

Green Branding Research Through a Bibliometric Lens

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ABSTRACT

This bibliometric study systematically analyzes the evolving landscape of green branding research, focusing on the intersection of sustainability and branding strategies. Using data from Scopus and Web of Science, the study employs bibliometric techniques such as co-citation analysis, keyword co-occurrence, and network visualization to map trends, key concepts, and intellectual structures in the field. The findings highlight the increasing importance of sustainability, green branding, and consumer behavior as core themes driving the development of green branding strategies. The study also underscores the challenges of greenwashing and the growing need for authenticity in green marketing to foster consumer trust. Furthermore, the analysis reveals a global collaboration pattern, indicating the widespread recognition of the need for sustainable practices across industries and regions. However, the study suggests that peripheral areas like place branding and ecotourism offer opportunities for further exploration in future research.

Keywords: *Green Branding, Sustainability, Consumer Behavior, Greenwashing, Brand Equity, Bibliometric Analysis*

1. INTRODUCTION

In recent decades, growing environmental degradation, climate change concerns, and resource depletion have significantly reshaped how businesses operate and communicate with stakeholders [1], [2]. Consumers, governments, and investors increasingly demand that firms demonstrate environmental responsibility alongside economic performance. As a result, sustainability has moved from being a peripheral concern to a core strategic priority for organizations across industries [3]. Within this context, branding has evolved beyond traditional value propositions to incorporate environmental commitments, ethical practices, and ecological stewardship, giving rise to the concept of green branding [4].

Green branding refers to the strategic process of positioning a brand based on its environmental attributes, sustainable practices, and ecological values. It serves not only as a marketing tool but also as a mechanism for signaling corporate responsibility and legitimacy in an environmentally conscious marketplace [5]. Through green branding, firms seek to influence consumer perceptions, build trust, and differentiate themselves from competitors by emphasizing reduced environmental impact and sustainable innovation [6]. Consequently, green branding has become a critical intersection between sustainability, marketing, and strategic management research.

As academic interest in green branding has grown, the field has diversified in terms of themes, methodologies, and disciplinary perspectives. Early studies primarily focused on green consumer behavior and eco-labeling, while more recent research has expanded to include brand equity, corporate reputation, stakeholder engagement, and greenwashing concerns [7], [8]. This expansion reflects the increasing complexity of green branding practices and the need to understand their implications across different markets, cultures, and regulatory environments. However, such rapid growth has also resulted in a fragmented body of literature that is difficult to systematically comprehend.

Bibliometric analysis has emerged as a powerful methodological approach to address this challenge by quantitatively analyzing large volumes of academic publications. By examining publication trends, citation patterns, co-authorship networks, and keyword co-occurrences,

bibliometric studies provide a structured overview of how a research field has evolved over time [9]. Unlike traditional narrative reviews, bibliometric methods reduce subjectivity and allow researchers to identify influential works, emerging themes, and intellectual structures within a discipline. This approach is particularly useful for interdisciplinary fields such as green branding, which span marketing, environmental science, management, and sustainability studies.

Despite the suitability of bibliometric techniques for mapping research landscapes, their application to green branding remains relatively limited. While some studies have reviewed sustainability marketing or green consumerism broadly, fewer have focused specifically on green branding as a distinct conceptual domain. This gap is noteworthy given the strategic importance of branding in shaping consumer perceptions and organizational sustainability outcomes. A bibliometric lens can reveal how green branding research has developed, which theoretical frameworks dominate the field, and how scholarly attention has shifted over time [10].

Furthermore, understanding the intellectual structure of green branding research is essential for guiding future investigations and practical applications. As firms face increasing scrutiny regarding environmental claims, scholars must critically assess how green branding concepts are defined, measured, and operationalized. Bibliometric analysis can identify research clusters, highlight underexplored areas, and expose potential biases or imbalances in geographic and methodological representation. In doing so, it supports a more coherent and cumulative development of knowledge in the green branding domain. Although the volume of green branding research has increased substantially, the literature remains fragmented and lacks a comprehensive, systematic overview of its intellectual development. Existing reviews often rely on qualitative approaches that may overlook structural patterns, influential contributors, and emerging research fronts. Moreover, the absence of a dedicated bibliometric study on green branding limits scholars' ability to understand the field's evolution, key themes, and future research directions. This gap hinders theoretical consolidation and reduces the practical relevance of green branding research for academics, practitioners, and policymakers. The objective of this study is to systematically analyze the green branding literature using a bibliometric approach.

