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Assessing the Multifacetedness of Greenwashing: Implications for Consumers, Companies and Societies

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Abstract

Purpose. This paper systematically reviews the current literature on Greenwashing, aiming to organize existing knowledge on the phenomenon. The research investigates and categorizes the main sub-topics within the broader realm of greenwashing, providing deeper insights and suggesting areas for future research.

Design/methodology/approach. Employing a qualitative design and Latent Dirichlet Allocation (LDA) analysis, a systematic literature review has been conducted, analyzing a dataset of 1,846 original contributions.

Findings. The analysis identified six sub-topics of greenwashing and three macro-categories: 1) Business-related effects, such as impacts on business credibility and brand; 2) Consumer-related effects, including implications for human rights and consumptions; and 3) Social-related effects, encompassing greenwashing regulation and its relationship with Corporate Social Responsibility. The study concludes by discussing implications for consumers, managers, and policymakers.

Originality/value. Unlike previous systematic reviews of Greenwashing concept, this study focuses on establishing a comprehensive and holistic framework of the main aspects within this field of research, rather than analyzing just specific sub-elements.

Keywords
greenwashing; corporate credibility; trust; corporate social responsibility; environmental concern; brand image; consumers; consumption

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1. Introduction

Greenwashing is a communication strategy adopted by companies and other organizations in their corporate social campaigns (de Freitas Netto et al., 2020; Glavas et al., 2023). Such communication strategies consist in communicating environmental-compliant organizations' behavior to create a positive perception of such companies among its stakeholders (e.g., institutions, companies, citizens, consumers, and so on), and thus, an ecologically responsible image among their audience even if accompanied by negative conduct and behaviors capable of damaging the surrounding environment (Torelli et al., 2020).

More specifically, organizations practicing greenwashing spend more time and money on marketing themselves as environmentally friendly than on minimizing their environmental impact (Szabo & Webster, 2021). Thus, it is a deceitful marketing gimmick intended to mislead consumers who prefer to buy goods and services from environmentally conscious brands (Urbański & Ul Haque, 2020; Sestino et al., 2023). To clarify, some typical examples of greenwashing practices may refer to the simplest, such as the use of images of leaves, animals, green packaging, and so on in brand communication strategies, or more severe, such as misleading labels, or, worst, fake cheating emissions tests (Glavas et al., 2023).

The issue of greenwashing is currently damaging markets all around the world; for instance, 68% of the U.S. CEOs affirmed that their companies are guilty of greenwashing (Google Cloud, 2022), and about 42% of green claims in Europe related to business communication campaigns are likely to be exaggerated, false, or deceptive (European Commission, 2022). Negatively, greenwashing practices have a negative effect on economic systems, innovation, and healthy competition; for instance, the resources spent on making something look environmentally friendly may, in turn, be used to innovate to achieve real and lasting results in terms of environmental impact.

Moreover, greenwashing may negatively affect employees, as they are unwilling to engage in unethical and immoral behavior (Walker & Wan, 2012). Thus, there is a clash between employees' moral foundations and their company's irresponsible behavior, as appraisal and moral foundation theories suggest. Furthermore, from a marketing perspective, greenwashing practices may have negative effects on consumption. First, previous literature has already explained how such practices may positively affect consumers' green skepticism, while it has a negative impact on purchase intention (Leonidou & Skarmeas, 2017; Skarmeas et al., 2018), individuals' green trust (Chen & Chang, 2013), organizational credibility, perceived company performance, and the market value of the brand (Nyilasy et al., 2014). Furthermore, consumers must be aware of greenwashing or when a company provides false or misleading information that is more environmentally conscious than they really are. The relevant issue is that these claims are unethical and thus may create more harm to the environment because they imply an overall negative impact on consumers, businesses, and the environment and compromise a range of ethical values of a business (Zych et al., 2021). Based on such premises, during the last few years, greenwashing as a phenomenon has captured researcher, policymakers, and practitioners' attention, together with massive scientific production, resulting in a disorganized knowledge of the matter, because building a corpus of knowledge derived from a multidisciplinary perspective.

Recently, research on greenwashing has grown, focusing especially on the unethical practices by organizations that falsely portray their products, services, or policies as environmentally friendly, also calling for future research on this domain (Free et al., 2024). Scholars are delving into the psychological and behavioral impacts of greenwashing on consumers, examining how misleading environmental claims can erode trust and alter purchasing behaviors (e.g., as in Bowen & Aragon-Correa Mangini, 2014; Mangini et al., 2020; Sestino & Sagona, 2024). Furthermore, interdisciplinary research is exploring the regulatory and policy frameworks needed to combat greenwashing, emphasizing the role of stricter enforcement and clearer guidelines (Kurpierz & Smith, 2020).

