

MECHANISMS OF GREENWASHING AND THEIR IMPACT ON CONSUMER ATTITUDES AND PURCHASING DECISIONS

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Abstract: *The article analyzes the phenomenon of greenwashing as a marketing strategy aimed at creating a false pro environmental image of companies. The paper discusses the evolution of the term—from its origins to contemporary, advanced forms of visual and communicative manipulation. Particular attention is devoted to the fast fashion industry, in which brands such as H&M, Zara, and Shein exploit gaps in consumer awareness and psychological mechanisms to stimulate sales. The analysis is based on a comparison of the “Seven Sins of Greenwashing” framework with market research findings that indicate a significant discrepancy between consumers’ pro environmental declarations and their actual purchasing choices, which are primarily driven by price. The main research problem is an attempt to answer the question: How do greenwashing practices employed by clothing brands influence the consumer decision making process? The purpose of this study is to assess the effectiveness of greenwashing strategies employed by selected apparel brands within the framework of the “seven sins of greenwashing” model, as well as to investigate the extent to which a fabricated pro-environmental image shapes and alters consumers’ market behaviours.*

The article applies research triangulation, combining a critical analysis of the literature, a case study of selected clothing brands, secondary analysis of statistical data based on market research results, and a comparative method juxtaposing companies’ pro environmental claims with actual data on recycling and emissions.

Keywords: *environmental awareness, consumer preferences, greenwashing, sustainable development, fast fashion*

Introduction

Challenges on the way to responsible consumption often include consumer habits, lack of availability of ecological products, or higher purchase costs resulting from ethical and/or local production. An important problem is also greenwashing, which is an unfair marketing practice that creates an image of a brand as more ecological than it actually is. The overuse of terms such as "bio" or "eco" makes it difficult for consumers to recognize truly responsible enterprises [Ronda, 2023].

The fast fashion industry is responsible for 10% of total global CO₂ emissions. This is as much as the European Union emits and more than the aviation and shipping industries combined [UNFCCC, 2018]. It is also a major source of water consumption and pollution, as well as textile waste. The fashion industry generates a total of about 20% of global wastewater. Moreover, as much as 85% of textiles end up in landfills or are incinerated, while most of these materials could be reused [UNFCCC, 2018; Kielbasiński, 2026].

The growth of globalization and the dominance of digital platforms as marketing channels have led to an escalation of overconsumption. A key psychological factor has become the FOMO (Fear of Missing Out) phenomenon, which, through mechanisms of social comparison and gamification, triggers anxiety in consumers about not participating in dynamically changing trends. In this way, a closed market cycle is created in which demand and supply are stimulated by social pressure and shopping addiction.

Greenwashing in the clothing industry in the light of market practice and EU legal regulations

The term greenwashing was first used by Jay Westervelt in the 1980s in the context of drawing attention to unfair practices used in the hotel industry. At that time, it was about incentives directed to hotel guests regarding the multiple use of towels, allegedly for environmental protection. However, the goal was actions aimed at reducing operating costs, rather than caring for the environment by reducing water and detergent consumption [Lane, 2019]. Since then, the term greenwashing has evolved and currently refers to all activities aimed at presenting an enterprise, product, or service as more ecological than they actually are [Delmas & Burbano, 2011]. Contemporary corporate greenwashing activities are so common that they are becoming increasingly difficult to detect. The use of false advertising slogans aimed at changing the perception of a given product, the use of colors associated with ecology and nature, such as shades of green, blue, or beige, the use of catchy phrases like "eco", "bio", "natural" on packaging or labels – these are selected ways of misleading consumers.

In 2007, the consulting firm Terrachoice (now UL Solutions) wrote down a list of the so-called “7 sins of greenwashing”. This list highlighted the ways in which manufacturers deceive and how they influence consumers. These are:

- hidden trade-offs – promoting one eco-feature while ignoring other problems
- lack of evidence for the sustainable nature of the product
- vague communication and the use of ambiguous terms
- the sin of irrelevance of statements
- promoting the “lesser evil”
- using false labels
- lying in declarations.

