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GREENWASHING IN CORPORATE SOCIAL RESPONSIBILITY: BIBLIOMETRIC ANALISIS

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Purpose: The aim of the research conducted was to identify the main research areas in scientific articles addressing greenwashing in corporate social responsibility and to present the most current areas of research in this area.

Design/methodology/approach: The study was conducted between August and December 2024. Scientific articles from the Scopus database were submitted for analysis. They were selected according to bibliometric query Q1. Based on the established criteria, 149 scientific articles were identified. These articles were analysed according to author keywords using the VOSviewer software, which was helpful to generate bibliometric maps. The study also conducted a systematic literature review of scientific publications that addressed the issue of greenwashing in corporate social responsibility.

Findings: We identified 11 author keywords most frequently used in the analysed publications. The analysis allowed us to see that the most topical areas of research in greenwashing in corporate social responsibility are ESG and corporate governance.

Research limitations/implications: Among the limitations of the study conducted, two factors can be mentioned. The first factor limiting the present study is the choice of a single database, which is the Scopus database. The bibliometric query Q1 constructed in the first stage of the research considerations undertaken can be considered the second limiting factor of the study. However, the analyses carried out in this article confirmed the validity of the choice of the Scopus database, as the articles selected for the study did not include studies prepared on the basis of the Scopus database alone. Constructed in this way, the study allows for expert planning of future research, with a focus on replicating this study in the future to verify new research areas.

Originality/value: The study carried out in this article is unique from those conducted to date, as confirmed by the Q1 bibliometric query constructed. The analysis identified the most up-to-date areas of research linking greenwashing and corporate social responsibility, as well as important future research directions, such as addressing the issue of green blockchain. In the authors' opinion, the article can be an inspiration for other researchers and those interested in the issues of greenwashing and corporate social responsibility.

Keywords: greenwashing, corporate social responsibility, green blockchain, green organization, sustainable development.

Category of the paper: Literature review.

1. Introduction

The rise in popularity of corporate social responsibility (CSR) means that companies often use CSR as a marketing ploy (Wu et al., 2020) using sometimes unsubstantiated or misleading claims about environmental and social attributes to create themselves as an environmentally friendly company (Aggarwal, Kadyan, 2011). This practice occurs both in the regulated commercial sphere and in the unregulated non-commercial sphere i.e. governments, NGO partnerships, or international declarations and commitments (Nemes et al., 2022). The practice described is referred to as greenwashing, and organisations that link poor environmental performance to positive communication about their environmental performance are greenwashing organisations (Delmas, Burbano, 2011).

The phenomenon of greenwashing is discussed by researchers in a wide range of areas. Although the problem is discussed in the context of, for example, promoting an organisation's social status, building relationships with consumers and employees or achieving short-term profits. Greenwashing, however, leads to the deliberate avoidance of changes to reduce negative environmental impacts (Nemes et al., 2022). The systematic adoption of greenwashing practices increases customer scepticism and reduces trust in a company's corporate social responsibility intentions (Santos, Coelho, Cancela, 2024) at the same time as preventing consumers from making informed purchasing decisions. This aspect is already recognised in various studies on the issue of consumers operating in an economy that is undergoing a green transition (Paduszyńska, Kozar, 2024).

This article undertook two research objectives. One objective referred to the presentation of the main research areas addressing greenwashing and corporate social responsibility simultaneously. The second objective concerned the identification of future research directions in the field of the addressed issues. To fully realise the objectives set, a systematic literature review (SLR) was conducted in this study. The Scopus database was selected for analysis. Articles were selected according to the constructed bibliometric query Q1. The VOSviewer software (version 1.6.20) was used to present the results graphically. This programme is used by numerous researchers to map bibliometric data (Kozar, Bolimowski, 2024b; Kozar, Wodnicka, 2024; Nuraisiah et al., 2024).