Based on the aforementioned contents, this study sheds light on the negative effects of greenwashing practices by answering the following research question:

***RQ**. What is the fundamental dealing with Greenwashing practices effects, and what are the most suitable recommendation for marketers, managers and policymakers to mitigate such effects?*

Through a qualitative research design, a systematic literature review has been conducted, by implementing a combination of established machine learning algorithms (specifically Latent Dirichlet Allocation, and hierarchical clustering), in the attempt to design the most human-meaningful topic structures. The analysis has been conducted on a corpus of 1,846 article journals. Findings shed light on six final fundamental topics, which we grouped into *Business-related effects* (i.e., 1) Effects of greenwashing practices on companies' credibility; 2) Effects of greenwashing practices on brand), *Consumers-related effects* (i.e., 3) Effects of greenwashing practices on human rights; 4) Effects of greenwashing practices on consumers and consumption), and *Social-related effects* (i.e., 5) Greenwashing regulation; and 6) Greenwashing and Corporate Social Responsibility).

The paper is organized as follows: In the following section we detailed the proposed methodological approach; Next, in the third section, we analyzed the obtained findings by providing the results of the topic modeling analysis and its network visualization, to then deeply discuss each topic, to shed lights on current issues, practices, and challenges. Finally, in the last section, we offer some conclusions together with discussing the main limitations of our research.

2. Material

To address the proposed research questions, a structured analytical approach aimed at detecting meaningful trends has been implemented. Similarly, to previous studies (e.g., Blei et al., 2003; De Mauro et al., 2019; Sestino & De Mauro, 2022), a literature review has been conducted accordingly on an original combination of established machine learning algorithms, in terms of Latent Dirichlet Allocation - LDA, and hierarchical clustering, aimed at designing human-meaningful topic structures based on the discovered research papers.

Latent Dirichlet Allocation (LDA) is a generative probabilistic model employed for topic modeling and uncovering latent structures in large text bodies (Blei et al., 2003): It operates by assuming that documents are mixtures of topics, where each topic is characterized by a distribution of words (De Mauro et al., 2019). Through iterative algorithms such as Gibbs sampling or variational inference, LDA estimates the probability distributions of topics within documents and words within topics. This method is particularly advantageous for literature reviews and cluster analysis, as it facilitates the identification of underlying themes and patterns across vast amounts of unstructured textual data. By organizing literature into coherent clusters of related topics, LDA aids researchers in synthesizing existing knowledge and pinpointing gaps or emerging trends within a given field.

Such approach consisted in five consequent phases namely: 1) Keyword definitions; 2) Database extraction; 3) Data preparation; 4) LDA launching; 5) Data analysis and topic modelling. Moreover, to increase comprehensibility and readability, together the topic discussion phase, we also performed a further phase of data visualization (i.e., network visualization, and word cloud simple analysis) in the attempt to identify more easily patterns, trends and outliers in the findings.

Phase 1: Keywords Definition

Our analysis begun by defining a list of specific keywords related to the phenomenon under investigation (e.g., as for "greenwashing", "sustainability", "ethic", and so on) to catch the most relevant contributions that may appear in international peer-reviewed journals related both to management, and marketing, and social impacts. We finally focused on 10 keywords and their combination.

Phase 2: Database Extraction

In the second phase, by using the selected keywords, a query has been launched to mine the Scopus database in the attempt to extract those contributions and documents dealing with both new greenwashing practices and their effects on management, marketing, and regulation strategies together with the effects on stakeholders, and specifically on final consumers. Importantly, to ensure the largest number of contributions collected we forced the co-presence of the terms into the papers' titles, abstract, keywords and in the full body of the text. As a period, coherently with our research question, we considered the last eleven years (i.e., 2012-2023). Specifically, we referred to scientific contributions and articles journals published from January 1st, 2012, to the end of September 2023. The query launched appear as the following one: "TITLE-ABS (("Greenwashing" or "practice") and ("business" OR "management")) AND PUBYEAR > 2012 AND ((LIMIT-TO (DOCTYPE,"ar")) OR ((LIMIT-TO (DOCTYPE, "cp")) AND ((LIMIT-TO (LANGUAGE, "English"))". On September 30th, 2022, we extracted a final total amount of 1,962 published journal articles, book chapters, and conference papers.

Phase 3: Data Preparation

After obtaining the dataset, we looked for contributions that included the full terms related to greenwashing practices and their impact on management, marketing, and regulation strategies, as well as any potential impact on consumer perception. We did this by taking into consideration the defined list of keywords. A sample of 1,846 articles was used for the study after carefully checking the content of the titles and abstracts. We performed a detailed preliminary data preparation using the program Knime using the final dataset of 1,846 scientific contributions (Qundus et al., 2021): White spaces and punctuation were removed from the corpus of texts as part of the dataset cleaning process to produce a "set of single words," excluding compound terms (i.e., with intra–word dashes). Using Porter's technique (1980), which returned each word's stem with its suffix removed, we then converted all capitals to lowercase. In addition, we eliminated frequent stop words, articles, conjunctions, adverbs, and other superfluous words (e.g., those related to copyright information and years). The LDA method was then used to assess the final dataset, which was composed of a list of associated terms (Delen & Crossland, 2008).