2. METHODS

This study adopts a bibliometric research design to systematically examine the scholarly landscape of green branding research. Bibliometric analysis is a quantitative approach that enables the evaluation of large bodies of academic literature through statistical and network-based techniques. It is particularly appropriate for identifying publication trends, influential contributors, and thematic structures within a research field. In this study, bibliographic data were retrieved from Scopus Database. The search process employed carefully selected keywords such as green branding, environmental branding, sustainable branding, and related terms to ensure the inclusion of relevant publications. Only journal articles published in English were considered to maintain consistency and academic rigor.

Following data collection, a screening and refinement process was conducted to ensure the relevance and quality of the dataset. Duplicate records, non-research documents (such as editorials and notes), and publications with limited relevance to green branding were excluded. The final dataset was then analyzed using bibliometric software tools designed for scientific mapping and performance analysis. To explore the intellectual and thematic structure of green branding research, science mapping techniques were employed. Co-citation analysis was used to uncover foundational studies and theoretical influences, while keyword co-occurrence analysis helped identify dominant themes and emerging research topics. Collaboration patterns among authors and institutions were

also analyzed through co-authorship networks to understand knowledge diffusion and research partnerships.

3. RESULTS AND DISCUSSION

3.1 Network Visualization

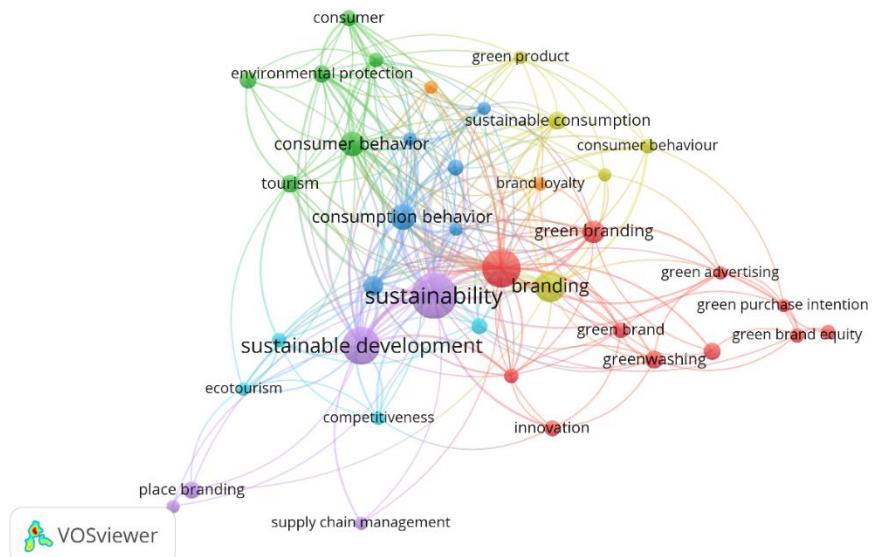


Figure 1. Network Visualization

Source: Data Analysis Result, 2026

Figure 1 offers a comprehensive view of the interconnectedness between various key concepts within the field of green branding and sustainability. At the heart of the network is the central node of sustainability, closely connected to terms like green branding, branding, and sustainability development. These central themes suggest that green branding is inherently tied to broader sustainability and development efforts, which are crucial in the marketing and consumer behavior sectors. A large portion of the network revolves around the relationship between consumer-related behaviors, such as consumer behavior, consumption behavior, and green product preferences. These connections reflect the growing interest in understanding how consumers' values and behaviors drive the demand for sustainable products. Green brands aim to tap into this shift by aligning their messaging with consumer concerns about environmental impact and sustainability, which is increasingly becoming a deciding factor in purchase decisions.