Scheme 1. 7 sins of greenwashing

Source: AI-generated graphic



Manufacturers also often abuse the meaning of certificates. An example is the OEKO-TEX STANDARD 100 marking [OEKOTEX® Association, 2025] as proof of ecological production and concern for the environment, while in reality, this certificate only covers the issue of the presence of harmful substances in the finished product. The indicated certificate,

however, does not refer to production conditions and environmental impact. Companies use certificates in marketing communication, giving them a new – misleading meaning and scope. The appropriate certificate in this case is OEKO-TEX RESPONSIBLE BUSINESS, which confirms the manufacturer's sustainable approach to environmental care [OEKO-TEX® Association, 2025].

Another phenomenon is distracting consumers' attention from the real problem by creating and advertising small ecological initiatives that, although they have a positive impact on the environment, it is minimal. The consequences of greenwashing are multidimensional. For consumers, it may mean difficulty in making conscious purchasing decisions, a drop in trust in brands, and growing skepticism towards ecological activities. For companies, on the other hand, it may involve risks of financial penalties or loss of reputation.

In the European Union, the fight against greenwashing is currently based on two pillars: the adopted and binding EmpCo (Empowering Consumers for the Green Transition) directive, and the proposed (though currently suspended) Green Claims directive. Directive (EU) 2024/825, known as the EmpCo directive, is a key European Union legal act aimed at unfair market practices. From September 2026, the following will be illegal, among others:

- generic claims – using terms like "eco", "green", "environmentally friendly" without demonstrating the ecological effects of the product
- claims about the future – declaring climate goals (e.g., "we will be neutral by 2040") without a specific, public plan and independent monitoring of progress
- apparent climate neutrality – claiming that a product has a lower environmental impact solely because the company purchased CO₂ emission certificates.

Value-laden slogans, such as "better choice" or "smarter purchase", are based on emotions and the mechanism of moral licensing. They suggest that purchasing a given product is a pro-social action, which removes the burden of responsibility for overconsumption from the consumer. However, this is a subjective claim, because without indicating "better than what/whom?", the message remains only a marketing promise that cannot be verified.

According to the Green Claims Directive, comparative formulations require the presentation of a reference point and evidence based on the Life Cycle Assessment (LCA) methodology. If a brand claims that a product is "better", it must specifically indicate, for example, how much less water or energy was used compared to the standard production process. Otherwise, this slogan is considered misleading by using unjustified arguments.

In addition to EU directives, national authorities, such as the Polish Office of Competition and Consumer Protection (UOKiK), are already issuing decisions based on general consumer protection regulations. It may seem illogical that corporations worth billions of dollars risk an image scandal for an advertising campaign. However, there are several reasons for such decisions. The dilution of responsibility in global supply chains makes companies hope that the degree of production complexity (e.g., in Southeast Asia) will prevent activists from reaching the truth. Brands also assume that the average consumer does not have enough knowledge to distinguish "bamboo viscose" from natural fibers. Furthermore, in the corporate world, the "result" counts. Even if a company is accused of greenwashing, the profit generated thanks to a "green" campaign can more than cover any potential fines.

Sustainable development has stopped being a choice and has become a necessity. Fitting into pro-ecological trends strongly affects brand value. Companies therefore use greenwashing because investors increasingly make their financing dependent on high environmental indicators. Thus, the pressure to demonstrate "green successes" in annual reports leads to "coloring" reality. Products labeled as "eco" are usually sold with a higher margin, which for

many marketing departments may be more important than the fear of potential financial penalty restrictions.

Fast fashion clothing brands such as H&M or Zara have already been caught several times lying about promises regarding textile recycling. H&M was sued in the United States for advertising fast fashion clothing and accessories as sustainable. The company was accused of using "green" consumer trends in the promotion of the Conscious Choice collection, which is not environmentally friendly [Witkowska, 2022]. Zara's Join Life collection has been repeatedly criticized for using misleading labels (Greenpeace, 2023). The Shein brand, in turn, was fined 1 million euros in Italy for misleading consumers regarding the environmental friendliness of the offered products [Gayle, 2025].