Phase 4: Latent Dirichlet Allocation (LDA) Analysis

In order to discover the theme organization of a corpus of documents including text data, the Latent Dirichlet Allocation (LDA) analysis approach has been selected (Blei, 2012; Delen & Crossland, 2008). Following this methodology, and similarly to Sestino & De Mauro (2021), the input text data may be processed and evaluated as a series of observations resulting from a generative random process with hidden variables. The topical organization of the documents may then be reflected in these final variables, which may also be useful in defining how the relative frequency of terms is related to the subject matter covered in the text. Coherently with this approach, each emerging topic is a probability distribution over terms within the vocabulary made of all the words present in the corpus. Therefore, every document in the corpus (each composed of multiple terms) will be associated with a mixture of k topics, chosen by the involved researcher. The Dirichlet distribution is thus described by the following formula:

$$\sum_{i=1}^{K} x_i = 1 \text{ and } x_i \geq 0 \ \forall i \in [1, K]$$

The subject validation is delegated to the academics participating in the literature review even if the implementation of a text-mining technique yields the greatest number of appropriate themes (Blei, 2012; Steyvers & Griffiths, 2007). Second, LDA displays the topic percentage for each individual document. This produces a n k matrix, where the coefficient n denotes the total number of documents in the dataset being utilized, and the coefficient k denotes the total number of topics.

The choice of the most appropriate k is left to the researchers engaged, who should ensure that the most human-comprehensible number of emerging themes from the dataset under consideration while determining the most appropriate *k*.

Phase 5: Data Analysis and Topic Modelling
By following Delen & Crossland (2008), as anticipated above, we determined the number of final *k* topics by selecting the model capable of providing the most readable output. LDA has been run for all values of k comprises from 6<*k*<10 and concluded through human judgment that the most readable model was obtained. Despite the first most human-comprehensible number appear for *k=8*, the preliminarily analysis resulted in a confusing and dispersive knowledge on the matter: Many contents, actually belonging to the same discussion topic, were allocated in different topics. Therefore, the number of k has been reduced, down to the most congruous *k*=6, resulting in the following six topics: *1) Effects of greenwashing practices on companies' credibility; 2) Effects of greenwashing practices on brand; 3) Effects of greenwashing practices on human rights; 4) Effects of green washing practices on consumers and consumption; 5) Green washing regulation; 6) Greenwashing and Corporate Social Responsibility.* The different different aggregations resulting from the LDA have been evaluated through an in-depth data analysis based on the process of data extrapolation, and the final six topics have been further organized in coherent manner (Bal & Nijkamp, 2001) resulting in three macro-categories we named: 1) Business-related effects; 2) Consumers-related effects; 3) Social-related effects.

3. Findings and Discussion

3.1 Overall Findings
As aforementioned, the final topic modelling results consisted in six greenwashing-related sub-topics, grouped in three macro-categories as shown in Table 1 below, reporting the LDA-derived distribution of the sampled contributions.

Year of Publication	*Effects of greenwashing practices on business credibility*	*Effects of green washing practices on brand*	*Effects of greenwashing practices on human rights*	*Effects of greenwashing practices on consumers and consumption*	*Greenwashing regulation*	*Greenwashing and CSR*	*Total*
2012	4	0	0	0	2	3	9
2013	12	8	2	8	5	9	44
2014	2	12	4	6	7	12	43
2015	9	10	7	12	11	9	58
2016	18	21	9	27	14	23	112
2017	54	44	15	31	18	30	192
2018	32	51	2	32	12	43	172
2019	88	62	5	62	22	40	279
2020	112	43	19	88	35	33	330
2021	108	46	20	112	12	52	350
2022	88	32	12	76	17	32	257
Grand Total	**527**	**329**	**95**	**454**	**155**	**286**	**1,846**

Table 1. Topic modeling results

To closely analyze the resulting topic modeling structure, a network model by leveraging the LDA output has been created resulting in the structure in where each topic is associated to a network node, and the edges represented the inter-topic distance across the topics (Nikolenko et al., 2017). It's interesting to note that, similarly to Glynn (2019), we also calculated the inter-topic distance by examining the degree of topic presence correlation across the corpus of documents, by calculating the distance matrix using the formula D= 1-R, in which the size of the nodes is proportional to the relative presence of topics in the corpus of documents; in contrast, the edge-width is proportional to the inter-topic distance obtained from the pair-wise correlation across topics in the corpus.

Graphically, the topics have also been grouped in the three macro-categories named *Business-related effects*; *Consumers-related effects*; and *Social-related effects* (see Figure 1).

