Systematic Literature Review: Greenwashing and its Impacts on Sustainability and Corporate Practices

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Abstract

This systematic literature review aims to analyze 16 academic articles that discuss the phenomenon of greenwashing, specifically its mechanisms, impacts, and mitigation strategies. The study uses a systematic literature review method based on the Published or Perish application tool. The results show that greenwashing, although often a short-term financial performance enhancer, can undermine long-term stakeholder trust and environmental goals. Key themes found include the role of corporate governance, stakeholder legitimacy, and regulatory intervention in moderating greenwashing. Emerging technologies such as blockchain and green finance are also discussed as mechanisms to counter deceptive environmental claims. The review highlights the persistent challenges of greenwashing in achieving sustainability and proposes an integrated framework for research and policy direction.

Keywords: Greenwashing, Sustainability, Corporate Practice

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INTRODUCTION

Sustainability is a complicated idea and practice, especially in the corporate world. Companies must practice environmental sustainability by managing their resources for present and future generations, which requires accurate assessment and analysis of these effects. Social sustainability takes into account the needs of individuals, groups, and society at large. Despite the lack of a specific definition, social sustainability is commonly understood in the context of business to mean reducing the bad effects and optimizing the positive ones of an organization's operations. (Moodaley & Telukdarie, 2023). The practice of sustainability reporting is a result of both the expanding public awareness of the importance of sustainability and the growing stakeholder expectations and demand that businesses disclose how their operations impact the environment and society. In that context, sustainability reporting has grown in significance as a means for businesses to demonstrate to stakeholders their dedication to environmental, social, and governance (ESG) considerations, (de Freitas Netto, et al. 2020).

As sustainability becomes a cornerstone of corporate strategy, greenwashing—the practice of misrepresenting environmental efforts—has emerged as a significant obstacle to genuine progress. Greenwashing is the practice of emphasizing one successful technique or a tiny portion of its operations while hiding all others that have detrimental effects on the environment and provide a false impression of sustainability, (Adamkiewicz et al., 2022). Greenwashing not only misleads stakeholders but also dilutes the impact of legitimate environmental initiatives. In some senses, greenwashing is a negative corporate strategy (De Jong et al., 2018). Greenwashing causes stakeholders to show displeasure and it does not increase potential benefits for the business (Walker & Wan, 2012). For other reasons, greenwashing benefits society hinders stakeholder identification, and deceives stakeholders (Marciniak, 2010). This systematic review synthesizes recent research to explore how greenwashing manifests, its implications for corporate governance and financial performance, and potential mitigation strategies.

OVERVIEW

Greenwashing

According to de Freitas Netto, et al., (2020), any three examples of the methods used to define "greenwashing" in scholarly literature. First, selective disclosure, or "greenwashing," refers to keeping " the presentation of both positive and negative information about the company's environmental performance". The second, "greenwashing as decoupling," describes how, among other things, "symbolic actions" are used to separate the communications from the actual behavior of the corporation on sustainability concerns. In the third, the application of signaling and legitimacy theory to greenwashing is identified.

Greenwashing first emerged as a response to sustainability demands, where companies present selective or misleading environmental information to improve their image in the eyes of stakeholders. (Mitchell & Ramey, 2011), This practice undermines genuine environmental efforts and contributes to stakeholder skepticism (Lyon & Montgomery, 2015). The impact of greenwashing extends to financial performance, where it may yield short-term benefits but risks eroding long-term stakeholder trust. In markets with high information asymmetry, such as emerging economies, greenwashing remains harder to detect, emphasizing the need for robust regulatory frameworks (Li et al., 2023).

Impact of Greenwashing on Sustainability

Greenwashing, which involves misleading environmental claims, may provide short-term financial benefits. However, it undermines stakeholder trust in the long term (Lee & Raschke, 2023). Investors are less inclined to support businesses that engage in deceitful manipulation

