

Greenwashing and its Consequences in Brand Equity: A Systematic Bibliometric Review

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Abstract

Background: Greenwashing has been increasingly popular in recent decades. Companies have used eco-friendly marketing approaches to convey their environmental initiatives, aiming to enrich their competitive advantage and attract consumers with ecological awareness. However, there is still a need for extensive and rigorous study, particularly on the emergence of this phenomena and its consequences on brand equity.

Objectives: To identify the existing studies on greenwashing, noting gaps and recommending future study opportunities.

Methods: The bibliometric study includes 576 items from the “Web of Science” database and “VOSviewer” software was used for analysis. Literature review is based on 12 papers that are highly significant to the study.

Results: Analyzing the latest research, this study identifies gaps that can guide future investigations. Potential avenues for further exploration include the influence of greenwashing on consumer buying intentions, attitudes, online business, stakeholders, and cross-cultural aspects.

Conclusion: In summary, this study highlights the damaging effects of greenwashing practices on organizations’ brands and images. By analyzing past, present, and future research areas, it underscores the importance of raising awareness to reduce greenwashing acts. Overall, this study helps to better understand the implications of deceptive environmental practices and advocates for greater accountability in promoting environmental responsibility.

Keywords: Brand, Ecofriendly, Equity, Greenwash, Marketing

JEL Classification: M00, P18, K32

Introduction

Since the inception of the ecological advocacy in the 1960s, apprehensions regarding environmental pollution and deterioration have consistently escalated (TerraChoice, 2010). Consumers are driven to embrace environmentally friendly consumption due to environmental concerns. Large corporations prioritize green practices to enhance consumer insights of their products, build community relations, and implement cost-effective sustainability measures. With the increased exposure of environmental preservation, a significant part of customers is interested to pay more money for items that are ecologically friendly or classified as “green” (Chen, 2007). Companies pursue the development of environmentally friendly products and brands for various reasons, such as; addressing market demands, venturing into new markets, enhancing product value, and cultivating progressive brand images and social responsibilities to garner social endorsement (Chen, 2010).

The term “greenwashing” originates from the concept of “whitewashing”, signifying a cover-up, and was created in 1986 by the conservationist Jay Westerveld (Bladt et al., 2023). Greenwashing refers to the practices used by certain firms to portray ecologically friendly manufacturing methods through claims, green-colored packaging, and nature-evoking visuals without actually demonstrating an environmental commitment. This condition poses a challenge to the creation of a market that is both ecologically and economically viable (Vangeli et al., 2023).

Scholarly investigations into greenwashing have acknowledged the adverse effects of such practices, particularly on brand reputation (Ahmad & Zhang, 2020). Thus, the literature has seen a substantial increase in attention towards greenwashing over the past 20 years, driven by emerging public concern regarding activities associated with greenwashing (Santos et al., 2023).

While academic interest in greenwashing has grown over the last decade, the available literature is still limited. The emphasis has mostly been on suspicion about all green products rather than studying reactions to individual companies (Nguyen et al., 2019; Xiao et al., 2021). There is excessive focus on the overall influence on the green marketing movement reduces worries for people that engage in greenwashing methods. Only when executives notice that it affects their individual brands, they will actively discard such approaches. This study also tries to investigate the impact of green washing on customers’ loyalty in order to address this issue (Xiao et al., 2022).

Review of Literature

Greenwashing practices are “a form of ‘creative reputation management’ in which businesses attempt to conceal misbehavior”(Akturan, 2018b). Greenwashing is commonly defined as “the act of deceiving consumers about a company’s environmental practices or the environmental benefits of a product or service.” (Dimitrieska et al., 2017). Many claims about being environmentally friendly often have issues known as the “seven sins of greenwashing.” These sins include not being transparent about trade-offs, lacking proof, using unclear language, relying on misleading labels, being irrelevant, choosing the lesser of two evils, and giving false information (TerraChoice, 2009). As per De Jong et al. (2019), even telling partial truths or half-lies doesn’t lessen the negative view people have about the reputation of companies involved in greenwashing. In summary, speaking a half-truth can be just as detrimental as saying the whole truth.

