

Sustainable Marketing: Insights on Current and Future Research Directions-A Bibliometric Analysis

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Abstract

This study analyzes the existing research on sustainable marketing in the areas of commerce, management, tourism, and services. 431 articles were retrieved from the Dimensions AI database by applying the inclusion and exclusion criteria of the PRISMA model. Bibliometric tools, including R-Bibliometrix Biblioshiny and VOSviewer, were employed to examine publication trends, influential contributors, current themes, and future directions in the field. The analysis reveals a significant increase in publications post-2018. "Towards Sustainability: The Third Age of Green Marketing" emerges as the most cited work, and Kim K H is found to be an influential author. Evolving themes such as "Institutionalization" and "Macromarketing" offer great opportunities for future research studies. This study also provides valuable scope for policymakers to make strategic decisions in business for sustainable marketing.

Keywords: Sustainable Marketing, Bibliometric Analysis, VOSviewer, Biblioshiny JEL Classification- M 30, M31, M37

Introduction

Sustainability has become increasingly relevant in shaping responsible practices as a result of current and growing challenges of the marketing ecosystem (Azmat et al., 2023). The concept of sustainability by Sakalasoorya (2021) has been widely adopted across many disciplines, including marketing (Kemper & Ballantine, 2019). Traditionally, marketing was linked to converting natural resources into products, that consumers used and disposed of leading to significant environmental problems (Azam et al., 2023). However, sustainable marketing involves the strategic planning, execution, and management of pricing, promotional, and distribution tactics to deliver products that meet consumer needs. These products align with organizational objectives and maintain compatibility with the extant sustainable marketing strategies in order to build long-term customer loyalty while maintaining the viability of natural systems (Buvaneswari et al., 2015; Popescu et al., 2023; Trang et al., 2023).

As sustainability becomes increasingly crucial, stakeholders including consumers, investors, and regulators demand greater environmental (Abbas, 2024) and social responsibilities (Martos-Pedrero et al., 2024) to be a part of marketing strategies. This has paved the way for a company to attract conscious consumers who seek environment friendly products (McCullough & Melton, 2017; Parthiban & Buvaneswari, 2024), enhance relationships with target audiences, reduced

costs (Calignano & Mercurio, 2023), and improved operational efficiency through eco-friendly processes and technologies can thus be achieved (Javaid et al., 2022). These strategies help companies generate higher profits and explore new market opportunities in sustainability-focused emerging markets (Moro-Visconti et al., 2020).

The use of digital technologies and social media has further extended the reach and influence of long-term marketing campaigns. Businesses can now communicate directly with customers (Adwan & Altrjman, 2024), promote their sustainability programs, and establish communities based on common values (Crittenden et al., 2011). Thus, the digital marketing revolution has resulted in innovative business models such as circular and shared economies, which prioritize sustainability and deviate from the traditional linear consumption paradigm (Bocken, 2020).

Review of Literature

Sustainable marketing, which incorporates social, economic, and environmental considerations into fundamental business operations, which is a critical approach for modern businesses (Epstein 2018). According to Zanten and Tulder (2021), businesses are increasingly incorporating sustainability into their operations and marketing strategies to achieve long-term value. Key marketing operations include creating eco-friendly products, establishing transparent supplier chains, and applying responsible corporate practices (Agu et al., 2024). These activities indicate corporate social responsibility, which increases brand loyalty, customer satisfaction, and trust (Iglesias et al., 2020). Consumer trust in brands has a significant impact on long-term spending habits. Furthermore, deceptive practices such as greenwashing may reduce customer trust (Rashid & Ahmad, 2023). Sustainable activities such as eco-labeling, emotional appeals, storytelling, community participation, circular economy involvement, and digital platforms improve companies' competitiveness (Abdelmeguid et al., 2024; Agu et al., 2024; Farida & Setiawan, 2022; Mallick et al., 2024).