and falsify their promises (Gatii, et al.2021). This practice exacerbates the misalignment between sustainability claims and actual environmental outcomes, hindering global sustainability goals (Ghitti et al., 2024). Companies engaged in greenwashing are less likely to adopt innovative green technologies, especially under weak environmental regulatory pressure (Zhang, 2022). Greenwashing, which involves misleading environmental claims, may provide short-term financial gains. However, it damages stakeholder trust in the long run (Lee & Raschke, 2023). Investors are less likely to support businesses that engage in deceptive manipulation and falsify their promises (Gatii et al., 2021). This practice exacerbates the misalignment between sustainability claims and actual environmental outcomes, thus hindering global sustainability goals (Ghitti et al., 2024). Companies that engage in greenwashing are less likely to adopt innovative green technologies, especially under the pressure of weak environmental regulations (Zhang, 2022). Correct business processes can increase consumer trust in green products and encourage long-term sustainable consumption behavior by fostering trust (Rifai Apriture Afianto, 2025). Consumers are more inclined to believe a company's sustainability promises when they think the product produces observable environmental benefits (Wicaksono & Darpito, 2023). Customers' perceptions of a product's green value might also encourage sustainable buying practices because they link green items to environmental preservation (Zhuang et al., 2021).

Impacts on Corporate Practices

In Corporate Governance, studies indicate that more diverse and independent boards ironically increase greenwashing due to reputational pressures (Ghitti et al., 2024). Green finance helps enhance innovation and ESG performance but does not eliminate greenwashing (Zhang, 2023). Strict local environmental regulations and negative media coverage effectively reduce greenwashing and improve corporate transparency (Mateo-Márquez et al., 2022).

Mitigation strategies for that impact use such a blockchain technology, It enables transparency and traceability in corporate sustainability claims (Nygaard & Silkoset, 2023) and use such vertical environmental regulations and centralized inspection, policies such as CEPI in China have been successful in curbing greenwashing practice (Zhao & Lee, 2024).

METHODS

This study uses the concept of Systematic Literature Review (SLR) through data collection, identification, and critical review of various types of available research studies. Researchers use articles that are relevant to the topic of discussion to conduct a review. The review process is carried out systematically and in an organized manner by following each stage set for each process (Triandini et al., 2019). Researchers began this study by collecting scientific works related to the research subject.

The first step taken by the author in this study is to determine the theme to be studied or researched. The researcher chose "Greenwashing and Its Impacts on Sustainability and Corporate Practices" as the research topic. The Systematic Literature Review (SLR) method was applied in this study, which is a systematic method for identifying research results and researchers' thoughts to identify, review, and evaluate research as a whole.

Then the next step in compiling a research question is:

- 1. What are the primary mechanisms and motivations behind corporate greenwashing?
- 2. How does greenwashing impact financial performance, stakeholder trust, and environmental outcomes?
- 3. What regulatory and technological interventions can mitigate greenwashing?

The literature research process begins with a data search in Google Scholar through the Publish or Perish application. The author uses the search keywords "accounting greenwashing",

with a search period from 2022 to 2025. Furthermore, the researcher collected 200 articles on accounting greenwashing in a search on Google Scholar and then selected 16 articles that were relevant to the research topic being conducted. Next, the researcher studied each article, including the 25 articles included, and studied them further to become 16 articles that were relevant to the discussion.

Sixteen articles related to the research topic were used, and these articles will be presented in the discussion and conclusion section. The following process flow diagram shows how the Systematic Literature Review (SLR) stage is conducted (n; number of articles).

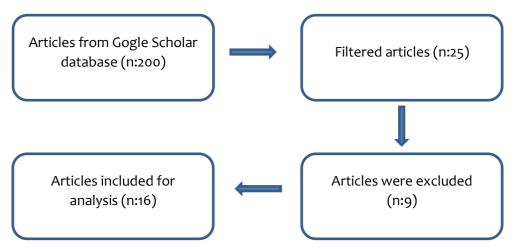


Figure 1. Flowchart related to the Systematic Literature Review steps

RESULT AND DISCUSSION

The results of 16 research data used in the literature review that have been determined and meet the inclusion criteria are as follows:

No	Author and year	Title	Journal	Research result
1	A Sailer, H Wilfing, E Straus, 2022	Greenwashing and bluewashing in black Friday-related sustainable fashion marketing on Instagram	•	This article examines how these companies employ bluewashing and greenwashing techniques to draw in customers and uphold a sustainable brand image. According to this study, customers who care about the environment and social justice can spot the greenwashing and bluewashing practices used by sustainable fashion firms to sell their products around Black Friday, and they are more likely to have an unfavorable opinion of these brands. Campaigns that are seen as more environmentally friendly, however, can draw in customers who are wary of advertisements in general and who are critical of Black Friday's effects on society and the environment.

