indicates that even the highest-ranked brands in this evaluation do not have well-developed and comprehensive CSR and sustainability communication strategies, and improvements are needed in certain areas. In terms of the evaluated criteria, these stores received comparable scores. The results are presented in Figure 1.

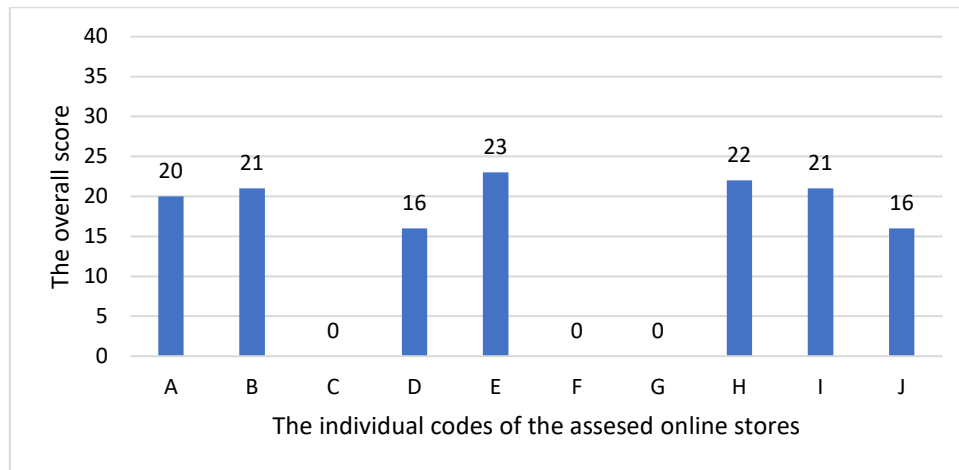


Figure 1: Evaluation results of online stores – stage 1: content analysis

Due to the fact that Stores C, F, and G did not present any content related to sustainability or CSR – making it impossible to conduct any categorization or measurement – they were excluded from the analysis assessing individual criteria. The results of the evaluation for each criterion are presented in Figure 2.

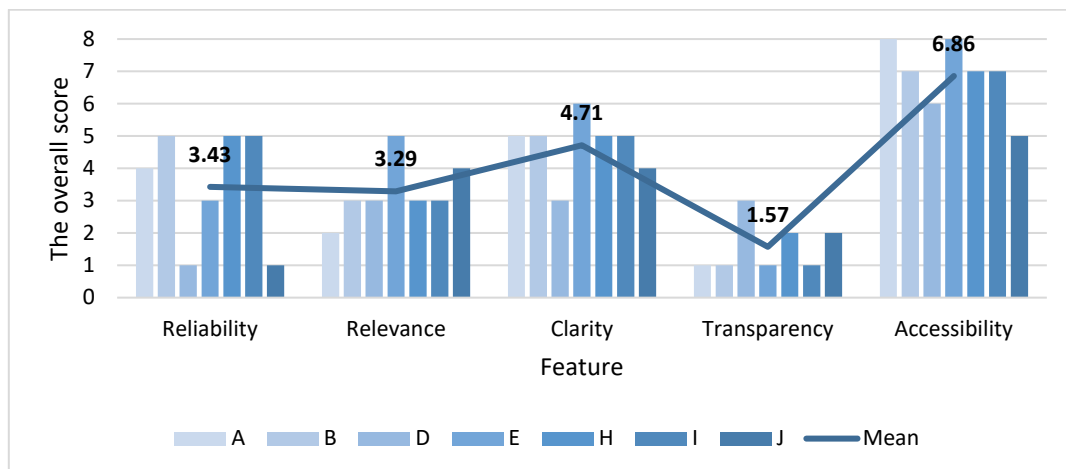


Figure 2: Evaluation results of online stores by individual feature

Considering individual criteria, the best and most consistently rated feature was "Accessibility". Most evaluated stores scored 7 or 8 points. Information regarding sustainability and CSR often appeared in dedicated sections

(e.g., "Our Responsibility," "Sustainability") located at the bottom of the homepage, although in some cases, this content was only available in English. When such information was included on product pages, it was presented in a standardized way across all or most of the store's assortment and appeared in various formats – textual, graphic, and audiovisual. Access to information was not restricted, e.g., by the need to create an account. This indicates that over half of the popular fashion brands operating in the Polish e-commerce market provide consumers with relatively easy access to environmental information, regardless of their technological skills or informational needs.