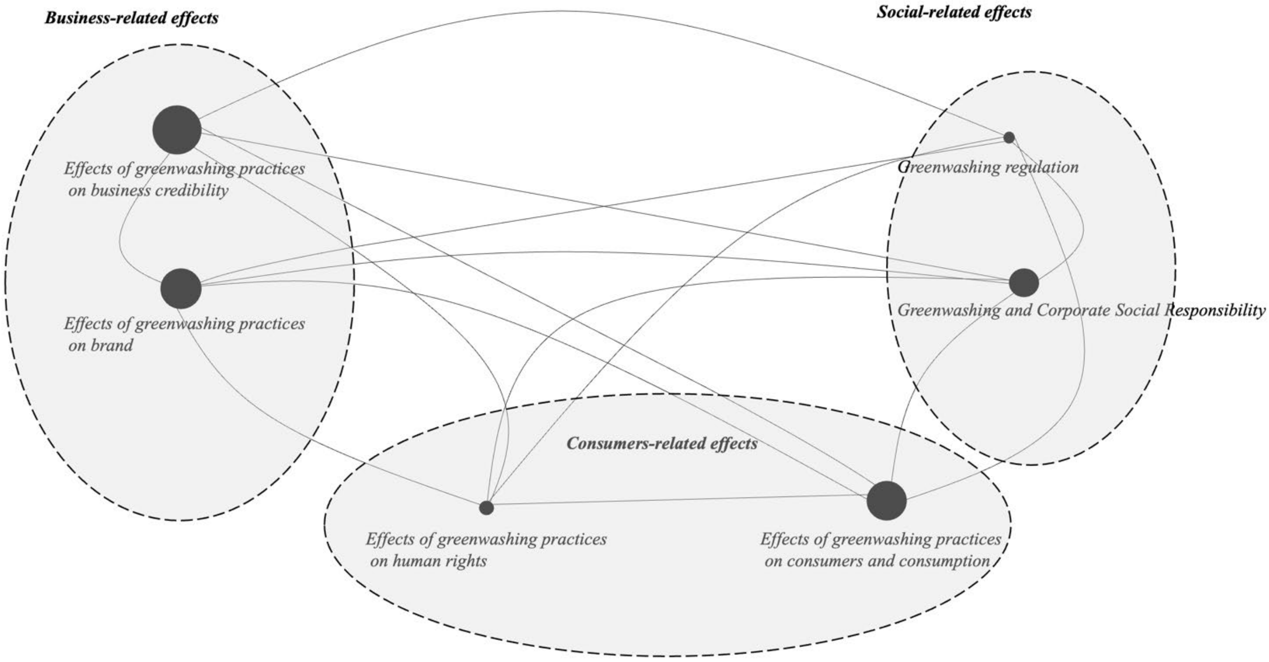

Figure 1. Network visualization of the topic modelling

3.2 Topics Discussion

3.2.1 Effects of Greenwashing Practices on Companies' Credibility

Business credibility relates to the believability of product positioning, which depends on consumers' perceptions of whether a company can carry on its promise (Park and Lee, 2013). Business credibility provides several benefits for companies, such as lowering perceived risk and increasing perceived quality and purchase intention (Chen et al., 2014; Leonidou and Skarmeas, 2017). As such, it plays a crucial role in achieving a sustainable competitive advantage, enhancing both tangible (Pitelli Britto et al., 2014) and intangible (Rossi and Magni, 2017) value creation for firms.

Since business credibility is a critical success factor to develop valuable relationships with consumers, their trust should never be threatened by practices devoted to deceiving them by making them believe that business activities are actually "green" while they aren't (Rahman et al., 2015). Therefore, greenwashing practices should be avoided to protect business value and trust.

Moreover, greenwashing practices may have negative effects on both consumer and employee engagement levels and may influence the direction of word-of-mouth (Hornik et al., 2015). Since business credibility is underpinned by signaling theory, which suggests that the asymmetric information between firms and consumers causes some obstacles to the development of trust between them, consumers tend to be on guard when a company tries to send messages about its "green activities" (Bougoure et al., 2016). Furthermore, greenwashing practices affect the expertise and trustworthiness of business credibility; that is, the ability and willingness of an organization to continuously deliver what has been promised to consumers (Bougoure et al., 2016). Credibility has an effect on companies that deliver both goods and services through its antecedents, namely consistency, investments in brand, and clarity, as established in the seminal study of Erdem and Swait (1998). Clarity is highly important for companies that are engaged in greenwashing practices because the higher the clarity, the lower the ambiguity in product information, including any possible greenwashing practice (Ghielen et al., 2021).

By merging the concepts of greenwashing and credibility, it is interesting to make a distinguish between what scholars call “claim” and “executional” greenwashing; the two classifications of greenwashing relate both to product- and firm-level activities (de Freitas Netto et al., 2020). Claim greenwashing affects business credibility using textual arguments that explicitly or implicitly refer to the ecological benefits of a product or service to create a misleading environmental claim (Parguel et al., 2012). On the other hand, executional greenwashing affects business credibility by leveraging on “nature-evoking elements such as images using colors (e.g., green, blue) or sounds (e.g., sea, birds)’ (de Freitas Betto et al., 2020, p. 10).

3.2.2 Effects of Greenwashing Practices on Brand

Regarding business credibility, greenwashing practices may have several negative implications for a brand and its management (Guo et al., 2018). The extant literature claims that greenwashing may cause a spillover effect on several brands that operate in the same industry. Consequently, if a brand in a certain industry behaves in an opportunistic way by making “fake” green initiatives, other brands will be affected by this negative behavior (even if their green practices are “real”); thus, greenwashing may have a severe ripple effect on industry value creation potential (Want et al., 2020). Similarly, Xiao et al. (2022) discussed that greenwashing may influence the propensity of consumers toward brand avoidance, finding a positive association between misconduct and consumers’ reactions. In another valuable and recent study, Wagner et al. (2020) recognized that greenwashing practices influence consumers so much to create an effect on brands that is known as hypocrisy, which is a particularly strong effect when it deals with corporate social responsibility of brands and with their sustainable practices more in general.