No	Author and year	Title	Journal	Research result
2	M Megura, R Gunderson, 2022	Better poison is the cure? Critically examining fossil fuel companies, climate change framing, and corporate sustainability reports	Energy Research &Social Science	The framework for climate change sustainability reporting used by fossil fuel firms is covered in this paper. There are four primary frames, specifically: 1. Technology optimism. 2. Compliance, 3. Countermeasures, and 2. Necessarianism. This tactic is an example of a new kind of greenwashing and climate denial. The sustainability reports from fossil fuel companies are prescriptive rather than diagnostic or evaluative of the climate change issue. Employing Entman's framing principle, the study demonstrates that businesses do not conduct a thorough analysis of the issue and its causes.
3	M Li, G Trencher, J Asuka, 2022	The clean energy claims of BP, Chevron, ExxonMobil and Shell: A mismatch between discourse, actions and investments	PloS one	The study examined BP, Shell, ExxonMobil, and Chevron between 2009 and 2020. Oil and gas industries' energy products are a major source of greenhouse gas emissions. Global decarbonization requires changing business models that rely on fossil fuels. According to the research, decarbonization plans are more words than deeds. Fossil fuel dependence is still high, while net investment in clean energy is quite low. Since there has been no shift to clean energy business models, there have been charges of "greenwashing."
4	W Li, W Li, V Seppänen,2023	Effects of greenwashing on financial performance: Moderation through local environmental regulation and media coverage	Business Strategy and the Environment	According to this study, corporate financial performance (CFP) in China is often improved by greenwashing tactics. This influence, however, is lessened when stringent local environmental laws are put into place and turns negative when the corporation is frequently the subject of bad media coverage. The impact of greenwashing on business financial performance is moderated in part by local environmental laws and

No	Author and year	Title	Journal	Research result
				media coverage. Greenwashing may be challenging for stakeholders to spot in an emerging economy with high information asymmetry, but stringent regulations and unfavorable media coverage can help lessen this information asymmetry, increasing the visibility of greenwashing and harming a company's bottom line.
5	D Zhang, 2022	Environmental regulation, green innovation, and export product quality: What is the role of greenwashing?	International Review of Financial Analysis	This study investigates the connection between corporate performance and environmental regulation. Export product quality is positively impacted by green innovation. Green innovation in highly polluting companies is negatively impacted by environmental regulation, whereas this effect is negligible in low-polluting companies. Businesses that engage in greenwashing and face financial difficulties are more affected negatively. The results demonstrate that environmental regulation's ability to foster green innovation is diminished by the stifling influence of greenwashing.
6	D Zhang, 2023	Does green finance really inhibit extreme hypocritical ESG risk? A greenwashing perspective exploration	Energy Economics	This paper examines the connection between corporate environmental, social, and governance (ESG) performance quality and the growth of green finance between 2014 and 2020. By decreasing greenwashing, green finance can improve ESC performance. Green finance has been shown to lower financia barriers, boost profitability, and foster green innovation. The beneficial effects are particularly noticeable in businesses that are owned by the state, have high pollution levels, or are subject to stringent environmental laws. In terms of ESG, this study evaluates the social value of green finance in emerging markets.

No	Author and year	Title	Journal	Research result
7	M Ghitti, G Gianfrate, L Palma, 2024	The agency of greenwashing	Journal of Management and Governance	This study compares self-reported environmental objectives with confirmed environmental outcomes in order to suggest a novel method of assessing corporate greenwashing. The authors discover that higher degrees of greenwashing are linked to specific board attributes, such as gender diversity and board independence. Additionally, they demonstrate that greenwashing lowers a company's worth, implying that financial markets penalize companies that don't meet environmental performance standards.
8	YN Zhao, CC Lee, 2024	The impact of vertical environmental regulation mechanism on greenwashing	Journal of Cleaner Production	Greenwashing is a significant barrier to China's "dual carbon goal" implementation, despite the country's aggressive carbon reduction efforts. One common vertical environmental regulation (VER) system that directly influences businesses' environmental protection activities and may thus have an effect on greenwashing is the centralized environmental protection inspection (CEPI) policy. Based on the empirical research carried out in the paper, the primary conclusion is that the CEPI policy, as a vertical environmental regulating structure, has been successful in lowering greenwashing behaviors among Chinese listed firms.
9	MT Lee, RL Raschke, 2023	Stakeholder legitimacy in firm greening and financial performance: What about greenwashing temptations?	Journal of Business Research	This research highlights the importance of legitimacy in shaping stakeholder perceptions of ESG performance and financial success. It also highlights the risks associated with greenwashing, suggesting that while it may not directly harm financial performance, it can ultimately undermine stakeholder trust and long-term sustainability. This