In parallel, the visualization shows the emergence of concepts like green washing and green advertising, which are also tightly connected to green purchase intention and green brand equity. This suggests that while many brands are embracing green strategies, there is a corresponding concern regarding misleading claims (greenwashing) and the genuine effectiveness of green advertising in influencing consumer decisions. This network highlights the challenge for brands in establishing trust and credibility in the sustainability domain, which is critical for brand loyalty and consumer retention. A secondary cluster in the visualization is related to innovation, competitiveness, and supply chain management, underlining that sustainability and green branding are not only about consumer engagement but also about the internal mechanisms of businesses. Innovation plays a crucial role in improving sustainability practices, whether it's through eco-friendly product development or more sustainable production and supply chain practices. Furthermore, the competitiveness of firms in a market increasingly shaped by environmental considerations is a key aspect, as businesses look to differentiate themselves based on sustainability credentials.

A less prominent cluster around ecotourism and place branding suggests that green branding is not only relevant in product and service industries but also in sectors such as tourism. The connection between sustainable development and tourism points to the role of green branding in promoting sustainable travel experiences. This broader application of green branding extends the influence of sustainability to various industries, creating a diverse and integrated approach to branding and sustainability across multiple sectors.

3.2 Overlay Visualization

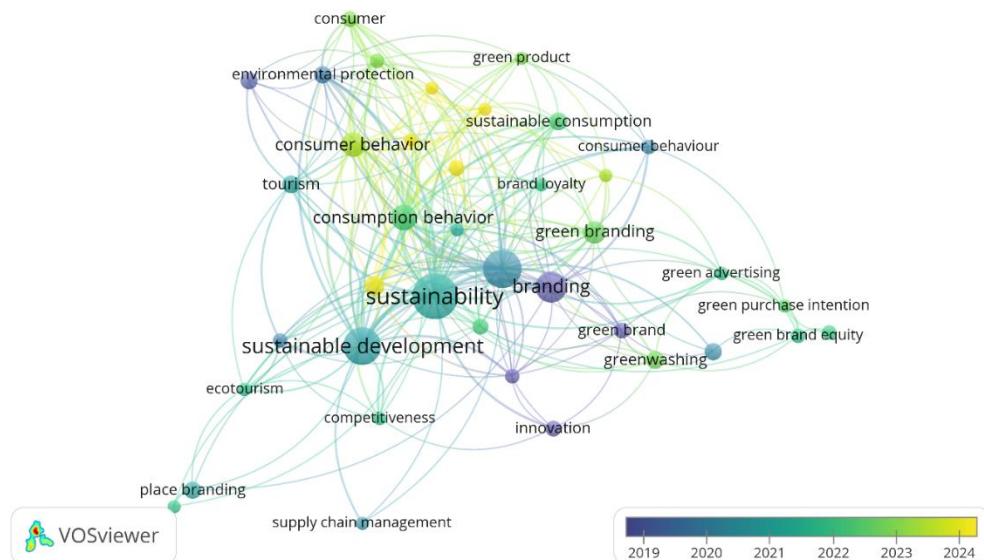


Figure 2. Overlay Visualization

Source: Data Analysis Result, 2026

Figure 2 includes a time dimension, with color coding representing the timeline from 2019 to 2024. The central themes such as sustainability, branding, and green branding remain prominent, but now we can see a clear evolution of the field. The shift in color from darker blues and greens (2019-2020) to lighter yellows and greens (2023-2024) indicates a growing research interest over time, particularly in areas like green advertising, green purchase intention, and green washing, which are all marked by increasingly recent studies. Notably, the consumer behavior and sustainable consumption clusters have grown stronger over the years, which reflects the increased attention brands are placing on understanding consumer motivations toward sustainability. This is further reinforced by the close connections between green products and green branding, suggesting that companies are focusing more on aligning their products with sustainable values, and exploring how branding strategies can tap into these changing consumer behaviors. The more recent development (2023-2024) of topics such as green brand equity and brand loyalty also reflects a maturing recognition of the importance of long-term consumer trust in green brands.

The peripheral themes like supply chain management and place branding, along with ecotourism, show that while they are still part of the broader green branding landscape, they have remained relatively steady in terms of recent research trends. The development of these clusters in earlier years, such as sustainability development and environmental protection, demonstrates how foundational sustainability principles continue to inform newer topics within the branding domain. As research continues to evolve, the field's growth in consumer-centric themes underscores a broader movement toward consumer-driven sustainability initiatives in branding strategies.