Akturan (2018) explored the relationship between greenwashing, green brand equity, brand credibility, green brand associations, and purchase intention. Although somewhat intuitive, research has shown interesting and deep effects of greenwashing on brand equity, credibility, and purchase intention. To illustrate, while greenwashing is widely conceptualized as a strategy to create a “fake,” but solid and concrete, green brand image, it is also used by many companies to create confusion among consumers, such as doubts about the severity of a certain green issue (Cherry and Sneirson, 2012). However, today’s empowered consumers, thanks to new sources of information, are more informed of the truthfulness of such initiatives. As a result, their risk perception when deciding whether to purchase a product because of its greenness is higher, as well as their green skepticism (Lin et al., 2017). In such a scenario, a “real” green brand image is crucial for enhancing brand loyalty and trust (Akturan, 2018). The latter concepts are more delicate when dealing with green brands, as they enhance the importance of cognitive and emotional aspects that a consumer searches for while deciding whether to create a bond with a given brand (Nagar, 2015).

Finally, research also highlights the importance for consumers to self-identify themselves in the products they buy, especially in the case of younger generations, that is, those who are more environmentally concerned (Wang, 2021). In fact, extant literature has reported that green brand image can be enhanced if consumers perceive that buying or using a green product can increase their social status and self-esteem (Johnstone & Tan, 2015). Therefore, higher cognitive and emotional benefits associated with purchasing a green product can enhance green brand image and value (Lin et al., 2021).

3.2.3 Effects of Greenwashing on Individuals and Human Right

As aforementioned above, the terms Greenwashing, has been coined by Westerveld in the 1980s, referring to the practice of companies promoting environmentally friendly activities while concealing substantial environmental damage caused by other operations, such as depleting aquifers and negative "exploiting" land and territories (Watson, 2017; Gombas et al., 2017). This deceptive practice obscures the negative and often irreversible environmental impacts of these companies' actions. A human rights-based policy approach is proposed to shift the focus to government responsibilities, particularly in establishing binding legal rules for companies to prevent misleading advertising at national and administrative levels. Such policies would hold corporations accountable for their social, environmental, and human rights impacts (Lashitew, 2021).

Greenwashing as a negative practice may significantly undermine human rights by misleading consumers about the environmental impact of products, thereby perpetuating harmful environmental practices that violate rights to health, a healthy environment, food, and water (Cherry, 2013; Rizzo et al., 2023). By falsely advertising products as eco-friendly, companies can continue depleting vital water sources and degrading ecosystems, directly impacting communities' access to clean water and healthy living conditions (Watson, 2017; Gombas et al., 2017). This deception can also result in regulatory complacency, where governments may delay or avoid implementing stricter environmental protections, further exacerbating environmental and human rights abuses (Lashitew, 2021).

The regulatory framework regarding corporate social, environmental, and human rights responsibilities has evolved significantly and is encapsulated in the "Three Pillars" system of the United Nations Human Rights Council (UNHRC) on business and human rights, alongside the 2011 Guiding Principles on Business and Human Rights (GPs). These frameworks represent the main instruments of soft law, which are non-binding international principles. From an ethical perspective, multinational companies must adhere to international human rights standards found in numerous conventions and soft law instruments, such as the Universal Declaration of Human Rights (UN, 1948) and subsequent international and regional human rights documents (Deva, 2012; Dhanarajan and Methven O'Brien, 2015; Maher et al., 2021).

Although international human rights law does not directly impose obligations on companies due to their lack of "international subjectivity," it is widely accepted that companies have an indirect responsibility to comply with substantive human rights protection standards through national laws related to employment and the environment (O'Brien, 2019; Ronzitti, 2019). The economic power of multinational companies, which often surpasses that of small sovereign states, allows them to significantly influence state development through their bargaining power (Focarelli, 2014).

Since the adoption of the GPs in 2011, governments have initiated numerous efforts to institutionalize them. These efforts include the implementation of new laws on due diligence and corporate human rights reporting, the development of national action plans on business and human rights through multi-stakeholder processes, and various awareness-raising, education, and capacity-building initiatives within industry sectors, businesses, and civil society organizations (Methven O'Brien et al., 2014, 2015; Methven O'Brien, Ferguson, and McVey, 2022). The European Commission's Development Education and Awareness Raising Programme exemplifies such initiatives (Vegimont, 2021).

According to the GPs, companies have a specific responsibility to respect human rights, which entails preventing and mitigating any negative impacts their activities may have on human rights (Kirchschlager, 2015). This responsibility requires multinational companies to adhere to both general international human rights standards and the host state's applicable laws when making foreign investments or establishing branches.

Considering greenwashing activities as a violation of human rights—specifically the rights to health, a healthy environment, food, and water—can significantly curb this deceptive practice by aligning it with the detrimental activities prohibited by the 2011 GPs (Ballucchi et al., 2020). The GPs prohibit misleading advertisements that result in greenwashing due to their negative impact on consumption and the fraudulent incentivization of consumer behavior regarding products purported to be environmentally friendly while concealing serious environmental impacts (Schmuck et al., 2018). To address these issues, multinational companies must prioritize complete transparency in their corporate policies to demonstrate respect for human rights.