The second highest-rated criterion was "Clarity". In this category, most stores received 5 or 6 points. The content on the websites was presented clearly and concisely, avoiding information overload or technical jargon. This information was often available at various stages of the customer journey – both in general sections and directly on product pages – thus enhancing its usability. Many stores also used simple and easy-to-understand visual formats, such as infographics, icons, or graphic labels, which helped communicate key messages. Although not all stores reached the maximum score in this category, the overall level of clarity can be considered satisfactory. This suggests that companies increasingly understand the importance of clear, accessible, and visually appealing communication in building relationships with customers interested in sustainability and CSR.

Next in line were the criteria "Reliability" and "Relevance", both averaging slightly above 3 points. The "Reliability" criterion showed the greatest variation in scores, suggesting that fashion retailers attach varying levels of importance to the verifiability and accuracy of environmental claims. In the top-rated stores, sustainability and CSR statements were supported by concrete evidence, such as quantitative data, third-party reports, or references to industry standards. However, this information was most often presented in general sections rather than at the product level. Some stores also displayed certifications and eco-labels. In some cases, the provided information went beyond basic labeling and included data such as production location or material origin.

The "Relevance" criterion focused on whether sustainability and CSR messages were truly meaningful from the consumer's perspective and linked to specific products offered by the store. The results were mixed. All evaluated stores did present contextual information related to their products, such as production processes, materials used, or origin of raw materials. Some stores only partially communicated a broader picture of environmental impact and included potential limitations, but most did not deliver such messages. Furthermore, only two stores offered the ability to filter sustainable products.

The lowest-rated criterion was "Transparency", indicating significant shortcomings in how transparently stores communicated their CSR and sustainability efforts. Although such content was present, in most cases it was not possible to verify who developed the statements and on what basis. One of the major limitations was the restricted ability to verify the authenticity of certifications and eco-labels. While some stores used graphical certification symbols, very few provided the data necessary for verification, such as license numbers, names of certifying bodies, or references to official databases. Additionally, detailed data regarding sources, methodological assumptions, or indicators used in formulating claims were not made available. The best-rated attribute in this category was the variation in the level of detail in the provided information, which in most stores was at least partially implemented, allowing users to adjust the depth of information to their individual needs and cognitive levels.

Regarding consumer interaction, the results revealed clear differences between the analyzed brands. The highest overall score (12 out of 16 points) was achieved by Stores A, D, and J, which provided both concrete opportunities for consumer engagement and educational content. In contrast, the lowest scores (2 points) were recorded by four stores – B, C, F, and G – which provided educational content on sustainability and CSR only after the consumer inquired via a contact form and was redirected to the corporate website of the brand. Detailed results are presented in Figure 3.