No	Author and year	Title	Journal	Research result
				creates an important area for future research, particularly in exploring the long-term implications of greenwashing for corporate reputation and performance.
10	W Li, 2023	Effects of greenwashing on financial performance: Moderation through local environmental regulation and media coverage	Business Strategy and the Environment	In addition to the moderating impacts of local environmental rules, media visibility, and media bias, this study looks at how greenwashing affects CFP. The findings demonstrate that greenwashing benefits CFP. When stringent environmental restrictions are put into place, this effect lessens, and when there is less bias in the media, it reverses. The results show that in emerging economic situations with considerable information asymmetry, stakeholders have a hard time spotting greenwashing. This knowledge asymmetry can be lessened by local environmental laws and unfavorable media coverage, which makes greenwashing simpler to spot.
11	AJ Mateo- Márquez,2022	An international empirical study of greenwashing and voluntary carbon disclosure	Journal of Cleaner Production	This study shows the importance of strong climate change regulation and strict enforcement to reduce greenwashing. Effective regulation not only increases public trust in corporate information but also encourages more concrete action to address climate change.
12	R Duchin, J Gao, Q Xu, 2024	Sustainability or greenwashing: Evidence from the asset market for industrial pollution	The Journal of Finance	The creation of the Pressure Index, which gauges environmental pressures on publicly traded firms in a number of ways, such as Rated firms, Pension Fund Companies, Democratic Headquarters, and Environmental Events, is covered in this paper. It examines hazardous emissions from 2000 to 2020 using information from the EPA's hazardous Release Inventory (TRI) program, paying particular attention to substances that present serious concerns to human

No	Author and year	Title	Journal	Research result
13	A Nygaard, R Silkoset, 2023	Sustainable development and greenwashing: How blockchain technology information can empower green consumers		health and the environment. This study also evaluates the effect of corporate environmental disclosure on perceived sustainability versus real environmental performance and looks at the role of information friction in a firm's decision to divest from a polluting plant. This study looks at the connection between greenwashing and sustainable development, with a particular emphasis on how blockchain technology may empower environmentally conscious consumers. The study emphasizes how deceptive promises make it difficult for customers to determine the authenticity of ecological items, including vegetables. The study measures consumer views of traceability, tamper-evident information, and greenwashing using a variety of constructs. Additionally, the survey looks at the respondents' demographics, shopping patterns, and level of acquaintance with certification programs and information technologies like RFID and QR
14	G Xu, N Lu, Y Tong, 2022	Greenwashing and credit spread: Evidence from the Chinese green bond market	Finance research letters	This study discusses the relationship between environmental performance (EP) and greenwashing in listed Chinese companies from 2010 to 2018. This study examines how environmental performance affects greenwashing practices using legitimacy theory and signaling theory, as well as the roles of environmental subsidies and political connections. This study shows that good environmental performance contributes to the reduction of greenwashing practices, driven by environmental subsidies and

No	Author and year	Title	Journal	Research result
				political connections. These findings are important for understanding the dynamics between environmental performance and information transparency in Chinese companies, as well as the policy implications for improving environmental accountability.
15	AW Montgomery, 2024	No end in sight? A greenwash review and research agenda	Organization and Environment	This research underscores the complexity and persistence of greenwashing in today's environmental discourse. Despite efforts to curb the practice, companies continue to adapt, creating new challenges for consumers, researchers, and policymakers. As the discourse on sustainability evolves, strategies to combat greenwashing must also evolve, ensuring transparency and accountability in companies' environmental claims.
16	M Ghitti, G Gianfrate, L Palma, 2024	The agency of greenwashing	Journal of Management and Governance	This study examines how corporate governance and greenwashing practices relate to one another and how this affects corporate value. A company's propensity to participate in greenwashing increases with the proportion of independent directors. This goes against the notion that greater supervision and openness will result from independence. Corporate value is negatively impacted by greenwashing.