Greenwashing occurs mostly through communication channels, primarily advertising. There are two kinds of publicity found in the literature on green marketing: “Claim greenwashing” and “Executorial greenwashing”. Claim greenwashing is the use of ambiguous or debatable words, the creation of deceptive assertions, and the manipulation of claims to exclude critical facts (Kangun, Carlson & Grove, 1991).

Understanding the impacts of greenwash in advertising is currently lacking (Schmuck et al., 2018). Research which are conducted earlier indicates that, consumers form diverse opinions of greenwashing, influenced by both the nature of advertising claims and their level of environmental knowledge. Greenwashing has been demonstrated to have an adverse impact on attitudes toward environmentally friendly products (Delmas & Burbano, 2011), the assessments of brands and advertisement (Schmuck et al., 2018), and the financial performance of companies (Szabo & Webster, 2021). Greenwashing has had an injurious impact on perceived communicative truthfulness and consumer attitudes towards environmental advertising. Additionally, it has diminished the intention of consumers to revisit (Schmuck et al., 2018)

Farquhar (1989), defined brand equity as “the added value with which a given brand endows a product.” It generates a prolonged market superiority for businesses. Chen (2010) defines green trust as “a willingness to depend on a brand based on the belief or expectation resulting from its credibility, benevolence, and ability about its environmental performance”. Aaker (1991), defined Brand worth as “a set of brand assets and liabilities linked to a brand, its name and symbol, that add to or subtract from the value provided by a product or service to a firm and/or to that firm’s customers”. He also highlighted that in the realm of branding literature, Brand value is perceived as a multi-faceted concept encompassing elements such as brand awareness, brand loyalty, perceived quality, brand associations, and other unique assets. Chen (2010) defined green brand equity as “Gathering both favorable and unfavorable aspects linked to a brand’s environmental promises and issues, connected to its name and symbol, that either enhance or diminish the value provided by a product or service”.

Commencing the cultivation of brand equity begins with establishing brand awareness. This occurs as consumers come across elements related to the brand, resulting in recognition and recall, thereby establishing awareness. Another essential aspect is brand loyalty, signifying a steadfast commitment to consistently repurchase a brand, thus creating resistance to competitors. Another facet of brand equity involves building associations, which are impressions stored in the consumer’s memory and can range from positive to negative. This third aspect of equity highlights the importance of these mental connections in shaping perceptions. The fourth dimension is perceived quality, determined by the customer’s evaluation of the overall superiority or excellence of a product or brand (Zeithaml, 1988).

Green brands elicit pleasant feelings, and customers who feel good about purchasing environmentally friendly items are more likely to embrace a “green” lifestyle. Greenwashing, on the other hand, has a detrimental influence on customer perceptions and actions, generating green uncertainty and increasing perceived risks (Chen & Chang, 2013; Lin et al., 2017a). Findings indicate that misleading greenwashing concerning specific products has the most pronounced adverse impact on brand attitude (Bladt et al., 2023).

Greenwashing refers to the act of promoting inaccurate or deceptive assertions about the eco-friendliness of products or businesses in advertising. This may cause consumers to question the veracity of these green statements, thereby undermining the ecological brand’s good image. (Lin et al., 2017b). In the time when people care a lot about the environment, how much someone cares about the environment can affect whether

they stay loyal to eco-friendly brands (Chen & Chang, 2013). Since there is a lot of false environmental advertising out there (greenwash), it can make people less loyal to eco-friendly brands if they can't tell if the environmental claims are true.

The study conducted by Akturan (2018), explores how the concepts of greenwashing, equity, credibility, associations, and purchase intention are interconnected. The study looks at two brands, one very involved in environmental issues and one less involved. The results show that positive associations with eco-friendly branding and having a trustworthy brand have a good impact on value, which, in turn, strongly influences consumers' intention. On the other hand, greenwashing has a negative impression on eco-friendly brand associations and credibility, indirectly affecting both value and the plan to purchase (Akturan, 2018b).