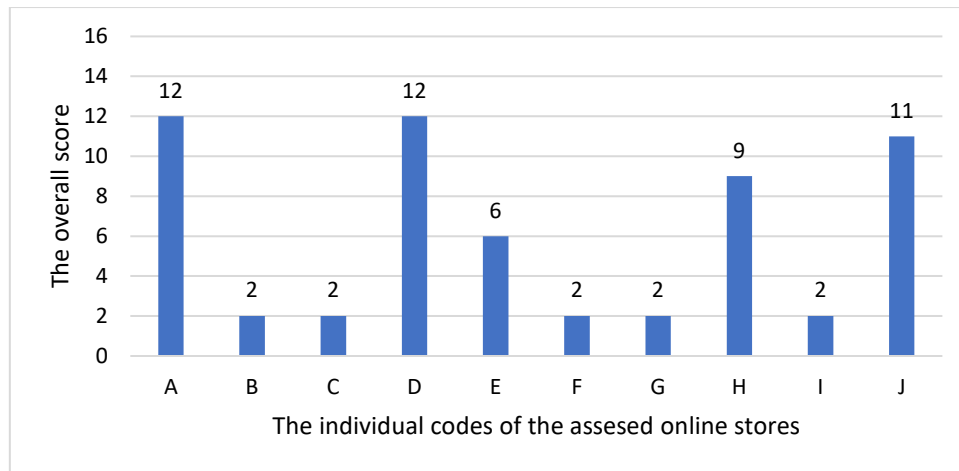


Figure 3: Evaluation results of online stores – stage 2: assessment of consumer interaction

With regard to consumer interaction, the most frequently observed practices included the implementation of used clothing collection programs, the facilitation of product returns, and the adoption of recycling initiatives. In the area of consumer education, only a limited number of online stores provided dedicated content such as blogs, FAQ sections, or contact forms explicitly addressing sustainability and CSR-related topics. The available materials predominantly focused on garment care guidance and detailed information concerning the brand's environmental and social impact.

The findings of this study are consistent with the conclusions of Tickle et al. (2024), who observed that over 90% of the fashion brands they analyzed include sustainability information on their websites – although it is not always easily accessible. These authors also noted that, despite the relatively high availability of eco-related content, verifying CSR and sustainability claims remains challenging, which is also confirmed by the results of the present study. Similarly, James and Montgomery (2017) and Egels-Zandén and Hansson (2015) pointed out that brands are more likely to share information in areas where they feel confident, while avoiding more complex or controversial topics. They also observed that sustainability information available in the consumer market is often fragmented and context-dependent – an issue also reflected in the current findings. Zhao et al. (2022), on the other hand, found that sustainability-oriented brands use both textual and visual communication, which was also evident in the analyzed examples. Conversely, the limited presence of educational and interactive tools noted in this study supports the conclusions of Chan et al. (2020), who highlighted the underutilized potential for engaging consumers in sustainability issues.

6. Conclusions

The findings revealed considerable variation in how popular fashion brands in Poland communicate their sustainability and CSR efforts online. The highest-rated brands were those that not only provided detailed information about their sustainability initiatives but also offered real opportunities for consumer engagement in CSR activities. Among the evaluated criteria, “Accessibility” received the highest and most consistent scores, indicating that fashion e-commerce platforms are increasingly effective at providing consumers with easy and intuitive access to environmental information. The “Clarity” criterion was also highly rated, reflecting a growing awareness among companies of the importance of transparent and understandable communication. “Reliability” and “Relevance” received moderate scores, suggesting a need for greater attention to the credibility of information and its contextual alignment with the products offered. “Transparency” received the lowest scores, revealing significant shortcomings in the ability to verify data sources, methodologies, and environmental certifications.

Clear disparities were also observed in the area of consumer interaction. Only a few retailers offered tangible means for consumer participation or consistent education in the field of sustainable fashion. Several retailers did not provide any relevant content within their online stores, limiting their ability to influence consumers or build trust. Only a portion of the analyzed brands consistently and transparently shared knowledge about their sustainability initiatives. The absence of coherent and visible CSR communication – even when such initiatives exist – reduces the potential to shape consumer awareness and attitudes.

From the perspective of Customer Knowledge Management (CKM), the results indicate an insufficient use of customer insights to tailor messages related to environmental and social responsibility. Only a few brands

offered avenues for two-way communication (e.g., contact forms, chats, or educational FAQs), which limits opportunities for mutual learning and for supporting consumers in making more informed purchasing decisions.

From a practical standpoint, the findings point to a need for stronger integration between sustainability/CSR strategies and communication efforts in online sales channels. Retailers should ensure that their information is not only reliable and up to date but also prominently displayed, easily accessible, and aligned with the consumer's purchase journey. Transparent, clear, and engaging communication about ecological and social initiatives can contribute to increased consumer awareness, brand loyalty, and the promotion of more responsible purchasing behaviors. Based on the findings, key recommendations include improving transparency through verifiable claims and certification data, enhancing product-level sustainability messaging, and expanding interactive and educational tools to engage consumers more deeply. The implementation of filtering options for eco-friendly products would also improve usability and trust.