Research shows that environmental awareness among consumers significantly influences their attitudes toward sustainable products (Khan et al., 2020). However, a gap often exists between attitudes and actual purchasing behavior, driven by factors such as sustainable ecosystem, environmental certification, previous experiences, and perceived benefits (Sharma, 2021). Moreover, personal disposition, emotions, information, social and cultural contexts, experiences, social media, product value, and economic and demographic factors all play a crucial role in shaping sustainable consumption patterns (Chun, 2024). In contrast, barriers to sustainable purchasing include an environmental unawareness, high prices, perceived threat, organizational reputation, credibility issues, and limited readiness to pay (Rana, 2022). Furthermore, younger generations, particularly Millennials and Gen Z, show a stronger preference for sustainability, reflecting broader societal shifts (Aziah et al., 2024).

Although the valuable insights exist through several contemporary researches, by prior studies, a comprehensive understanding of sustainable marketing remains limited. To address this gap, this study proposes an extensive bibliometric analysis of research in sustainable marketing. Key themes, authors, and journals that have shaped the field, along with the most influential articles and emerging topics are explored in this research. The findings of the study will help in a better perspective by addressing the following.

RQ1. Have publication trends, citation impact, and key journals influenced sustainable marketing research? How?

RQ2. Who are the dominant researchers in the field of sustainable marketing?

RQ3. What are the keywords used to generate insights on sustainable marketing?

RQ4. What are the prevalent insights on the major trending topics on sustainable marketing?

RQ5. What is the contribution of this research in identifying the future research directions in sustainable marketing?

Methodology

Bibliometric analysis deals with the evaluation of the available relevant bibliometric data, tracing the evolution of ideas and identifying key contributors, such as countries, authors, and journals (Donthu et al., 2021). It has gained significant popularity due to its systematic, transparent, and consistent approach, making it an ideal method for analysis (Yıldız & Yılmaz, 2023). Therefore, this study employs bibliometric analysis to highlight key trends, findings, and knowledge gaps and proposes future research directions (Vergura et al., 2023). The method used in this article follows the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) protocol, encompassing identification, screening, and inclusion stages (Selçuk, 2019; Moher et al., 2010) as shown in Figure 1.

Identification

The Dimensions AI database connects research publications, citation databases, and policy papers, offering a holistic perspective of the research ecosystem (Hakkaraki, 2023; Vilchez-Román et al., 2024). This database was chosen because it contains about 106 million publications, which is 30% more than other databases (Volpe et al., 2024). A search was then conducted using a query with the keywords “Sustainable Marketing” in the title and abstract fields. Broad keywords were also used to capture a variety of related works for a comprehensive thematic profile (Santos et al., 2024). The search, conducted on August 12, 2024, yielded an initial set of 991 documents, which was also verified, and as a result, no duplicates were identified in the dataset.

Screening

After screening 991 records, the results were refined using specific inclusion and exclusion criteria outlined in Table 1. This process eliminated irrelevant records and narrowed the dataset to publications in the field of research (ANZSRC 35, 2020) in Commerce, Management, Tourism, and Services, which contained the highest number of relevant publications, as shown in Figure 2. ANZSRC 35, 2020 was selected for its strong focus on sustainable marketing, providing comprehensive insights into relevant practices and developments. After retrieving 664 records, further filtering was applied to include only articles in English, resulting in 435 articles. Following the eligibility assessment, articles unrelated to sustainable marketing, including those focused on general business topics without marketing-specific insights, were removed, leaving 431 articles for review.

Inclusion

The total of 431 articles of the study obtained from the bibliometric data were saved in Excel and analyzed using VOSviewer and R-Bibliometrix Biblioshiny software (Iliescu, 2021). The VOS viewer helps generate maps and identifies relationships among scientific publications, journals, researchers, organizations, countries, and keywords. Co-authorship, citation, co-occurrence, and other links help investigate networks (Martins et al., 2024; Meng et al., 2020). In addition, bibliometric data have been analyzed and synthesized through R-Bibliometrix Biblioshiny (Aria & Cuccurullo, 2017; Nyulas et al., 2024). This software's interface was very simple for data visualization and allowed it to be used to create broad bibliometric maps and graphs. These data were useful for analyzing a huge number of bibliographic data; hence, many graphs, maps, and indicators were designed and generated to improve the understanding regarding research (Hassan & Awad, 2023).