3.3 Citation Analysis

Table 1. The Most Impactful Literatures

Citations	Authors and year	Title
563	[11]	The green-feminine stereotype and its effect on sustainable consumption
376	[1]	Green branding effects on attitude: functional versus emotional positioning strategies
222	[12]	Why not green marketing? Determinates of consumers' intention to green purchase decision in a new developing nation
222	[13]	The influence of green product competitiveness on the success of green product innovation: Empirical evidence from the Chinese electrical and electronics industry
212	[14]	The role of benefits and transparency in shaping consumers' green perceived value, self-brand connection and brand loyalty
190	[15]	Green marketing and its impact on supply chain management in industrial markets

Source: Scopus, 2025

3.4 Density Visualization

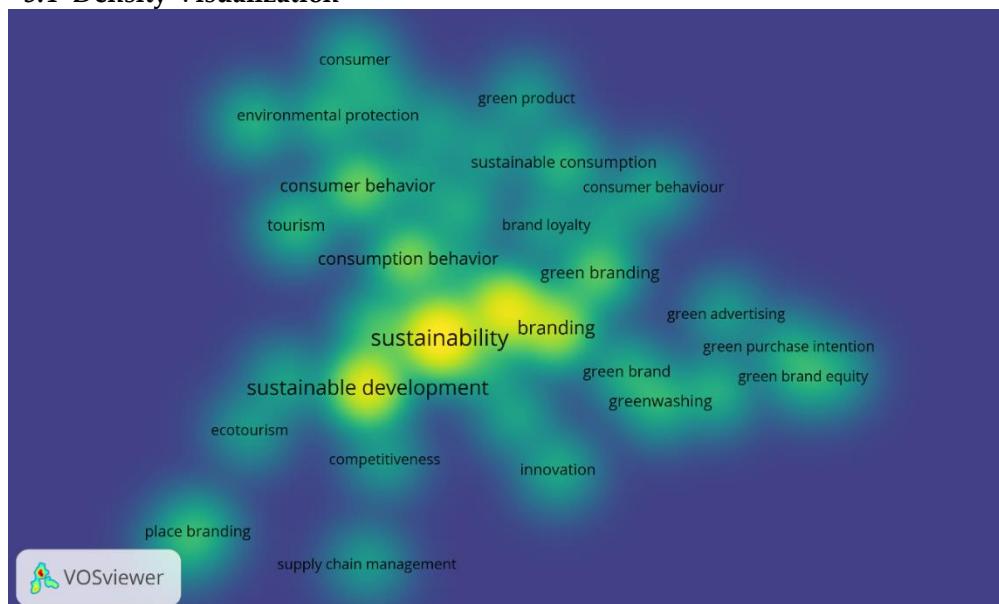


Figure 3. Density Visualization

Source: Data Analysis Result, 2026

Figure 3 highlights the areas of most intensive research focus within green branding and sustainability, with sustainability and branding at the core, represented by the brightest yellow zones. This central concentration indicates the primary focus of current studies, emphasizing how these two interconnected themes dominate the research landscape. The surrounding concepts, such as green branding, green product, green advertising, and consumer behavior, show strong correlations, suggesting that scholars are deeply engaged in understanding how branding strategies are shaped by sustainability concerns, and how consumer behavior plays a critical role in the success of these green initiatives.

On the periphery, we observe slightly less intense clusters around topics like sustainable development, ecotourism, and place branding, which indicates that these areas, while still important, are not as heavily researched compared to the core concepts. The heatmap also highlights the growing concerns around greenwashing and green brand equity, pointing to a significant interest in how brands' sustainability claims are perceived by consumers, and how these claims impact brand value. The relatively cooler areas around supply chain management and competitiveness suggest

that while sustainability in these areas is still a topic of interest, it is less intensely studied compared to consumer-facing aspects of green branding.