Theoretically, this study adds to the discourse on CKM and knowledge sharing in digital retail environments, underscoring their relevance for shaping responsible branding practices in the fashion industry. Practically, the results highlight the strategic value of clear, accessible CSR communication as a competitive differentiator in a market shaped by growing environmental and ethical awareness.

However, the study has certain limitations. First, it focused solely on content available on brand-operated e-commerce websites, excluding social media, newsletters, or corporate websites. Second, the analysis was limited to ten of the most popular online stores, and the evaluation tool – while based on international guidelines – did not capture all possible aspects of CSR communication. Future research should consider expanding the scope by including consumer perspectives, cross-country comparisons, and the study of how communication formats influence consumer attitudes and behavior.

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AI declaration: During the preparation of this work the authors used OpenAI ChatGPT4 in order to check grammar and spelling. After using this tool, the authors reviewed and edited the content as needed and take full responsibility for the content of the publication.

References

- Adamkiewicz, J., Kochańska, E., Adamkiewicz, I. and Łukasik, R. M. (2022) "Greenwashing and sustainable fashion industry", *Current Opinion in Green and Sustainable Chemistry*, 100710. <https://doi.org/10.1016/j.cogsc.2022.100710>.
- Ceylan, O. (2019) "Knowledge, attitudes and behavior of consumers towards sustainability and ecological fashion", *Textile & leather review*, 2(3), pp. 154–161.
- Chaithanapat, P. and Rakthin, S. (2020) "Customer knowledge management in SMEs: Review and research agenda", *Knowledge and Process Management*. <https://doi.org/10.1002/kpm.1653>
- Chan, H.-L., Wei, X., Guo, S. and Leung, W.-H. (2020) "Corporate social responsibility (CSR) in fashion supply chains: A multi-methodological study", *Transportation Research Part E: Logistics and Transportation Review*, 142, pp. 102063.
- Da Giau, A., Foss, N. J., Furlan, A. and Vinelli, A. (2019). "Sustainable development and dynamic capabilities in the fashion industry: A multi-case study", *Corporate Social Responsibility and Environmental Management*, 27(3), 1509–1520.
- Daukantiene, V. (2022) "Analysis of the sustainability aspects of fashion: A literature review", *Textile Research Journal*, Vol. 93 Issue 3-4, pp. 991-1002.
- Deloitte. (2023) "Brand purpose – rynek mody 2023", [online], Deloitte, <https://www2.deloitte.com/pl/pl/services/deloitte-digital/Raport-Brand-Purpose-rynek-mody.html>.
- Egels-Zandén, N. and Hansson, N. (2015) "Supply Chain Transparency as a Consumer or Corporate Tool: The Case of Nudie Jeans Co", *Journal of Consumer Policy*, 39(4), pp. 377–395. <https://doi.org/10.1007/s10603-015-9283-7>
- Ellen MacArthur Foundation. (2021) "Rethinking business models for a thriving fashion industry", [online], Ellen MacArthur Foundation, <https://www.ellenmacarthurfoundation.org/fashion-business-models/overview>.
- European Commission. (2022) "Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions", [online], European Commission, https://environment.ec.europa.eu/publications/textiles-strategy_en.
- Fang, F. (2020) "Research on mobile e-commerce marketing model based on smart phones", *E-commerce*, Vol 49 No. 4, pp. 63–64.