Despite these gaps in VOSviewer's features, it lacks a time range for the data and frequently confuses the user when utilizing clustering (Zhu et al. 2024). On the other hand, Biblioshiny requires expertise in R programming for advanced features, and its user learning curve may be considerable (Bujas et al., 2023). Despite these challenges, the tools used enabled a thorough examination of the 431 publications selected, yielding critical new information on the subject of sustainable marketing research. The findings were subsequently reported using a sensemaking approach (Sharma et al., 2024).

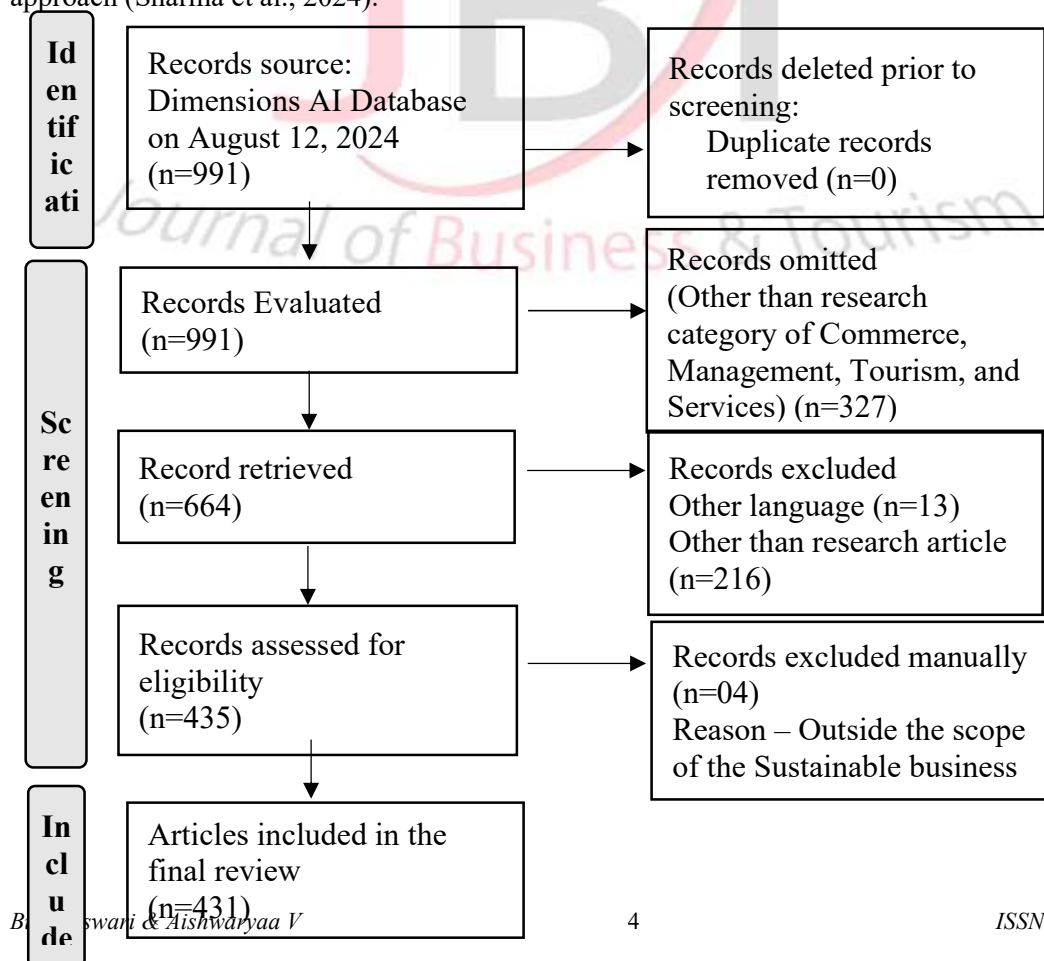


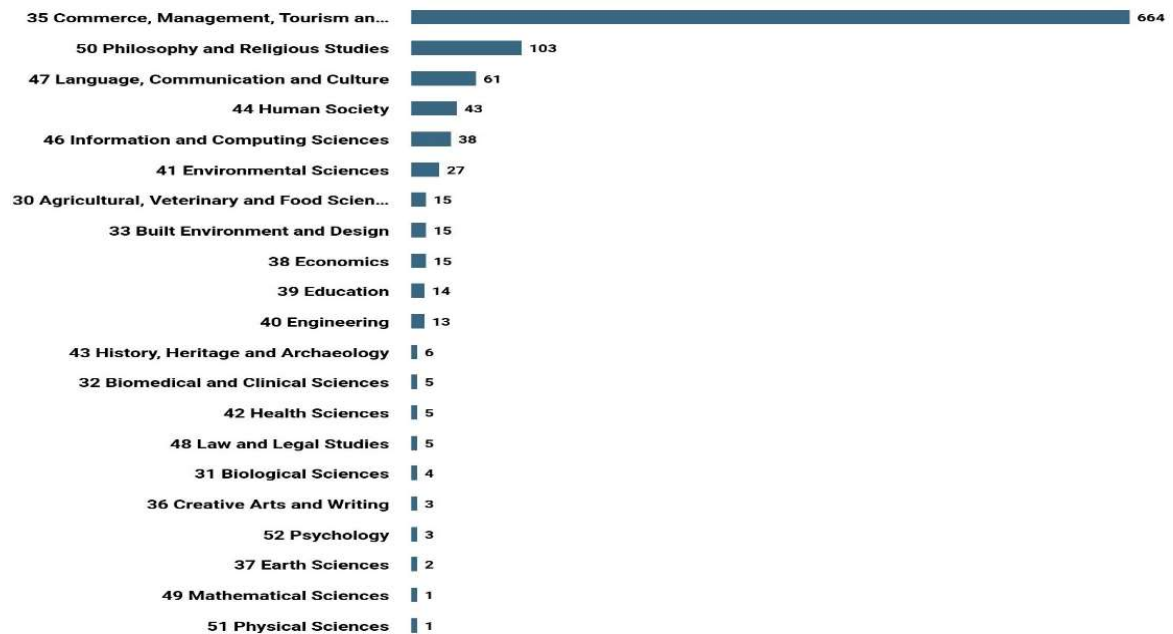
Figure 1 PRISMA protocol

Source: Authors’ own compilation

Table 1 The Five major criteria of *the current sustainable marketing analysis*

Criteria	Inclusion	Exclusion
Source	Records indexed in the Dimensions AI Database	Records indexed in databases other than the Dimensions AI
Field	Records related to sustainable marketing within the fields of commerce, management, tourism, and services (ANZSRC 2020)	Records not relevant to the specified fields
Publication Type	Articles	Proceeding, Edited book, Chapter, Preprint, Monograph and other grey literature
Language	English	Articles published in any other languages
Context	Articles addressing the scope of sustainable marketing	Articles focused outside the scope, such as general business topics without marketing-specific insights