3.2.4 Effects of Greenwashing Practices on Consumers and Consumption

The effects of greenwashing practices are multiple, but mainly facing consumers' loss of trust in brands and companies, and the issue related to consumers protection (mainly discussed in the following topic namely "Greenwashing regulation"), together with their negative reactions toward the companies who practice such an unethical marketing strategy (de Jong et al., 2020; Delmas & Burbano, 2011). Thus, such effects mainly refer to the damages that consumers experience indirectly after being exposed to greenwashing practices; for example, consumers may buy products derived from a precise environmentally friendly marketing and advertising strategy and then discover that, in reality, the purchased products are not green at all, but rather heavily capable of impacting the environment and society (Schmuck et al., 2018).

Consequently, when consumers discover that they have been deceived, it is very difficult to rebuild the image and reputation of the company because the damage can be even greater than the benefit that the company hoped to obtain due to a significant loss of trust (Nyilasy et al., 2014). Indeed, recent studies have demonstrated how greenwashing practices negatively affect consumers' reactions because of increasing skepticism, perceived skepticism, and perceived green risk (Aji & Sutikn, 2015). In this sense, marketers and managers should carefully design their advertising campaigns; by considering consumers' rising skepticism about apparently eco-friendly products, environmental claims that are incongruent with their extant perceptions are unlikely to be effective" (Chan et al., 2000 p. 349). More interestingly, a greenwashing-related practice able to negatively affect consumers is the so-called "executional greenwashing", consisting in the use of nature-evoking elements (through images, scenarios, and so on) in the companies' advertising campaign in the attempt to enhance a brand's ecological image: Consistently Parguel et colleagues (2015) demonstrated that such an approach may mislead consumers in their evaluation of a brand's ecological image, especially if they have low knowledge of environmental issues. In fact, advertising should be salient and informative to emphasize the true essence and rewarding characteristics of the product (Miller & Berry, 1998) and not aimed, through artificial manipulation, to create images that do not correspond to reality (Schmuck et al., 2018).The loss of confidence and negative reactions of consumers also occur because sometimes, in an attempt to have environmentally friendly consumption behaviors, consumers show a greater willingness to pay for green products than traditional ones, and consumers' income level has a significant impact on environmental consciousness and green purchase behavior since they exhibit a higher willingness to pay to be environmentally friendly. In this domain, consumers' understanding of greenwashing practices negatively moderates these effects (Jog & Singhal, 2020). More importantly, apart from consumers' loss of trust, such greenwashing practices may also negatively affect consumers' green word-of-mouth and their green-buying intentions (Nguyen et al., 2021), causing numerous social problems, as consumers predisposed to customary green practices could be discouraged as a result of unethical behavior. Indeed, when consumers perceive such unethical campaigns, they not only result in disengagement from environmentally friendly actions but also spread negative word-of-mouth about their experiences (Lim et al., 2013).

Moreover, when consumers perceive unethical behavior, such as in the case of greenwashing practices, they will not engage themselves in future efforts to be environmentally friendly. Coherently, Rahman et al. (2015), by using hospitality services as a research setting, demonstrated that greenwashed environmental campaigns increased consumer skepticism, and, in turn, their negative behavior to be engaged in environmentally friendly actions, such as the linen reuse program, also negatively impact their intention to revisit the unethical hotel.

Overall, from a consumer and consumption perspective, greenwashing does not imply any kind of advantage either for the environment or for companies, as not only does it not embody a real competitive advantage (De Jong, 2017), but it also represents a serious threat to the environment (both in persevering in the purchase of products that are not green, and in masking unethical productions), with the twofold negative result of distancing consumers from a brand (e.g., due to consumers' loss of trust or skepticism), and discourages sustainable purchasing behavior. However, as a consequence of such unethical behavior, regaining consumer trust after greenwashing is not simple because marketers and managers' efforts should be directed to design the most appropriate recovery strategies to stimulate a set of consumers' demanding protective factors in terms of emotional factors, functional factors, and legitimate factors that may eventually try to rebuild trust in the company and its brand (Wang et al., 2020).

3.2.5 Greenwashing Regulation

The effects of greenwashing and the mitigating policy activities of this unfair practice have been regulated differently in countries around the world, also by virtue of cultural and environmental differences, to prevent unethical behaviors (Feinstein, 2013).

In terms of legislation on greenwashing, China's advertising law stipulates that operators must not use advertisements or other means to position a product/service in a way that is misleading, such as inconsistency in terms of function, quality, ingredients, price, awards of the products or the content, use of incorrect statistics, research results, and quotations that cannot be verified and have a substantial influence on purchase (Wang et al., 2020). Sometimes multinational companies can obtain "green financing" to develop green projects (Guo et al.2019). The local China Banking and Insurance Regulatory Commission Office is entitled to improve the assessment system of supporting banking financial institutions to establish green finance standards to prevent the risk of greenwashing projects (Musthalati, 2022).

In 2021, the Green Claims Code and related guidelines were published in the UK by the Competition and Markets Authority (CMA). A green claim can show how a product, service, or firm is less harmful to or even benefits from the environment (Baum, 2012; Maxwell &Miller, 2017). The rules contained in the 2021 Code provide guidance to companies to understand their legal and social responsibilities towards consumers, with a specific focus on environmental issues (Maxwell & Miller, 2017). The Code sets out six principles that specify that environmental claims should be Accurate; Tested without hidden material information, and clear and unequivocal (Tecichmann, 2020).