Different misleading practices has diverse nature of impact on the brand equity. A research study explored how different greenwashing practices affect how consumers feel about brands. The study created a classification system with six types of greenwashing based on the type of claim and where it originates. They surveyed 315 people in Germany and found that people reacted differently to each type of greenwashing. The study highlights the need to recognize and understand various forms of greenwashing to better address how consumers perceive the issue (Bladt et al., 2023a).

Research explores how misleading green marketing by companies affects the eco-friendly buying choices of Taiwanese consumers. Using structural equation modeling, the study found that greenwashing negatively impacts consumers' eco-friendly purchasing behavior. The research also revealed a connection between greenwashing, consumers' insights of the company's environmental efforts, and loyalty to eco-friendly brands. Both the company's green image and consumer loyalty play a vital role in lessening the unfavorable outcomes of eco-deception on eco-friendly buying behavior (Chen et al., 2020).

This study on environmental airline advertising found that concrete compensation claims don't raise suspicions unless consumers have high environmental knowledge. When identified, greenwashing in these claims negatively affects brand evaluations and contributes to "flight shame (Neureiter & Matthes, 2023). Companies must eliminate greenwashing and ensure customers receive appropriate information to diminish skepticism about the environmental claims made by the company in order to boost brand image, consumer loyalty, and purchasing behavior (Hoedeman, 2002).

To remain competitive, Chinese energy businesses are resorting to green marketing tactics, but the risk of greenwashing is losing confidence. Using an institutional approach, study of Guo et al. (2017), examines how the deviation of energy brands from eco-friendly commitments influences trust in green energy, while also factoring in credibility and customer loyalty. The study underlines the significance of green brand sincerity as a mediator in the trust rebuilding process. Thus, association between greenwashing and the green brand needs further clarification and deeper understanding (Pimonenko et al., 2020).

Numerous theoretical methods have been employed, but researchers have usually linked greenwashing to its influence on brand equity, using eight theories. Decoupling of Institutional Theory (Guo et al., 2018; Meyer & Rowan, 1977; Beverland & Luxton, 2005), Schema Incongruity Processing Theory (Goodstein, 1993), Construal Level Theory (Trope & Liberman, 2010), Theory of Psychological Reactance, Theory of Psychological Distance (Trope & Liberman, 2010) consumer theory (Policarpo et al., 2023), Schema Incongruity Processing Theory (Clark & Fiske, 2014), Human Association Memory theory (Anderson et al., 1998; Keller, 1993), Adaptive network model (Janiszewski & Van Osselaer, 2000; Van Osselaer &

Alba, 2000). The majority of research studies embrace the institutional theory. According to this theory, businesses are intricately connected to various social systems. The operational endeavors of enterprises are required to align with existing social systems, which encompass the regulations, standards, and guidelines governing business activities (Zhu, 2016).

Materials and Methods

Among the various online databases, Web of Science (WoS) is used in this study because it is globally considered as one of the most reliable, trustworthy and strong databases. The primary and vast dataset, which included 576 publications, was subjected to bibliometric study to determine the most significant studies in the field of greenwashing. Concurrently, datasets of 12 articles were chosen for the review process to study the relationship of greenwashing and brand, which aligned with the goals of this investigation. Moreover, these 12 reviewed articles served the dual purpose of identifying knowledge gaps and delineating opportunities for future investigations. Each phase of the review process in systematic way are visually presented in Figure 1.

To comprehensively gauge the extent of literature referencing the term “greenwashing,” a Topic search employing the term “Greenwash OR Greenwashing” was conducted, yielding 576 articles. In the course of this search, a Boolean Proximity search strategy was applied to identify words closely associated with greenwashing (i.e., “greenwashing”, “greenwash”). Subsequently, to refine the focus in alignment with our research objectives, quantity of documents was delimited based on criteria such as type, citation databases, date range, languages used, and groups. The omission criteria and assortment strategy are illuminated in the flow chart figure, as depicted in Figure 1.