In recent years, the use of sustainability reports (ESG) as a marketing tool can also be observed. Some companies publish these reports solely to improve their image, without introducing real changes in their operating strategy [KPMG, 2023]. The lack of uniform reporting standards in this area can favor manipulation and make it difficult to compare data between enterprises – this, in turn, affects the problematic nature of making ethical and conscious decisions by consumers [Hassan, 2024].

The impact of greenwashing on consumer purchasing decisions in the light of empirical data

To ensure the methodological rigor of the analysis, insights derived from case studies of selected apparel brands were integrated with findings from market reports and with data concerning the environmental initiatives publicly disclosed by the companies under examination.

Greenwashing practices significantly affect how consumers make decisions. In the fast fashion model, which is characterized by a high pace of production, frequent changes in trends, and low prices, greenwashing serves as a mitigating agent, helping consumers in subconsciously making purchasing decisions without the feeling of self-criticism associated with excessive consumerism.

One of the psychological mechanisms used in the context of greenwashing is so-called moral licensing, or moral relief. Consumers, after making a choice considered moral (e.g., buying an "eco" product), feel entitled to make less ethical decisions in the future [Williams, 2020]. An example can be the behavior of a group of people studied by V. Tiefenbeck's team in Switzerland – the studied group signed up for a program aimed at teaching them how to save water and thus pay lower bills. Ultimately, water consumption decreased, but interestingly – electricity consumption increased, which may indicate the occurrence of the moral relief phenomenon. By doing a good thing – saving water – the studied group felt justified and less guilty about electricity consumption. A similar phenomenon can be observed in the context of purchasing clothes or other textiles. At the time of purchasing a product marked with an "eco" label or "made from recycled materials", the consumer feels less guilty buying more than they actually need [Suvarna, Shanbhag & Santekellur, 2026]. They also have less resistance to spending a larger amount of money and do not feel the need to verify the compliance of these labels with the actual state – which clothing manufacturers exploit. These are incentives to purchase products, even if the company's promises are not true [Tiefenbeck, et al., 2013].

The moral relief mechanism is complemented by the halo effect. This is a cognitive bias consisting in the fact that, based on one positive feature of a product (e.g., the word "natural"), the consumer attributes a whole series of other positive properties to it, which it does not actually possess. The halo effect makes the consumer assume that a logo resembling a

certificate (e.g., a green leaf) builds trust in the brand's entire supply chain, even in a situation where certification applies to only a fraction of production.

Thus, consumers often perceive products marked with various certificates, photos, natural colors, or slogans as being of better quality, more durable, or more ethical. Brand themselves can also suffer from unfulfilled promises – a consumer who discovers untrue or false declarations regarding ecology may stop trusting the brand and stop making purchases [Timmons, et al., 2024]. Consumers may begin to perceive the promises made as a kind of advertising slogan, rather than a factual contribution to environmental care [Fella & Bausa, 2024].

The fast fashion industry is characterized by intensive production, frequent collection replacement, and a short life cycle. These are factors that have a negative impact on the natural environment, because they affect greater water consumption, CO₂ emissions, or the use of dangerous chemicals. Research conducted in selected European countries indicates that as many as 71% of respondents would like to purchase clothing in a more sustainable way, and as many as 74% prefer wearing clothes longer and thus reducing the frequency of purchases made. Nevertheless, the most frequently mentioned obstacles are price (41%), difficulty in recognizing a sustainable product (27%), and lack of knowledge about where to buy such a product (24%) [Globe Scan, 2025].