Similarly, Canada has several provisions that can be applied to stigmatize the phenomenon of greenwashing, such as the Federal Competition Act, Textile Labelling Act, Consumer Packaging and Labeling Act, and Canadian Trademark Act (Hazel, 2020).

From a European perspective, the French Consumer Code provides for a generic prohibition of misleading commercial activities, including advertisements that do not comply with certain legal standards present in the law (Parguel, 2015). Five clauses must be included to identify the product: what is promoted, what is produced, what is monitored, what is measured, and possible social impact.

In Italy, until 2013, the normative references were articles n. 20-23 of the Consumer Code, legislative decree number 206 of September 6, 2005 (which implemented the European Directive 84/450/EC). In March 2014 the Institute of Self-Regulation of Advertising published the 58th edition of the Code of Conduct for Commercial Communication, by presenting a first reference to the abuse of terms that recall environmental protection: Commercial communication that declares environmental benefits must be based on truthful data, relevant and scientifically verifiable. Also, Italy poses a strong focus on the labeling system of the product, as complied with in ISO 14021:2016: The norm, namely "Environmental labels and declarations; Self-declared environmental claims", concerns the self-declared environmental claims made by companies for products they offer on the market (e.g., made by manufacturers, importers, distributors, retailers; De Chiara, 2016; Dendler, 2014). The UNI EN ISO "classification" is the most recent one and provides the key concepts related to the communication of the environmental footprint of products in B2B (business-to-business) and B2C (business-to-consumer) contexts in terms of principles, communication requirements and methods of using supporting data, program requirements and related necessary verifications (Poli et al., 2015) also in the attempt to impact green consumption and green loyalty even in a business-to-business context (Gelderman et al., 2021). The general information to be provided must be easily accessible and should be summarized in the following points: clear indication of the reference area, phases of the life cycle under study, access to support information, product sustainability, and control and implementation systems.

Europe, with its signing of the Sustainable Development Goals of the 2030 Agenda, should have proactively guided member states towards sustainable and environmental development. This creates a more favorable environment for green investment and attracts private investment. Fundamental maneuvers envisaged by the Green New Deal. Some authors are critical to the success of this operation (Silva, 2021; Zich et al., 2021). Notably, the guarantee of environmental compatibility of some products is now also certified through blockchain, which allows the entire production chain of a particular product to be traced in an unambiguous and truthful manner, because, by virtue of the technicalities of blockchain technology (whose data are by nature immutable and unchangeable; Singhal et al., 2018), it cannot allow illegal practices such as advertising as green, a product that is not, or that derives from unsustainable production processes (Sestino et al., 2022).

3.2.6 Greenwashing and Corporate Social Responsibility

Corporate social responsibility (CSR) is a key term and concept in the management literature, as it indicates a business model that helps a company be socially accountable to itself, its stakeholders, and the public (Torelli et al., 2012; Rossi et al., 2023). CSR is crucial for enhancing brand value because it increases consumers' willingness to pay a premium price if they perceive that the brand and its products are green and sustainable (Wu et al., 2020). Therefore, communicating green activities in a transparent and clear manner is essential to avoid being considered as a "fake" green brand. Green practices are not always directly observable, as are negative greenwashing activities. A valuable example is the one provided by Wu et al. (2020) that stated: "a consumer can easily observe whether a food producer uses biodegradable packaging, but it is much more difficult to observe the energy efficiency of the firm's factory" (p. 3097). Consequently, the minimum perceived risk by consumers will last in any case (Aji and Sutikn, 2015). Many firms try to decrease the risk of being seen as "fake" green companies by publishing CSR reports to demonstrate their commitment to social causes. This kind of voluntary disclosure signals the company's efforts in sustainable practices (Uyar et al., 2020). In addition, other firms might use the same reporting as a greenwashing tool; that is, to be perceived as green while they are not (Wang et al., 2018).

Sound CSR is critical for increasing performance, achieving a sustainable competitive advantage, and a positive green brand image. Odriozola and Baraibar-Diez (2017) highlighted the interplay between being green and socially responsible for increasing corporate reputation and rooted this interplay in legitimacy and stakeholder managerial theories. Interestingly, the authors also discussed the type of data (qualitative vs. quantitative) of CSR reported by companies. While financial reporting can be easily transcribed using objective units (i.e., numbers), many CSR data are qualitative in nature and destined to a number of different actors.

Therefore, finding the best way to report on CSR practices can be difficult in terms of how to express concepts and which concepts and facts do not appear to manipulate stakeholder groups and as a mere greenwashing practice (Odriozola and Baraibar-Diez, 2017). Moreover, greenwashing is considered as able affects both CSR and a firm's financial performance (Walker and Fan, 2012). On the other hand, Seele and Gatti (2017, p. 242) found that "greenwashing is a phenomenon in the eye of the beholder and is based on stakeholders' perceptions about the authenticity of CSR communication". Thus, CSR communication and its effect on credibility and authenticity (see paragraph 3.2.1) deserve further investigation in this field of research by connecting CSR and greenwashing themes (Li et al., 2022).