The article contains four parts: introduction, material and method, result and discussion, conclusion. The introduction of this paper justifies the choice of topic and presents the purpose of the research and the research methods. Using the literature on the subject, the issue of greenwashing and its importance in corporate social responsibility is presented. The timeline of the research work carried out is described in the second section on research material and methods. The Q1 bibliometric query, according to which articles were selected for analysis, was also presented and the VOSviewer software, which was used to generate bibliometric maps, was described. The next section provides a discussion based on the results obtained. The final section of this article provides conclusions.

2. Material and Method

The research described in this article was carried out in the period August - December 2024. Three research stages were adopted, which served the research objective outlined in the introduction. Each stage was assigned specific research activities and a time period for their implementation (Figure 1).

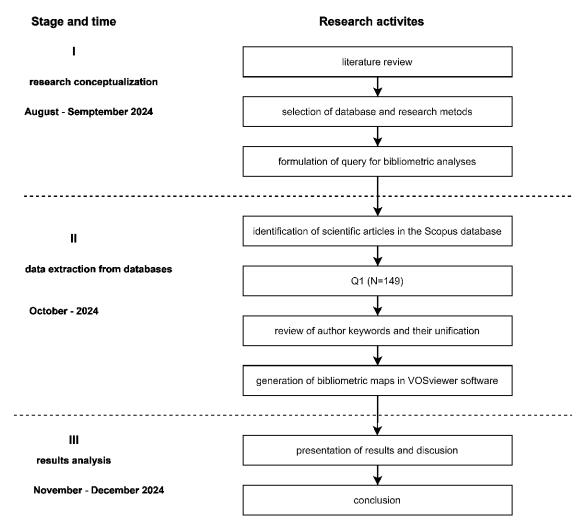


Figure 1. Research procedure stages and timeline.

Source: authors' elaboration.

The research considerations started with the conceptualisation of the study. This stage was oriented towards a general literature review on the issue of greenwashing in corporate social responsibility. The sources analysed were mainly from the Scopus database and Google Scholar. The analysis of selected publications made it possible to perceive an increased interest among researchers in the topic of greenwashing (Kozar, Bolimowski, 2024a; Santos, Coelho, Marques, 2024; Wodnicka, 2023). Accordingly, a research objective has been set for this article, which is to identify the key research areas undertaken by researchers in the field of the issues covered in the title of this paper. At this stage, research methods and tools were also identified

(bibliometric analysis, SLR method, VOSviewer software were selected). The next step was to select the database and define the variables for the bibliometric query Q1, which are presented in Table 1. The choice of the Scopus database was intentional, as it is considered by researchers to be a reliable source of scientific information for bibliometric analyses (Ben Youssef, Mejri, 2023; Kozar, 2024; Wodnicka, 2024).

Table 1.

Symbol	Query syntax	No. Results in the Scopus
Q1	TITLE-ABS-KEY (greenwashing AND ("Corporate Social Responsibility" OR csr)) AND PUBYEAR > 2002 AND PUBYEAR < 2024 AND (LIMIT-TO (SRCTYPE, "j") OR LIMIT-TO (SRCTYPE, "p")) AND (LIMIT-TO (PUBSTAGE, "final")) AND (LIMIT-TO (DOCTYPE , "re") OR LIMIT-TO (DOCTYPE, "ar") OR LIMIT-TO (DOCTYPE, "cp")) AND (LIMIT-TO (LANGUAGE, "English"))	149

Source: Authors' elaboration.

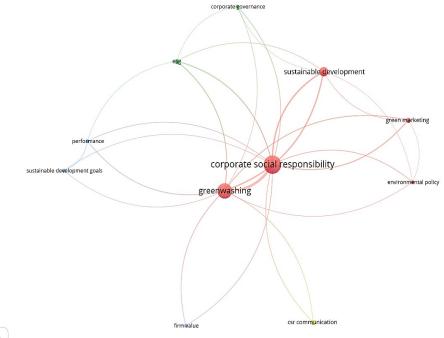
The review of the Scopus database according to bibliometric query Q1 used covered articles in English published between 2003 and the end of 2023. The review consisted of verifying titles, abstracts and keywords in all identified articles that referred to greenwashing and corporate social responsiveness. Criteria for extracting scientific publications from the Scopus database presented table 2. Based on the criteria adopted, 149 scientific articles were identified and further analysed using the VOSviewer software. The functionality of this software allows bibliometric maps to be graphically represented in an easily interpretable way (van Eck, Waltman, 2010).