The 2023 Fashion Transparency Index report shows that consumers expect greater transparency from fast fashion clothing manufacturers. Buyers want transparency in matters concerning, among others: the supply chain, origin of fabrics, working conditions, CO₂ emissions, water, or electricity consumption. Transparency in these areas allows consumers not only to make more conscious purchasing decisions but also builds trust in the brand and enables comparison of companies' actual actions in the field of sustainable development. The lack of such data makes it difficult to unambiguously assess which products meet the criteria for responsible consumption and which use greenwashing activities [Fashion Revolution, 2023].

An increasing number of consumers are starting to notice the greenwashing strategies used by fashion brands. The Changing Markets Foundation Annual Report 2023 shows that the organization revealed 60 new examples of misleading green claims in the fashion industry through the Greenwash.com platform. This growing publicity of greenwashing practices contributes to an increase in skepticism among customers – consumers increasingly doubt the authenticity of brands' "eco" messages. The limited possibility of verifying the declarations made and the lack of comparability of data between individual enterprises make it difficult to make fully conscious purchasing decisions [Changing Markets Foundation, 2024].

“7 sins of greenwashing” in the practice of the clothing industry

The growing ecological awareness of consumers makes clothing brands increasingly declare concern for the environment. Unfortunately, behind many "green" messages lie only pretenses of action. Greenwashing has become one of the most serious problems of modern fashion – from the abuse of vague terms, through data manipulation, to hiding the real impact of production on the environment. An analysis of the seven most frequently committed sins allows us to understand how the industry creates an ecological image that often has no basis in facts, and why a critical approach to marketing promises is so important [de Freitas Netto et al., 2020; Suphasomboon & Vassanadumrongdee, 2026].

Sin of hidden trade-offs. This is the most common sin in the fashion industry. It consists in suggesting that a product is "eco" based on one feature (e.g., organic cotton content), while ignoring the huge carbon footprint, water consumption, or toxic dyes used in the production

process. An example is H&M and its "Conscious" collection. The brand promotes a line of clothing made from sustainable materials. However, as noted by the Changing Markets Foundation [2021]) the production of these clothes takes place in the same energy-intensive business model that relies on overproduction. The collection contains an even larger share of synthetics than the brand's main line, and the use of polyester from recycled PET bottles is described as a "false solution" that does not reduce the real environmental impact.

Sin of no proof. This concerns claims that cannot be verified using easily accessible information or reliable external certificates. An example is the Shein brand, which often uses vague statements about "sustainable production lines". However, the brand's transparency reports lack specific data regarding emissions throughout the entire supply chain. Claims about "ethical sourcing" remain empty slogans.

Sin of vagueness. The use of terms so broad that their meaning is practically elusive to the consumer (e.g., "planet-friendly", "ethical", "natural"). An example is the Zara brand and its "Join Life" tags. The term "Join Life" is an example of emotional marketing that does not define a specific environmental impact, but only suggests a pro-ecological attitude of the buyer. This matter is being handled by the Polish UOKiK [2026], claiming that the company's declarations were not accompanied by clear information about their scope, scale, and limitations.

Sin of irrelevance. Providing information that is true but irrelevant from the point of view of environmental protection in a given product category (Table 1).

Table 1. Example greenwashing in the clothing industry

Source: Own elaboration

Brand	Reservations regarding "ecologicality"
H&M	Accused of misleading marketing, in which products presented as "sustainable" often do not show real ecological advantage. Inconsistencies were also noted in reporting the composition of materials, including recycled polyester.
Zara	Indicated in reports regarding the use of cotton from areas related to illegal deforestation and land expropriation, despite having certificates of "sustainable" origin.
Shein	The EU has issued warnings regarding the use of "fake discounts" and misleading claims about sustainable development. Studies have also indicated the presence of toxic substances (lead, cadmium) in products in concentrations many times exceeding the norms.

Some fashion brands (Zara or H&M) promote their products as "free from harmful substances X", while the use of these substances has long been banned by EU regulations. Companies use certificates such as GOTS or Oeko-Tex. Instead of educating consumers about what these certificates mean, brands emphasize one slogan "GMO-free" to evoke positive associations, even if the trade of such materials is already strictly regulated in the EU. This is an attempt to take credit for complying with basic legal norms.