- Fuxman, L., Mohr, I., Mahmoud, A. B. and Grigoriou, N. (2022) "The new 3Ps of sustainability marketing: The case of fashion", *Sustainable Production and Consumption*, 31, pp. 384–396.
- Gemius. (2024) "2024 E-commerce w Polsce", [online], Gemius, https://gemius.com/documents/66/RAPORT_E-COMMERCE_2024.pdf.
- Han, J., Seo, Y. and Ko, E. (2017) "Staging luxury experiences for understanding sustainable fashion consumption: A balance theory application", *Journal of Business Research*, 74, pp. 162–167.
- James, A. and Montgomery, B. (2017) "Engaging the fashion consumer in a transparent business model", *International Journal of Fashion Design, Technology and Education*, vol. 10, no. 3, pp. 287–299. <https://doi.org/10.1080/17543266.2017.1378730>
- Kamhawi, R. and Weaver, D.H. (2003) "Mass Communication Research Trends from 1980 to 1999", *Journalism & Mass Communication Quarterly*, 80(1), pp 7–27.
- Krippendorff, K. (2013) *Content Analysis: An Introduction to Its Methodology*, Sage Publications, Inc., Thousand Oaks.
- Lee, E.-J., Choi, H., Han, J., Kim, D. H., Ko, E. and Kim, K. H. (2020) "How to "Nudge" your consumers toward sustainable fashion consumption: An fMRI investigation", *Journal of Business Research*, 117, pp. 642–651.
- Mandarić, D., Hunjet, A. and Vuković, D. (2022) « The Impact of Fashion Brand Sustainability on Consumer Purchasing Decisions", *Journal of Risk and Financial Management*, 15(4), pp. 176.
- Market Hub. (2024) "Rynek odzieżowy", [online], Market Hub, <https://markethub.pl/rynek-odziezowy/>.
- Martínez-Martínez, A., Martelo-Landroguez, S., Cepeda, G. and Cegarra-Navarro, J.-G. (2024) "Sustainable fashion knowledge: nurturing individual responsibility through spiritual and emotional sustainable capacities in the fashion industry", *Journal of Knowledge Management*, Vol. 28 No. 10, pp. 2843–2865.
- Mikuła, B. (2023) "Knowledge transfer and instrumentalization of its implementation in customer knowledge management", *e-mentor*, 100(3), pp. 12–21.
- Papatla, P. (2011) "Do online shopping styles affect preferred site attributes? An empirical investigation and retailing implications", *Journal of Retailing and Consumer Services*, 18(4), pp. 362–369.
- PARP. (2023) "Raport z I edycji badań. Branża mody i innowacyjnych tekstyliów", [online], Polska Agencja Rozwoju Przedsiębiorczości, https://www.parp.gov.pl/storage/publications/pdf/BBKL-Moda-i-innowacyjne-tekstylia_22_7_2022.pdf.
- Polanía Giese, J.C. and Mützel, J. (2022) "Guidelines for Providing Product Sustainability Information in E-Commerce", [online], One Planet Network and adelphi,
- Rowley, J. E. (2002) "Reflections on customer knowledge management in e-business", *Qualitative Market Research: An International Journal*, 5(4), pp. 268–280. <https://doi.org/10.1108/13522750210443227>
- Śpiwak, R. (2023) "Zastosowanie elementów audytu UX oraz narzędzi Google do oceny stron sklepów internetowych", *Zeszyty Studenckie „Nasze Studia”*, 13, pp. 241–249.
- Tickle, M., Hannibal, C. and Zapparoli, M. (2024) "The faster the better? Comparing sustainability performance information in fast and luxury fashion", *International Journal of Productivity and Performance Management*. <https://doi.org/10.1108/IJPPM-06-2024-0404>
- Thorisdottir, T. S. and Johannsdottir, L. (2019) "Sustainability within Fashion Business Models: A Systematic Literature Review", *Sustainability*, 11(8), pp. 2233.
- White, K., Habib, R. and Hardisty, D. J. (2019) "How to SHIFT Consumer Behaviors to be More Sustainable: A Literature Review and Guiding Framework", *Journal of Marketing*, 83(3), pp. 22–49.
- Zhao, L., Lee, S. H., Li, M. and Sun, P. (2022) "The Use of Social Media to Promote Sustainable Fashion and Benefit Communications: A Data-Mining Approach", *Sustainability*, 14(3), pp. 1178.