These analyses were carried out in the next stage of the research. As a result, 470 author keywords were obtained. The resulting words were subjected to a unification procedure due to their different spelling forms. Spelling unification was carried out for the author keywords by selecting one variety of English. For keywords that occurred in both the plural and singular number, one of the numbers (plural or singular for the author word) was used. When identifying author keywords, the full name of the author word in question was used for some of them or linguistic errors were eliminated.

Further analyses were conducted on the basis of 124 author keywords, as alignment was done for 25 keywords. The generated new keywords in csv format were used to create bibliometric maps, which were generated using software VOSviewer (1.6.20 version). The co-occurrence, author keywords and full counting options were used when generating the maps. They were also re-checked at the verity selected keywords step, which did not exclude any author keywords. In the third stage of the research, the results were analysed on the basis of the obtained results.

3. Results and discussion

In this part of the article, three bibliometric maps were generated according to the research steps presented above and the assumed criteria. Their visualisations are graphically presented in Figure 2, Figure 3 and Figure 4. In the choose threshold panel, the minimum number of co-occurrences of author keywords proposed by software VOSviewer was set at 5. This criterion was met by 11 author keywords. Their visualisation on the bibliometric map is presented in Figure 2, where each keyword is indicated by the colour of the cluster to which it was assigned.



A VOSviewer

Figure 2. Author keywords co-occurrences in full counting method of Q1 results. Source: authors' elaboration in VOSviewer software (1.6.20 version).

The co-occurrence analysis of the identified author keywords most frequently used in the analysed publications is also presented as quantitative bibliometric data (Table 2). In the analysed articles, the most frequent author keywords are those contained in the red cluster and include corporate social responsibility (O = 101), greenwashing (O = 74), sustainable development (O = 27).

	Composition of keyword clusters by links, total link strength, co-occurrences				
Cluster	Autor's Keywords	Links (L)	Total Link strength (TLS)	Co-occurrences (O)	
Red	corporate social responsibility	10	110	101	
	environmental policy	4	8	5	
	green marketing	4	17	8	
	greenwashing	10	100	74	
	sustainable development	6	42	27	
Green	corporate governance	4	8	5	
	ESG	5	19	8	
Blue	performance	4	10	5	
	sustainable development goals	3	6	5	
Yellow	CSR communication	2	7	8	
Purple	firm value	2	9	5	

Table 2.Cluster of author's keywords visible in Figure 2

Source: Authors' elaboration.

Another bibliometric map was generated to highlight the author keyword greenwashing (Figure 3). The analysis allowed us to see that this word co-occurred with other listed author keywords.

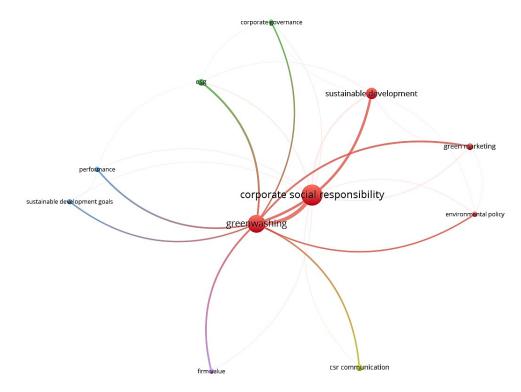


Figure 3. Keyword "greenwashing" relations with other keywords.

Source: authors' elaboration in VOSviewer software (1.6.20 version).