Sin of the lesser of two evils. An attempt to make the consumer feel better about purchasing a product that is harmful in its nature by comparing it to an even worse alternative. For example, biodegradable garment bags in fast fashion, while the content itself (a polyester garment) will decompose for hundreds of years. This is a classic diversion of attention from the heart of the problem, which is the durability of the product (Table 2).

Sin of fibbing (lying). Providing completely false information about certificates or product composition. Many brands unlawfully place information on their websites about having the OEKO-TEX STANDARD 100 certificate. This certificate only concerns the lack of harmful substances in the finished fabric, and not – as brands suggest – an ecological way of growing the raw material or ethical working conditions. In the case of Shein, the "sin of lying" most often concerns production ethics, as the brand creates an image of a modern one, with a controlled supply chain, while in reality, it relies on dispersed, uncontrolled sewing rooms that violate labor rights.

Sin of worshipping false labels. Creating one's own "green" logos that closely resemble certificates from independent institutions to give the consumer a false sense of security.

Table 2. Comparison of declarations and reality at fashion giants

Source: Own elaboration

Brand	Declared action	Actual problem
H&M	Textile recycling program in stores	The clothes collection program in chain stores often serves to generate vouchers for subsequent purchases, which drives the consumption loop. The real recycling rate of these clothes into new fibers remains marginal (about 1%).
Zara	100% sustainable cotton by 2025	Lack of transparency in defining what the brand understands by "sustainable" cotton.
Shein	Donations to environmental foundations	Business model based on sending millions of air packages a day, generating a gigantic carbon footprint.

It can take as little as 10 days from the creation of a new Shein brand project to garment production. Every day, about 10,000 products are added to the website, and there are as many as 600,000 products on sale, at an average price of 10 dollars [Kiełbasiński, 2026]. Shein's fast-to-market strategy is "alarming". The company has been ranked among the worst fast fashion retailers in terms of emission reduction and sustainability efforts. Low-quality, cheap clothing from China and mass production carry extensive consequences. The presence of substances such as PFAS, formaldehyde, phthalates, heavy metals, and microplastics in cheap clothing is a serious problem [SGS, 2025].

The fast fashion model is characterized by a specific approach to clothing production, which emphasizes fast response to changing fashion trends and intensive production. The life cycle of products in this model is significantly shorter – from the moment of designing a new model to introducing it to the market, only a few weeks pass. Such a dynamic process allows brands to respond quickly to consumer needs while putting pressure on all stages of production.

Typical production processes include, among others, material selection, cutting, sewing, and packaging. Fast fashion focuses on reducing costs and time at every stage, which often involves using cheap raw materials and large, consolidated production. According to N.

Arimany Serrat, M. Arribas-Ibar, and G. Erdoğlan [2025], brands such as Zara, H&M, or Shein use diverse strategies:

- Zara: part of the production and logistics processes are managed internally, and part is outsourced. This allows for a very short production cycle and quick reaction to changing fashion. Zara's flexibility allows it to frequently replenish its assortment and update collections, minimizing the waiting time for new products.
- H&M: uses a network of foreign suppliers, which allows for lowering production costs and provides access to various materials and manufacturing technologies. This extends delivery times, which limits the speed of reaction to changing trends. Thanks to this, H&M maintains a balance between costs, quality, and delivery time.
- Shein: operates in an ultra-fast fashion model, using a decentralized and flexible supply chain. This enables the company to instantly introduce new products tailored to current trends.

The analysis of the above mechanisms shows that greenwashing in the Polish and European market has evolved towards systemic disinformation. Clothing brands have stopped using simple lies, replacing them with "information noise" and imprecise messages that exploit consumer cognitive biases.