The researcher examined all articles related to “greenwashing” to monitor how the term is used in academic literature. Web of Science database was used to provide statistics on research productivity (Birkle et al., 2020), including the historical development of publications, key articles published to date, journals where they were available, and the articles cited frequently. Moreover, researcher employed “VOSviewer software” for a bibliometric mapping approach to analyze patterns and pinpoint key topics in the area of greenwashing (Van Eck & Waltman, 2014).

VOSviewer software allows the generation and visualization of maps, considering co-citations of authors or journals, as well as bibliometric networks involving citation, co-citation, co-authorship, bibliographic coupling, and other factors. This tool is highly beneficial for presenting extensive bibliometric maps in a user-friendly and understandable manner (Van Eck & Waltman, 2014). We used supplemental filtering techniques to create a link between greenwashing and its consequence on brand equity, as well as to preserve the correctness of our study. (Santos et al., 2023).

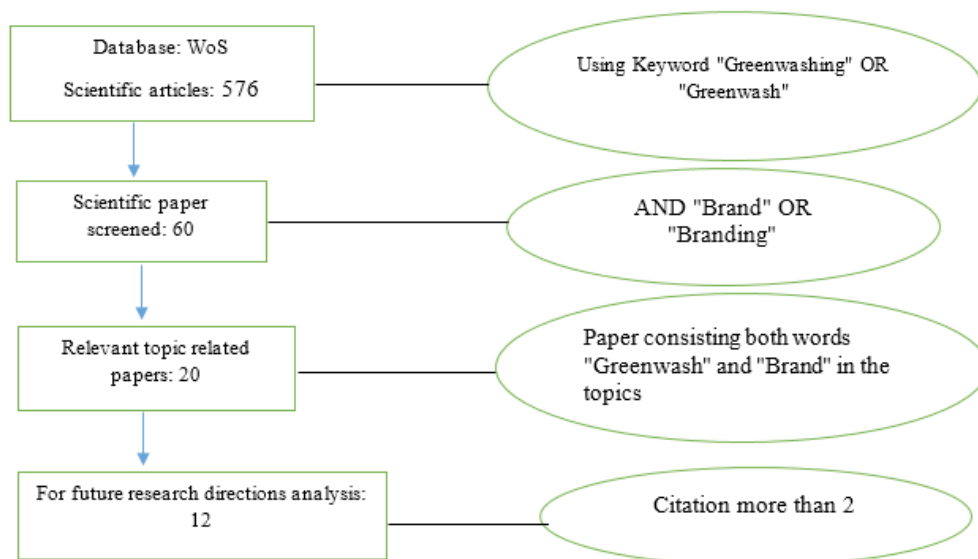
The study identified relevant records in the WoS core collection on December 19, 2023. Researcher used a Topic search with the term “greenwash*” and found 576 articles. To emphasis on the effect of greenwashing on brand equity, unrelated articles using terms like “Brand” were filtered out and excluded 516 documents. After further screening, 12 articles fulfilled review criteria and were incorporated in the study.

Result and Discussion

Based on the above research methodology, the following results are presented.

Figure 1

Flowchart of identifying relevant papers for future research direction.