The research results from the 16 articles used showed that:

- 1. Companies often employ selective disclosure and ambiguous language to enhance their perceived environmental performance (Megura & Gunderson, 2022). Independent directors and gender diversity on boards, contrary to expectations, may correlate with higher greenwashing practices due to reputational incentives (Ghitti et al., 2024).
- 2. That impact is, that greenwashing can yield short-term financial benefits, especially in highly information-asymmetric emerging markets. However, strict environmental regulations and negative media coverage negate these benefits (Na et al., 2022);((Zhang, 2023). Persistent greenwashing erodes stakeholder legitimacy, compromising long-term corporate reputation and investor confidence (Lee & Raschke, 2023);(Zhao & Lee, 2024).

3. The mitigation strategies are, Vertical environmental regulations and centralized inspection policies have proven effective in reducing greenwashing practices (Mateo-Márquez et al., 2022). Blockchain technology offers traceability and transparency, empowering consumers to verify environmental claims (Nygaard & Silkoset, 2023). Enhanced access to green finance mechanisms incentivizes genuine ESG improvements, reducing hypocritical practices (Zhang, 2023).

CONCLUSION

Greenwashing remains a persistent challenge in corporate sustainability efforts, driven by complex interactions between governance structures, market incentives, and regulatory environments. While certain governance characteristics inadvertently exacerbate greenwashing, regulatory frameworks, and technological advancements show promise in countering deceptive practices. To combat greenwashing effectively, companies must prioritize transparency and accountability. Stricter environmental regulations enhanced public scrutiny through media coverage, and the adoption of innovative technologies like blockchain are essential tools in mitigating deceptive practices. Furthermore, integrating green finance mechanisms and promoting genuine ESG efforts can help reduce the prevalence of greenwashing, especially in markets with high information asymmetry.

Future research and policy development should focus on creating a cohesive framework that combines regulatory, technological, and governance interventions. By addressing these interconnected elements, it is possible to foster more sustainable corporate practices and rebuild public trust in environmental initiatives.

This study has several limitations: it is based on 16 selected academic articles, which may not capture all aspects of greenwashing comprehensively. Furthermore, because it is a systematic literature review, it does not include primary data analysis, which limits the ability to test the theoretical framework. Most of the reviewed studies concentrate on Western and Chinese markets; these may not be fully generalizable to other regions with different regulatory and cultural contexts.

Suggestions for further research to study greenwashing practices in specific industries (such as fashion, energy, and food) to better understand the differences between sectors. Conducting empirical research to determine greenwashing trends over time can provide deeper insights into its long-term impact on a company's reputation and financial performance. Studying how greenwashing functions across different cultural and regulatory environments will provide a broader understanding of the phenomenon. Future research should investigate how machine learning, blockchain, and AI help identify and prevent greenwashing practices.

Theoretically, this study adds to the literature on corporate sustainability by combining the main mechanisms, effects, and mitigation methods of greenwashing. The results suggest that technological, regulatory, and governance interventions should be included in the discussion of sustainability. The study emphasizes the role of corporate transparency in maintaining stakeholder trust using signaling and legitimacy theories. Meanwhile, practical implications for policymakers: these findings suggest that implementing stricter regulations and enforcement mechanisms is essential to reduce greenwashing practices. To maintain long-term stakeholder trust, companies should invest in verifiable sustainability initiatives and avoid false claims. For consumers, increasing awareness of greenwashing can lead to more ethical purchasing decisions, which requires greater transparency from companies.

REFERENCES

Adamkiewicz, J., Kochańska, E., Adamkiewicz, I., & Łukasik, R. M. (2022). Greenwashing and sustainable fashion industry. Current Opinion in Green and Sustainable Chemistry, 38, 100710.