The breakthrough in the fight against these practices, brought by new EU directives and the activity of UOKiK, means the end of the era of "unfair" marketing. The introduction of the obligation to document every pro-ecological declaration with hard scientific data (LCA) and the ban on the use of general slogans without evidence poses a challenge of transparency for companies. For the consumer, these changes mean a chance to realistically support ethical brands and eliminate the "eco-illusion" that for years has hampered the real sustainable transformation of the fast fashion industry. The considerations prove that only a combination of legal sanctions with psychological education of consumers can effectively limit the scale of market manipulation.

Conclusions and summary

The conducted considerations regarding the phenomenon of greenwashing in the fashion industry allow for the formulation of several key conclusions.

Firstly, greenwashing in the fast fashion industry should be seen as a structural, not an incidental, element. Environmental disinformation mechanisms are an integral part of a business model based on overproduction and rapid turnover of goods. The use of strategies corresponding to the "seven sins of greenwashing" enables brands to create appearances of ecological responsibility while maintaining unchanged, high-emission mass production.

Secondly, the effectiveness of greenwashing is reinforced by psychological mechanisms that the literature describes as moral licensing or moral relief. Empirical studies, including the works of Tiefenbeck and colleagues, indicate that contact with a "pro-ecological" message can reduce consumer criticism and lead to compensatory consumption behaviors. Consequently, greenwashing serves as a tool regulating cognitive dissonance, which makes it an effective, though ethically problematic, marketing instrument.

Thirdly, the considerations confirm the existence of a clear gap between declarations and purchasing practice. Although consumers declare high ecological sensitivity, their actual choices are determined primarily by price, availability, and limited knowledge about environmental certification. Susceptibility to visual manipulation is also visible, which favors the consolidation of greenwashing as a dominant communication strategy.

Fourthly, against the background of the above phenomena, European Union regulations appear as a potential factor of market transformation. The Green Claims Directive, assuming the obligation of scientific justification of environmental claims and the introduction of ex-ante verification, can significantly limit the scale of abuse. Financial sanctions reaching 4% of turnover constitute a significant incentive to change communication practices and move from declarativeness to transparency based on data.

The findings of the conducted research clearly indicate that apparel brands cannot base their strategies solely on the claim of “being green.” The “seven sins of greenwashing” model has ceased to function merely as a theoretical construct and has instead evolved into a practical framework for evaluating the environmental integrity of corporate practices. A practical implication of the study is the potential development of internal marketing checklists grounded in this model, enabling companies to mitigate risks such as the “sin of hidden trade-offs” or the “sin of no proof” prior to launching campaigns.

It is advisable to implement educational initiatives that raise consumer awareness of the psychological mechanisms of manipulation employed by brands, thereby enabling individuals to assess products rationally on the basis of their composition rather than a green-themed label. Shifting from image-driven slogans toward providing consumers with measurable and verifiable carbon-footprint data directly on product labels would simultaneously reduce reputational and legal risks.

The article demonstrates a discrepancy between consumers’ pro-environmental declarations and their actual purchasing decisions, which remain predominantly price-driven. In practical terms, this suggests that marketing strategies built around generic ecological claims are losing their effectiveness. Considering the analysed EU directives (Green Claims), which penalize a lack of transparency, companies should redefine their brand communication. A key recommendation would be to require firms to conduct supply-chain audits and to base their marketing exclusively on EU-approved certifications.

Environmental responsibility requires radical transparency and a departure from the paradigm of unlimited growth. Real sustainability is only possible with the implementation of comprehensive assessment tools, such as life cycle assessment (LCA), and with consistent reduction of production volume. The future of ethical fashion therefore depends both on the effectiveness of regulations and on the growth of consumer competence in the critical assessment of environmental messages.

Concluding – it is necessary to introduce two-track actions regarding producers and consumers. For the first group, systemic changes are necessary, consisting in taking responsibility for the manufactured product. The next step is the technological transformation of production processes, allowing for the reduction of waste generation and CO₂ emissions, as well as stopping the pollution of groundwater. Consumers, on the other hand, require education in environmental responsibility, which will enable them to distinguish reliable ecological actions from greenwashing. A conscious consumer will not act impulsively, but in a thoughtful and conscious way.

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