A further bibliometric map (Figure 4) was generated to complement the analysis and to show the changes over time in the research undertaken on the topic under discussion. This action was taken to indicate the most recent areas of research. These areas are marked in light colour.

As can be seen from the presented bibliometric overlay map generated using VOSviewer, one of the new areas of research linking greenwashing and corporate social responsibility is corporate governance. This research targets corporate governance and its relevance in terms of creating stakeholder value through improved environmental practices (Velte, 2023) and engaging in community projects (Choi, Hong, 2022). Researchers emphasise that different corporate governance mechanisms such as, for example, board of directors, ownership structure, and shareholders should be analysed to examine their impact on companies' environmental disclosure and prevention of greenwashing (Pinheiro et al., 2023).

Another new issue raised in the articles analysed is ESG. The attention of researchers to this area is due to several arguments. One is the growing interest in Environmental, Social and Corporate Governance (ESG) in business, mainly in ESG-based investments (Kim, Lee, 2023). In addition to this, the academic research undertaken in this area and the results obtained are expected to allow all those interested in this topic to better understand the complexity of corporate ESG aspects particularly in terms of the complexity of ESG measurement (Jámbor, Zanócz, 2023). As highlighted by researchers, ESG risks are more challenging than traditional risks known and established in risk management (Frank et al., 2021) hence the need to identify them.

The last most recent area of research identified in the bibliometric map is sustainable development goals. This area addresses the development of environmental reporting and corporate social responsibility highlighting the measurement and provision of information to support the achievement of sustainability (Wilson, 2021). It raises issues of greenwashing and the need for transparency across value chains (Thakker, Sun, 2023). According to the researchers, this is an area that requires research and the development of a model for assessing corporate social responsibility with sustainable development goals in mind (Lu et al., 2021). According to the researchers, the rationale for conducting research in this area is the existence of a large number of methodologies and indicators for environmental reporting and corporate social responsibility used by companies. This results in a lack of full transparency and gives difficulties in comparing companies and the inability to compare corporate social responsibility between industries or countries (Lu et al., 2021), and sometimes supports and gives positive results in greenwashing (Wilson, 2021).

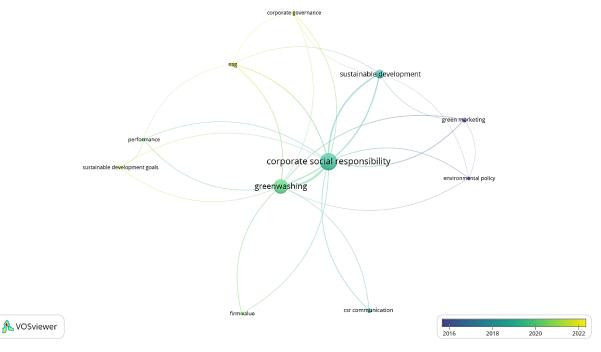


Figure 4. Overlay map of the author's keywords co-occurrences. Source: authors' elaboration in VOSviewer software (1.6.20 version).

An analysis of the articles shown in this bibliometric study showed that some of them presented results from bibliometric studies. These studies were conducted using data from the Web of Science database (Montero-Navarro et al., 2021; Nyantakyi et al., 2023; Wang, Ma et al., 2023) or from a combination of this database and the Scopus database (Jámbor, Zanócz, 2023; Vangeli et al., 2023; Ziabina, Dzwigol-Barosz, 2022). A study was also identified, which was a literature review based on articles published in a number of databases, i.e. ScienceDirect, Emerald Insight, SpringerLink and Web of Science (Yang et al., 2020). To demonstrate the research differences between this article and the articles taken for the study, the content of the bibliometric queries prepared by the researchers in their research articles was analysed. In some of the research papers, it can be observed that the researchers omitted the word corporate social responsibility in their bibliometric queries using only the word greenwashing itself (Vangeli et al., 2023; Yang et al., 2020) or in addition to the word greenwashing they used various other forms of it (Montero-Navarro et al., 2021; Wang, Ma et al., 2023). An article was also identified where the biliterate query omitted the word greenwashing and used the word corporate social responsibility combining it with the word green brand (Ziabina, Dzwigol-Barosz, 2022). Among the articles analysed were also those where the authors did not use the words greenwashing and corporate social responsibility in the bibliometric query (Jámbor, Zanócz, 2023; Nyantakyi et al., 2023). Hence, the presented study is distinguished not only by the choice of database, which is the Scopus database, but also by the content of the bibliometric query. This allowed for a new quality of data presented in the bibliometric maps.