- https://doi.org/10.1016/j.cogsc.2022.100710
- De Freitas Netto, S.V.; Sobral, M.F.F.; Ribeiro, A.R.B.; Soares, G.R.d.L. Concepts and forms of greenwashing: A systematic review. Environ. Sci. Eur. 2020, 32, 19.
- De Jong, M. D. T., Harkink, K. M., & Barth, S. (2018). Making Green Stuff? Effects of Corporate Greenwashing on Consumers. *Journal of Business and Technical Communication*, 32(1), 77–112. https://doi.org/10.1177/1050651917729863
- Ghitti, M., Gianfrate, G., & Palma, L. (2024). The agency of greenwashing. In *Journal of Management and Governance* (Vol. 28, Issue 3). Springer US. https://doi.org/10.1007/s10997-023-09683-8
- Lee, M. T., & Raschke, R. L. (2023). Stakeholder legitimacy in firm greening and financial performance: What about greenwashing temptations? ★. Journal of Business Research, 155, 113393. https://doi.org/10.1016/J.JBUSRES.2022.113393
- Lyon & Montgomery, 2015. The Means and End of Greenwash. Organization & Environment 28(2).
- Marciniak, A. (2010). Greenwashing as an Example of Ecological Marketing Misleading Practices. Comparative Economic Research. Central and Eastern Europe, 12(1–2), 49–59. https://doi.org/10.2478/v10103-009-0003-x
- Mateo-Márquez, A. J., González-González, J. M., & Zamora-Ramírez, C. (2022). An international empirical study of greenwashing and voluntary carbon disclosure. *Journal of Cleaner Production*, 363(May). https://doi.org/10.1016/j.jclepro.2022.132567
- Megura, M., & Gunderson, R. (2022). Better poison is the cure? Critically examining fossil fuel companies, climate change framing, and corporate sustainability reports. *Energy Research and Social Science*, 85(April 2021), 102388. https://doi.org/10.1016/j.erss.2021.102388
- Mitchell, L. D., & Ramey, W. D. (2011). Look how green I am! An individual– level explanation for greenwashing. Journal of Applied Business and Economics, 12(6), 40–45.
- Moodaley, W., & Telukdarie, A. (2023). Greenwashing, Sustainability Reporting, and Artificial Intelligence: A Systematic Literature Review.
- Na, C., Chen, X., Li, X., Li, Y., & Wang, X. (2022). Digital Transformation of Value Chains and CSR Performance. Sustainability (Switzerland), 14(16). https://doi.org/10.3390/su141610245
- Nygaard, A., & Silkoset, R. (2023). Sustainable development and greenwashing: How blockchain technology information can empower green consumers. *Business Strategy and the Environment*, 32(6), 3801–3813. https://doi.org/10.1002/bse.3338
- Rifai Apriture Afianto. (2025). Impact of Greenwashing and Perceived Value on Purchase Intention in the Bottled Drinking Water Industry: Mediating Role of Trust. Journal of Enterprise and Development (JED), 7(1). https://doi.org/https://doi.org/10.20414/jed.v7i1.12795
- Triandini, E., Jayanatha, S., Indrawan, A., Putra, G. W., & Iswara, B. (2019). Metode Systematic Literature Review untuk Identifikasi Platform dan Metode Pengembangan Sistem Informasi di Indonesia. 1(2).
- Walker, K., & Wan, F. (2012). The Harm of Symbolic Actions and Green-Washing: Corporate Actions and Communications on Environmental Performance and Their Financial Implications. *Journal of Business Ethics*, 109(2), 227–242. https://doi.org/10.1007/s10551-011-1122-4
- Wicaksono, R. A., & Darpito, S. H. (2023). Pengaruh green perceived value dan green perceived risk terhadap green purchase intention yang dimediasi green trust. Jurnal Ilmiah Manajemen Kesatuan, 11(2), 223–232. https://doi.org/10.37641/jimkes.v11i2.1775
- Zhang, D. (2022). Environmental regulation, green innovation, and export product quality: What is the role of greenwashing? *International Review of Financial Analysis*, 83, 102311. https://doi.org/10.1016/J.IRFA.2022.102311

- Zhang, D. (2023). Does green finance really inhibit extreme hypocritical ESG risk? A greenwashing perspective exploration. *Energy Economics*, 121, 106688. https://doi.org/10.1016/J.ENECO.2023.106688
- Zhao, Y. N., & Lee, C. C. (2024). The impact of vertical environmental regulation mechanism on greenwashing. *Journal of Cleaner Production*, 475, 143637. https://doi.org/10.1016/J.JCLEPRO.2024.143637
- Zhuang, W., Luo, X., & Riaz, M. U. (2021). On the factors influencing green purchase intention: A meta-analysis approach. Frontiers in Psychology, 12(April), 1–15. https://doi.org/10.3389/fpsyg.2021.644020