3.5 Co-Authorship Network

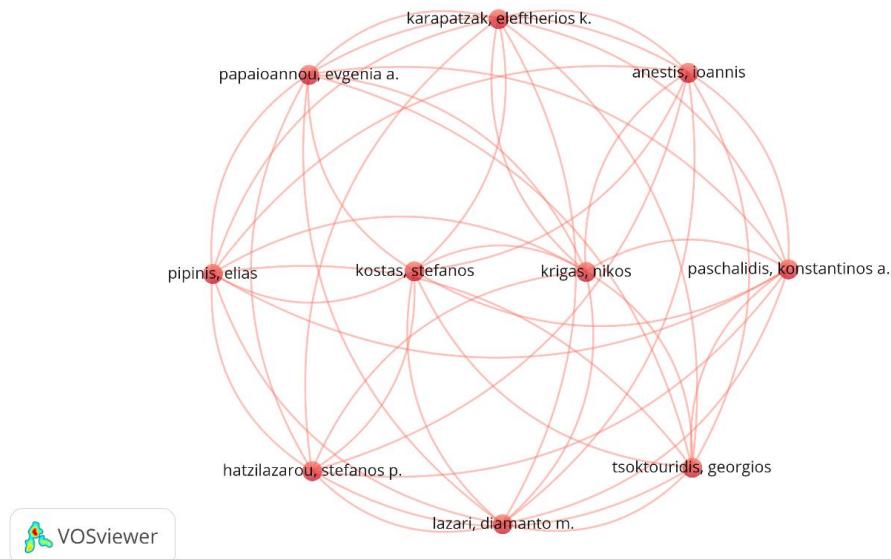


Figure 4. Author Visualization

Source: Data Analysis Result, 2026

Figure 4 illustrates the co-authorship relationships between a group of researchers. Each node represents an individual researcher, and the lines connecting the nodes indicate collaborative publications. The highly interconnected network, where each researcher shares multiple co-authors with others, suggests a close-knit research community with frequent collaboration. The equal distribution of connections among all researchers shows a balanced level of interaction within the group, highlighting their collective work on related topics, likely in a specific research field or area of study. The presence of numerous interconnections indicates a strong and active collaborative network.

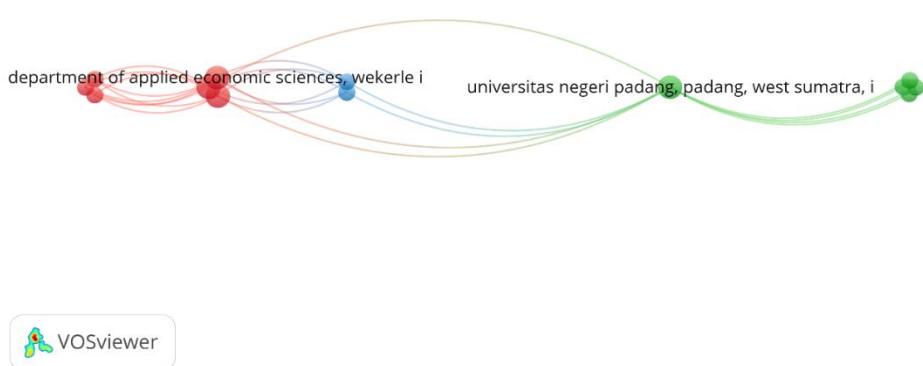


Figure 5. Affiliation Visualization

Source: Data Analysis Result, 2026

Figure 5 represents the relationship between three entities: the Department of Applied Economic Sciences, Wekerle I, Universitas Negeri Padang, Padang, West Sumatra, Indonesia, and a third unspecified node. The connections between these entities are illustrated with color-coded lines, indicating collaborative or referenced relationships. The green and red nodes represent the institutions, with the blue node acting as a central connector between them. This suggests that these two institutions are involved in some form of academic or research collaboration, possibly in the field of applied economics, as indicated by the department name. The directional lines likely indicate the flow of academic connections or citations, with the green node (Universitas Negeri Padang) being a significant part of this network.