Source: Authors compilation



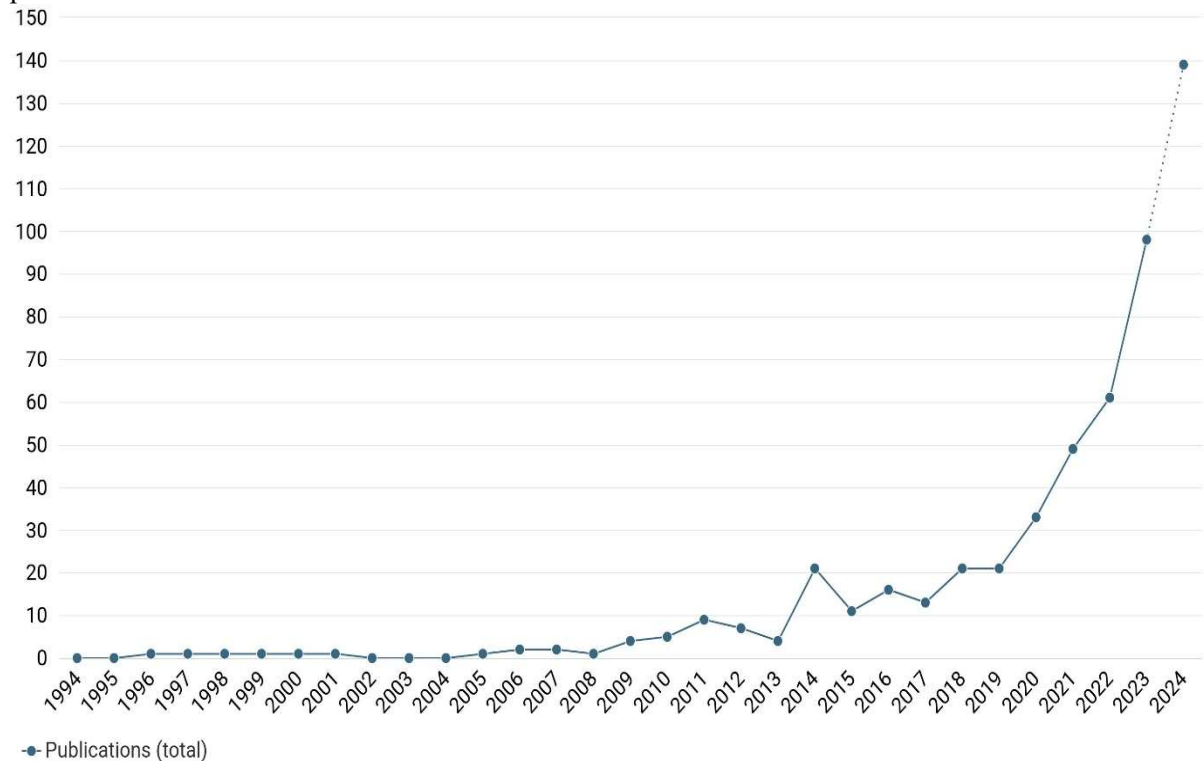
Source- Dimensions AI output

Figure 2 The categories and publications on Sustainable Marketing

Analysis & Discussion

Publication trend in Sustainable Marketing.

The incremental growth of publications related to sustainable marketing research, indicating a rising interest in the field since 2014, is depicted in Figure 3. The pattern was generally consistent until 2018. A large increase occurred after 2018, with a sharp spike in publications beginning in 2020, implying that sustainable marketing became a key focus of research from that period. This upward trajectory reflected the expanding scope of sustainable marketing research, encompassing areas such as the digital age (Rohmansyah et al., 2023), sustainable entrepreneurship (Muhajir, 2024), sustainable business strategies (Prescah, 2023), and sustainable consumption behavior (Lavuri et al., 2023), highlighting an increasing integration of sustainability in business marketing practices.



Source- Dimensions AI output

Figure 3 Publication trend of Sustainable Marketing

Global Citations trend of journals on Sustainable Marketing

Global citation, an assessment of the impact and influence of a publication across fields (Sharma et al., 2024). In this study, the publication with the most global citations is “Towards Sustainability: The Third Age of Green Marketing” by Peattie (2001) with 337 global citations, followed by “Frontiers of the Marketing Paradigm in the Third Millennium” (2011) by Achrol & Kotler (2012) with 280 global citations, and “Sustainability and Marketing in Tourism: Its Contexts, Paradoxes, Approaches, Challenges, and Potential” by Font & McCabe (2017) with 263 global citations (Table 1). These high citation counts reflect the growing importance of

sustainable marketing as a research topic, with its increasing influence across various fields and industries.