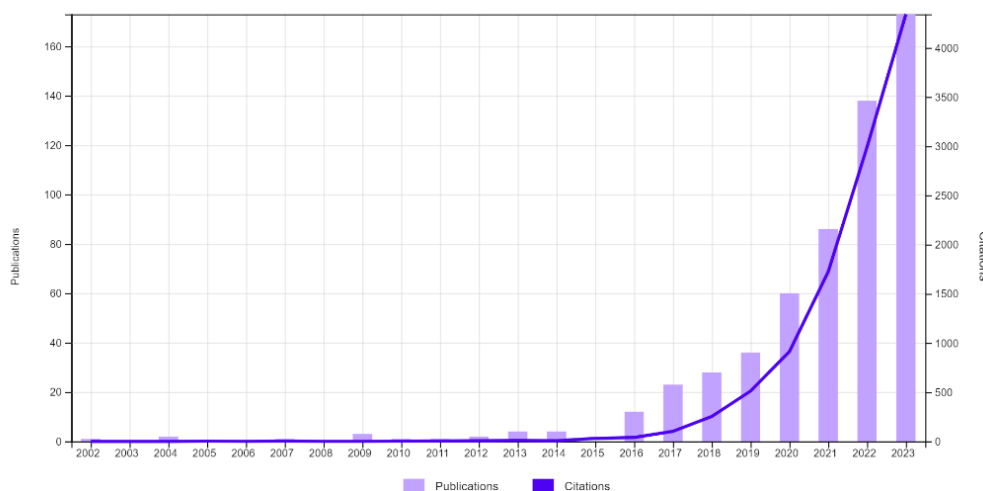


Bibliometric Analysis

The graph in Figure 1 depicts the development of articles on “Greenwashing” and yearly citations. The initial document was published in 2002, in Scientific American Journal, entitled “Greenwashing the car”. The trend in the map represents three different stages of growth in study related to “Greenwashing” i.e. 2002 to 2013, 2012 to 2017 and 2017 to 2023. In the first stage there is minimum number of publications as well as citations. However, in the figure we can see, after 2012 a minimal raise in the number of publications till 2017. An increasing rate of growth in speedy way occurred after 2017 to 2023. The publication form 21 (Approx.) inclined to 170 (Approx.) within 7 years’ time interval. This growth trend man represented the increasing concerns regarding the greenwashing behavior, environment concern, sustainability and public health.

Figure 2

The growing trends of greenwashing articles and yearly citations.



According to the WoS Science core collection, within the uppermost ten nations, the People’s Republic of

China emerges as the foremost prolific nation, contributing 129 articles accompanied by 1698 citations. Following closely are the USA and England with 98 and 67 articles, respectively. Predominantly, the research endeavors are concentrated in advanced economies, underscoring a dearth of investigative efforts in developing nations. Some publications manifest collaborative efforts with multiple countries, and these collaborative clusters are visually represented in the accompanying figure. The hierarchical positioning of nodes in Figure 3 is indicative of the volume of articles originating from each country, with the node corresponding to China occupying a notably prominent position, substantiating its status as the most prolific nation.

Furthermore, the alliances among academics from distinct nations are quantified with the inter-node distances. Consequently, five principal co-authorship clusters between nations are discernible. The first cluster (denoted in red) encompasses England, Spain, Canada, Italy, and France. The second cluster (in green) comprises the United States, Germany, and the Netherlands. The third cluster (in blue) incorporates China, Australia, and India. The fourth cluster (in purple) includes France, Spain, Canada, Italy, and Germany. The fifth cluster (in orange) includes USA, Canada, England, Italy, and Germany.

Figure 3

Co-authorship from countries

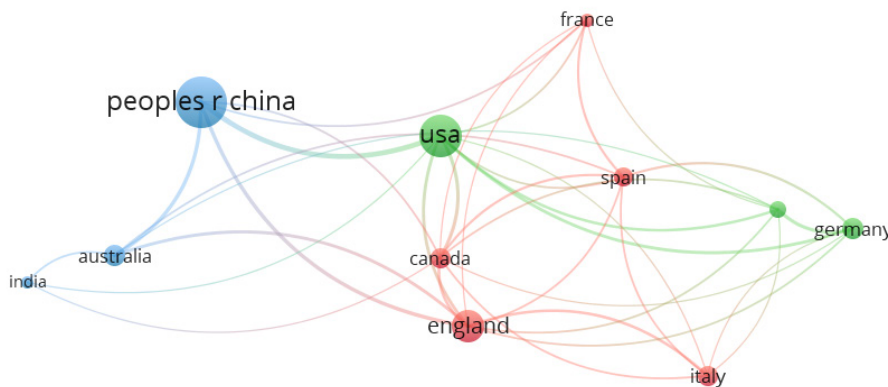


Table 1

Top 11 Countries with articles featuring greenwashing

Country	Documents	Citations	Total link strength
Peoples R China	129	1698	31
USA	98	2730	39
England	67	1353	32
Australia	37	613	17
Germany	37	522	18
Italy	36	1091	11
Canada	35	921	22
Spain	33	473	17
Netherlands	27	468	17
France	21	571	10
India	17	336	4

The information presented in Table 2 underscores a significant emphasis on exploring greenwashing within Environmental Sciences and Ecology, reflected by a notable total of 289 documents. Next, there is a notable concentration of studies in Business Economics, numbering 237, and Science, Technology,

and other Topics, with 157 documents. However, it is evident that certain fields, including Engineering, Social Science, Communication, Government Law, Energy, Geography, and Public Administration, exhibit a comparatively lower volume of research in the context of greenwash. This suggests a potential gap in the exploration of greenwashing practices within these disciplines, warranting further attention and investigation.