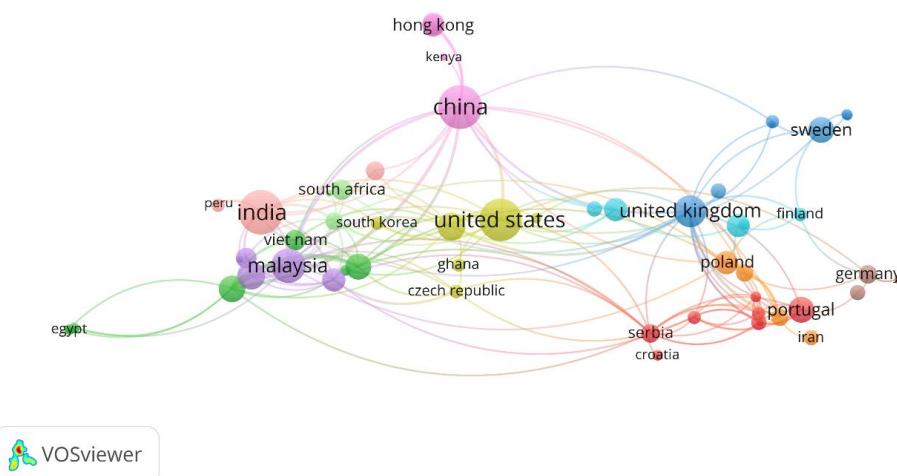


Figure 6. Country Visualization

Source: Data Analysis Result, 2026

Figure 6 displays the co-occurrence of countries based on some shared research or collaboration topics. The central nodes represent large, well-connected countries such as China, United States, and India, with multiple connections to other countries across various regions. China and the United States are particularly prominent, indicating a high level of academic or research collaboration with numerous countries such as Malaysia, Vietnam, South Korea, and South Africa. The surrounding clusters, like those around Portugal, Germany, and Poland, show more localized networks, with these countries engaging in collaborations primarily within Europe, but with connections extending globally. The color gradients further reflect the intensity of these connections, with certain countries like China and India representing key hubs in global research networks.

Discussion

The study of green branding through a bibliometric lens reveals several significant trends that highlight the growing importance of sustainability in branding strategies across various industries. Central themes such as sustainability, green branding, and consumer behavior emerged as the core focus of recent research, reflecting a shift towards understanding how brands align with consumer values related to environmental protection. This trend is supported by the rising interest in green advertising, green products, and sustainable consumption, indicating that both businesses and consumers are increasingly prioritizing environmental concerns in their purchasing decisions. The bibliometric analysis also underscores the challenge of greenwashing, highlighting the need for authenticity and transparency in green branding to build consumer trust and loyalty.

Another key finding from the study is the growing role of innovation and competitive advantage in sustainable branding. As companies strive to differentiate themselves in the marketplace, they are leveraging innovation to develop eco-friendly products and incorporate sustainability into their branding strategies. The connections between innovation, green brand equity, and brand loyalty suggest that brands focusing on sustainability are gaining a competitive edge, as consumers are more likely to support companies that demonstrate a genuine commitment to environmental responsibility. This trend is particularly evident in the context of emerging markets, where consumer demand for sustainable products is on the rise, and businesses are adapting their marketing strategies accordingly.

The study emphasizes the global nature of green branding research, as evidenced by the diverse geographical connections observed in the bibliometric network. The significant collaboration between researchers from regions like Asia, Europe, and North America reflects the widespread recognition of the need for sustainable branding across different cultural and economic contexts. However, the presence of peripheral clusters, such as place branding and ecotourism, suggests that while these areas are still relevant to green branding, they are not as heavily studied compared to more consumer-facing aspects like green product development and advertising. This indicates that future research could benefit from further exploring the integration of sustainability into place branding and the tourism sector, which are increasingly influenced by environmental concerns.

CONCLUSION

This bibliometric study of green branding highlights the growing intersection of sustainability and branding strategies, emphasizing the critical role of consumer behavior, innovation, and authenticity in shaping the future of green brands. The research reveals that companies are increasingly aligning their branding with sustainability goals, with a clear focus on eco-friendly products, green advertising, and building brand loyalty through environmental responsibility. However, challenges such as greenwashing remain prominent, underscoring the need for transparency in brand messaging. The global nature of green branding research, as seen in the diverse international collaborations, further emphasizes the universal significance of sustainability across industries and regions. Future research could expand on the peripheral areas such as place branding and ecotourism, which also present opportunities for deeper integration of sustainable practices in branding.

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