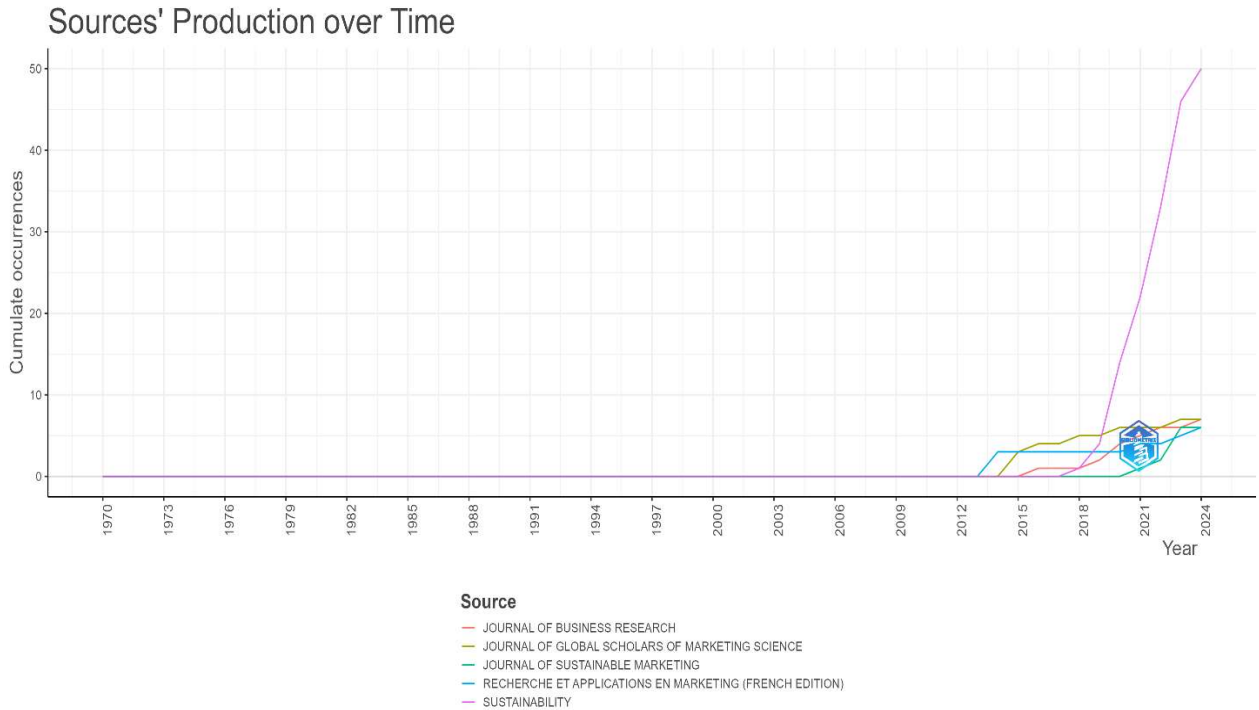
Table 1 Most impactful global citations trend of publications on sustainable marketing research

Title of the Article	Journal	Author and year	TC	TC per Year
Towards sustainability: The third age of green marketing	The Marketing Review	(Peattie, 2001)	337	14.04
Frontiers of the marketing paradigm in the third millennium	Journal of the Academy of Marketing Science	(Achrol & Kotler, 2012)	280	20.00
Sustainability and marketing in tourism: Its contexts, paradoxes, approaches, challenges and potential	Journal of Sustainable Tourism	(Font & McCabe, 2017)	263	32.88
A framework for sustainable marketing	Marketing Theory	(Gordon et al., 2011)	226	16.14
Review and critical assessment of research on marketing and the environment	Journal of Marketing Management	(Kilbourne & Beckmann, 1998)	221	8.19
Going beyond green: The “why and how” of integrating sustainability into the marketing curriculum	Journal of Marketing Education	(Bridges & Wilhelm, 2008)	164	9.65
Marketing means and ends for a sustainable society: A welfare agenda for transformative change	Journal of Macromarketing	(Varey, 2010)	162	10.80
Sustainable marketing and social media: A cross-country analysis of motives for sustainable behaviors	Journal of Advertising	(Minton et al., 2012)	154	11.85

Source: Authors Compilation

Sustainable Marketing: Journals' Contribution over Time

Figure 4 shows the journal contribution trends over time in sustainable marketing research. The X-axis represents years, and the Y-axis represents cumulative publications of journals. Each line represents a specific journal, thus enabling one to compare the volume of each journal over time (Berthe et al., 2024). The graph also indicates that there are different peculiar publication growth patterns. *Journal of Business Research*, *Journal of Global Scholars of Marketing Science*, and *Journal of Sustainable Marketing* showed a distinct growth pattern. The enormous increase in publication numbers that the *Sustainability* journal has experienced especially after the year 2020. This implies that research on sustainability is gaining more grounds while emphasizing the wider sustainable marketing scope. The upward trend of such publications also indicates a rising academic interest in areas such as business strategy, consumer behavior, and marketing practices toward sustainability in the future. The growing role of sustainability in business suggest its increasing significance in shaping future marketing strategies.



Source- Biblioshiny Output
Figure 4 Journals' Contribution over Time

Most dominant Authors in the field of Sustainable Marketing research

Metrics of author impact are the tools that define statistics concerning the academic influence of researchers. Authors are measured with indicators, such as the h-index (measures productivity and citation impact), g-index (which takes into account weighted citations), m-index (impact relative to career duration), and Total Citations (TC) (Passas, 2024). Table 3 shows the most popular and influential researchers in the area of sustainable marketing research with their respective indices.