Table 2

Top 10 research areas regarding the concept of “Greenwash”

Research Areas	Record Count
Environmental Sciences Ecology	289
Business Economics	237
Science Technology Other Topics	152
Engineering	61
Social Sciences Other Topics	44
Communication	25
Government Law	21
Energy Fuels	16
Geography	16
Public Administration	14

Among 259 references, 33 journal articles gathered more than 50 references, with only 16 journals surpassing 100 references. In table 3, the topmost 10 journals, contributing extensively to the greenwashing literature, are visually represented. Although 576 articles were spread across 171 sources, a significant portion is concentrated in key journals. Notably, 36.2% of all recognized articles found their place in the top 10 journals, with the top 4 journals hosting around 26% of the cited articles. This underscores their particular significance in the realm of greenwashing research. Sustainability stands out as the most impactful research journal, boasting 61 publications on the subject, while Business Strategy and the Environment lags behind with only 35 publications.

Table 3

Top 10 journals with larger number of articles featuring greenwashing.

Publication Titles	Documents	Citations
Sustainability	61	518
Business strategy and the environment	35	925
Journal of cleaner production	33	1396
CSR and environmental management	19	348
Journal of business ethics	15	1083
Environment development and sustainability	10	81
Business ethics the environment responsibility	9	7
Energy economics	9	85
Environmental science and pollution research	9	38
Finance research letters	9	56

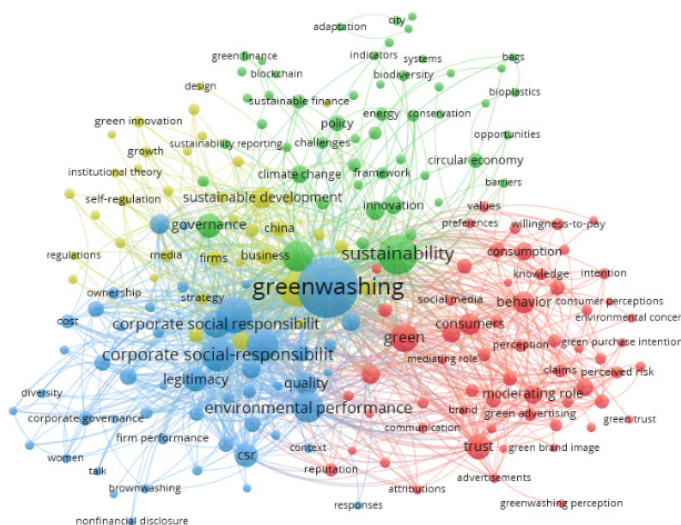
The study looked at 2,786 different keywords, and we found that 201 of them showed up at least 5 times. By checking these words, we discovered important topics and trends in research. The goal was to figure

out what subjects are popular and how keyword trends change over time, using a tool called VOSviewer. We used a method called “full counting” and found three main words: greenwashing, Consumer, and Sustainability. Each of these words represents a cluster or group of related keywords.

In Figure 4 we can see four color-coded groups. The red group (Cluster 1) is about the results of greenwashing, including terms like brand, knowledge, environmental concern, trust, and green advertising. This cluster shows what people are most concerned about regarding greenwashing. The green group (Cluster 2) is about the areas where studies on greenwashing happened, like Circular economy, energy consumption, health, innovation, and climate change. It tells us where researchers focused their studies. The blue and yellow groups (Clusters 3 and 4) are about different ways to visualize networks and connections in the research. They help us understand how things are related in the studies.