4. Conclusion

4.1 Conclusion and final remarks

Today, stakeholders are facing a barrage of green-friendly messages from companies hoping to profit from increased concern over environmental issues.

The negative effects of greenwashing are not limited to negative business perceptions, damaged brand image, or adverse environmental impact. Unknowingly, greenwashing pushes consumers to support companies that destroy the planet and ecosystems. To deeply investigate this phenomenon and add knowledge around this topic, this paper has systematized the huge amount of literature about greenwashing, and greenwashing-related practices by investigating studies concerning business green unfriendly behavior and by providing a framework useful to understand such a complex phenomenon on the basis of its Business-related, Consumers-related and Social-related effects, by a multidisciplinary perspective.

Thus, this research may significantly contribute to the discourse on sustainability, offering insights that are essential for businesses, consumers, and policymakers alike in navigating the complexities of sustainable development and ethical branding practices.

In contrast to other attempts to systematically review the greenwashing concept (e.g., de Freitas Netto et al., 2020), our study focused on establishing a comprehensive framework of the main aspects that rely on this field of research. Consequently, our paper conceptualized greenwashing as a general concept that impacts business, consumer, and social matters. Therefore, the research did not distinguish between greenwashing and blue washing (i.e., how some scholars describe the social implications of greenwashing activities over society) in order to exploit the highest possible value in terms of wealth of information. To illustrate, this study explored current regulations regarding greenwashing and discussed CSR reporting practices, highlighting the importance of distinguishing among firms that use such reporting to manipulate stakeholders' perceptions about being green and those who use it for healthy purposes. Moreover, this study distinguishes between executional and claim greenwashing to encompass all types of greenwashing at both the product and firm levels.

The resulting double-level hierarchical structure describing the central topics of current research and the possible future developments presented in this study may support future research and business management in multiple ways. First, researchers and practitioners may fully understand the issues hidden in the greenwashing phenomenon and be conscious of its negative consequences on both their business struggles and the social environment. Furthermore, researchers may design their future contributions in a precise theoretical background within the proposed framework based on the reported business, consumers, and social approach, acknowledging the intrinsic multidisciplinary nature of the domain. Moreover, our classification may allow researchers, practitioners, and policymakers to understand which aspects require more attention and five them an opportunity to improve the maturity of their firms and their impact on society.

4.2 Policy implications

Greenwashing undermines business credibility, brand equity, human rights, and consumer trust, therefore necessitating robust policy measures and practices to mitigate these adverse effects. As mentioned above in the Findings section, several regulatory frameworks have been implemented in many countries to attempt to manage the phenomenon. Nevertheless, these regulatory frameworks should be harmonized and enhanced at the international level by establishing clear guidelines and global standards for environmental claims, ensuring multinational companies provide transparent and verifiable information (Mateo-Márquez et al., 2022).

Moreover, consumers' education on greenwashing practices should be increased, in order to help consumers recognize this practice and make informed purchasing choices. To this end, public awareness campaigns, supported by governments and non-profit organizations, may effectively disseminate information about greenwashing, and reach large audiences. Additionally, the establishment of consumers' rights groups or watchdog organizations dedicated to monitoring and reporting instances of greenwashing may provide consumers with greater awareness and more precise information on companies (Jones, 2019).

Lastly, as mentioned above, new digital technologies such as blockchain may help counter greenwashing by certifying the origin of products across the entire production chain. These technologies enable the tracking of each step in the production process, from raw material sourcing to final delivery, ensuring that all claims about a product's environmental impact can be verified and traced back to their source. Consequently, blockchain technologies may foster greater accountability and trust, allowing consumers to make more informed choices and supporting genuinely sustainable business practices (Sestino et al., 2022).

This study is poised to serve as a valuable resource for individuals seeking to understand and manage the intricate phenomenon of sustainability and greenwashing. By addressing the triad of focal actors—businesses, consumers, and society—this research offers a robust framework for policymakers aiming to safeguard societal interests and promote sustainable development from both legal and human perspectives.

In contemporary settings, consumers exhibit growing concerns regarding the sustainability of corporate practices, often struggling to differentiate genuinely green companies from those engaging in deceptive practices designed to appear environmentally friendly. This issue is particularly pronounced in industries characterized by rapid business models and extensive supply chains, such as fast fashion (e.g., as in (Akrout & Guercini, 2022), where sustainability is frequently not prioritized by governments and regulators in key production hubs.

4.3 Limitations

As for limitations, this article considers only English-language articles, potentially obscuring further contributions from other languages. Moreover, despite the use of the Latent Dirichlet Allocation (LDA) technique for analysis, the selection of the number of topics is subject to the individual work of the researchers involved and their co-interpretation (initially independent, subsequently collaborative) of the obtained results.

However, significance and utility of this study are underscored by its potential to inform stakeholders across various sectors. Notably, while some companies actively pursue greenwashing strategies, there are also firms genuinely aspiring to adopt sustainable practices but lacking practical knowledge and guidance. For these firms, understanding the practical implications of sustainability on brand management and brand value is crucial.

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