Corporate social responsibility and greenwashing have been an area of interest among researchers for several decades. Mainly, research on greenwashing is widespread in developed countries (Ioannou et al., 2023). Initial studies highlighted public and political concerns about the environment, which have raised the profile of corporate social responsibility (CSR) among companies (Watson, Mackay, 2003), and the prevailing lack of an agreed international system of environmental accounting reporting, which may consequently encourage greenwashing (Delmas, Burbano, 2011). Despite the passage of many years, this problem is still relevant.

In their studies, the authors undertake analyses of this issue from different perspectives. They consider the phenomenon of greenwashing, for example, from the point of view of consumers (Delmas, Burbano, 2011), employees (Mu, Lee, 2023; Robertson et al., 2023), the role of management in the relationship between greenwashing and firm value (Chen, Dagestani, 2023), financial management (Gregory, 2023) or investment decisions (Gregory, 2023). It is also possible to note analyses on the 'collaborative management of greenwashing' where researchers emphasise its non-existence (Wang, Ma et al., 2023; Wang, Sun et al., 2023). They acknowledged the validity of collaboration among multiple stakeholders participating in the market i.e. government, businesses, media, non-profit organisations and citizens to share information on corporate social responsibility. They highlighted that many actors participate in the management of greenwashing individually without information sharing and collaboration, which translates into ineffective management of the phenomenon in question (Wang, Sun et al., 2023). Encouraging actors to participate in the management of greenwashing at both macro and micro levels will create a good culture of honest and trustworthy low-carbon consumption throughout society (Wang, Ma et al., 2023).

According to the analysis, transnational corporations could use their finances, manpower, production infrastructure or logistical expertise to play a key role in corporate social responsibility and sustainability, but greater rigour, consistency, transparency in their disclosure of data related to environmental performance is required (Lamont et al., 2023). Also, sustainability indicators that would support the market's function of embracing corporate social responsibility as part of corporate performance are currently unavailable in a form that would be credible and could hold companies accountable for poor performance or use of greenwashing (Tsagas, 2020).

4. Conclusion

This article demonstrates that the stated aim of the research, which was to identify the main research areas undertaken by researchers in the issues identified in the title of this study and to identify the most topical issues emerging in recent studies, has been achieved. Eleven research areas most frequently addressed in scholarly articles were identified, including the three most recent (corporate governance, ESG, sustainability development goals).

Nowadays, more and more companies are prioritising CSR by embedding it in their operational strategies, but due to two factors, i.e. corporate legitimacy and stakeholder pressure to be green, they are taking steps towards using greenwashing (Mu, Lee, 2023). Researchers have concluded that multinational corporations tend to disregard corporate social responsibility when it is convenient for them and then use greenwashing for their strategic benefit (Reza, Du Plessis, 2022). Despite this, greenwashing is perceived as a phenomenon that harms society, even when it benefits various stakeholder groups (Yang et al., 2020).

Undoubtedly, the study carried out shows that the problem of greenwashing in the context of social responsibility requires constant attention and ongoing research to find long-term and effective solutions to reduce or eliminate this phenomenon at both the macro and micro level. In this context, new technologies, including green blockchain, allowing for reliable reporting of information related to pro-environmental activities, are an interesting direction for future research and scientific considerations in the field of greenwashing and corporate social responsibility, particularly in the area of reliability of presented data.

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