Figure 4

Keywords Visualization



Conclusion and Suggestions

The recent research landscape on greenwashing and its impact on brand equity reveals significant insights and future research possibilities. A review of 12 articles from 2018 to 2023 highlights several gaps and suggests recommendations for future studies. Most reviewed studies were cross-sectional, indicating a need for longitudinal, multicultural, and multinational research. Key areas for future investigation include understanding the impacts of greenwashing on different stakeholders, exploring consumer purchasing behavior influenced by greenwashing, image, and loyalty, and examining online consumer behavior and engagement with greenwashed products on various social media platforms.

Akturan (2018) suggests studying the interplay between brand loyalty and greenwashing. Topal et al. (2020) examined online consumer engagement with greenwashed products on Facebook, recommending expanding to other platforms and methodologies. Xiao et al. (2022) emphasize breaking down greenwashing into different dimensions to understand their distinct effects on customer reactions. Ha et al. (2022) identified the association between greenwashing and brand, considering mediating factors like image, satisfaction, and trust. They suggest examining greenwashing through perceived risk philosophy and consumer loyalty for more comprehensive insights.

Many authors, like (Policarpo et al., 2023; Neureiter & Matthes, 2023; Chen et al., 2020; Ha et al., 2022; TerraChoice, 2009; Xiao et al., 2022), propose various methods and tools. Additionally, Guo et al. (2017 and Neureiter et al. (2023) present different viewpoints, while Neureiter et al. (2023), Neureiter and Matthes (2023) and Topal et al. (2020) suggest using different scales. Some researchers, such as (Chen et al., 2020; Ha et al., 2022; Xiao et al., 2022) emphasize the importance of collecting data over an extended period.

Like any bibliometric analysis or literature review, this study has certain limitations. Firstly, documents were collected on a particular day from a single databank Web of Science. While WoS is trustworthy (Saleem et al., 2021). The researcher acknowledges the potential omission of relevant papers indexed in other databases, such as Scopus. Consulting additional databases could mitigate data bias and enhance the understanding of greenwashing research. Secondly, the study focuses solely on journal articles, excluding other works like book chapters and proceedings papers. While journal articles undergo peer review, it's essential to note this limitation. Thirdly, the literature review considered the total numerical figure of citations and only the articles published during last five years, potentially overlooking the actual standard of documents. Despite this, prioritizing citations provides a better measure of an author's impact and influence.

Numerous prior studies, bibliometric analyses, and logical reviews have examined greenwashing, yet they lack a comprehensive study of its effect on brand equity. This study addresses this gap, offering a detailed examination and expanding our understanding of the subject. It supplements the established findings by offering insights on the present state of research, highlighting trends, gaps, and future study possibilities.

This study offers three key additions by conducting a bibliometric analysis of papers on greenwashing published up to 2023 and a more concentrated evaluation of literature on the effect of deceptive environmental claims on organizational value over the past five years. Firstly, it traces the evolution of greenwashing literature, highlighting its growing relevance and novelty as a research topic. The increasing number of published articles suggests the potential for further exploration in various fields. Additionally, the study identifies leading journals, prolific authors, and key articles, shedding light on the contributors and disseminators of knowledge in greenwashing research. Notably, it uncovers a recent trend in investigating greenwashing outcomes.

The utilization of VOSviewer software enables the visualization of co-occurrences of keywords, unveiling hotspots and trends crucial for understanding advancements in the field (Liu et al., 2021). The review of literature, specifically focusing on articles linking greenwashing to brand equity, reveals that the Decoupling of Institutional Theory is a widely used theoretical approach, with past investigations primarily relying on surveys.

Moreover, previous studied literature states that greenwashing practices have detrimental effects on customers, brands, and brand loyalty. This study, by analyzing the latest research, identifies gaps that can guide future investigations. Potential avenues for further exploration include the influence of greenwashing on consumer buying intentions, attitudes, online business, stakeholders, and cross-cultural aspects.

The primary contribution of this study lies in identifying and analyzing past, present, and future research areas. Importantly, it emphasizes that deceptive environmental claims harm the brand and image of any organization, raising awareness about the damaging effects and potentially reducing the frequency of such acts.

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