These authors have significantly shaped the landscape of sustainable marketing, demonstrating diverse levels of influence and productivity. Among the top five scoring contributors, Kim K H is the most influential, with the highest total citations (TC 294; h-index 5; and g-index 5). These scores indicate a consistent output of high-quality publications. However, the relatively modest m-index of 0.455 suggests that his impact has accumulated over a longer career span.

In addition, Hunt S D stands as the second highest with a score of 222 followed by Kim J and Sun Y. have also made substantial contributions, each attaining an h-index score of 6, a g-index of 7, and an m-index of 0.545, with total citations of 198 and 197, respectively. Their consistent and significant scores imply the importance of their work in advancing the field of sustainable marketing.

Table 3 Dominant Researchers in the Field of Sustainable Marketing

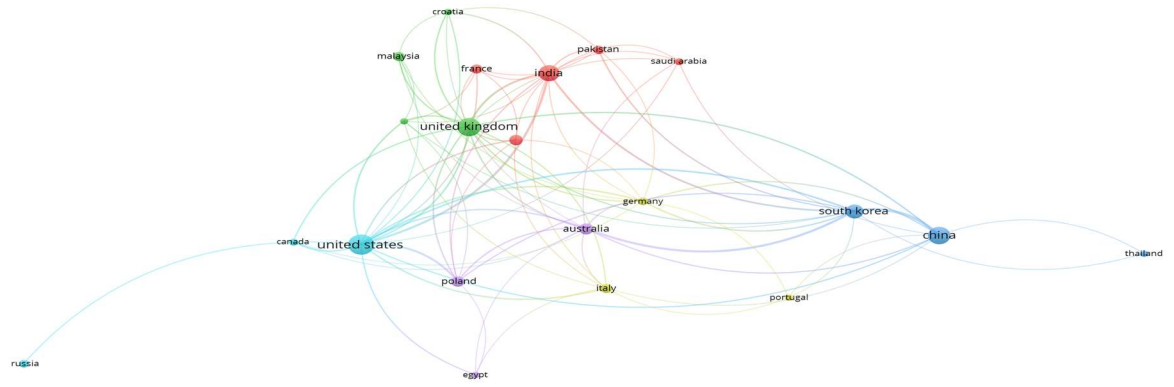
Author	h_index	g_index	m_index	TC
Kim J	6	7	0.545	198
Sun Y	6	7	0.545	197
Kim K H	5	5	0.455	294
Hunt S D	3	3	0.2	222
Kim C	3	3	0.231	188
Lavuri R	3	4	0.75	94
Balderjahn I	2	2	0.333	36
Dyck B	2	3	0.5	24
Garrett T C	2	2	0.222	73
Huttel A	2	2	0.333	36

Source: Author Compiled

Citation analysis of Countries

According to Büyükkıdık (2022), citation analysis considers the number of mentions in other works as measures of determining a publication's scholarly impact. Besides giving one an understanding of the intellectual dynamics of a domain, it also enables the identification of seminal works (Donthu et al., 2021). When applied to countries, citation analysis focuses on their contributions to disciplines such as sustainable marketing. When applied to countries, citation analysis highlights their contributions to fields like sustainable marketing. Figure 5 depicts a citation analysis of nations in sustainable marketing, concentrating on 21 out of 61 that have at least five papers. Total link strength measures the strength of citation linkages and has a greater impact among the scientific community (Al-Ashmori et al., 2024). Each node represents a country, and its size indicates the total link strength (Yu et al., 2020).

The United States has the most total link strength (65), with several connections to other countries. The United Kingdom and South Korea, with connection strengths of 54, have a substantial impact, with nodes near the United States demonstrating strong intellectual ties. Australia and Canada, with link strengths of 34, are influential but have less citation connections than the top contributors. Smaller nodes representing countries such as China, France, India, and Germany emphasize their interest in the topic, but their citation links are less dependable. This network emphasizes the global aspect of sustainable marketing research, and many countries are actively involved in its development.

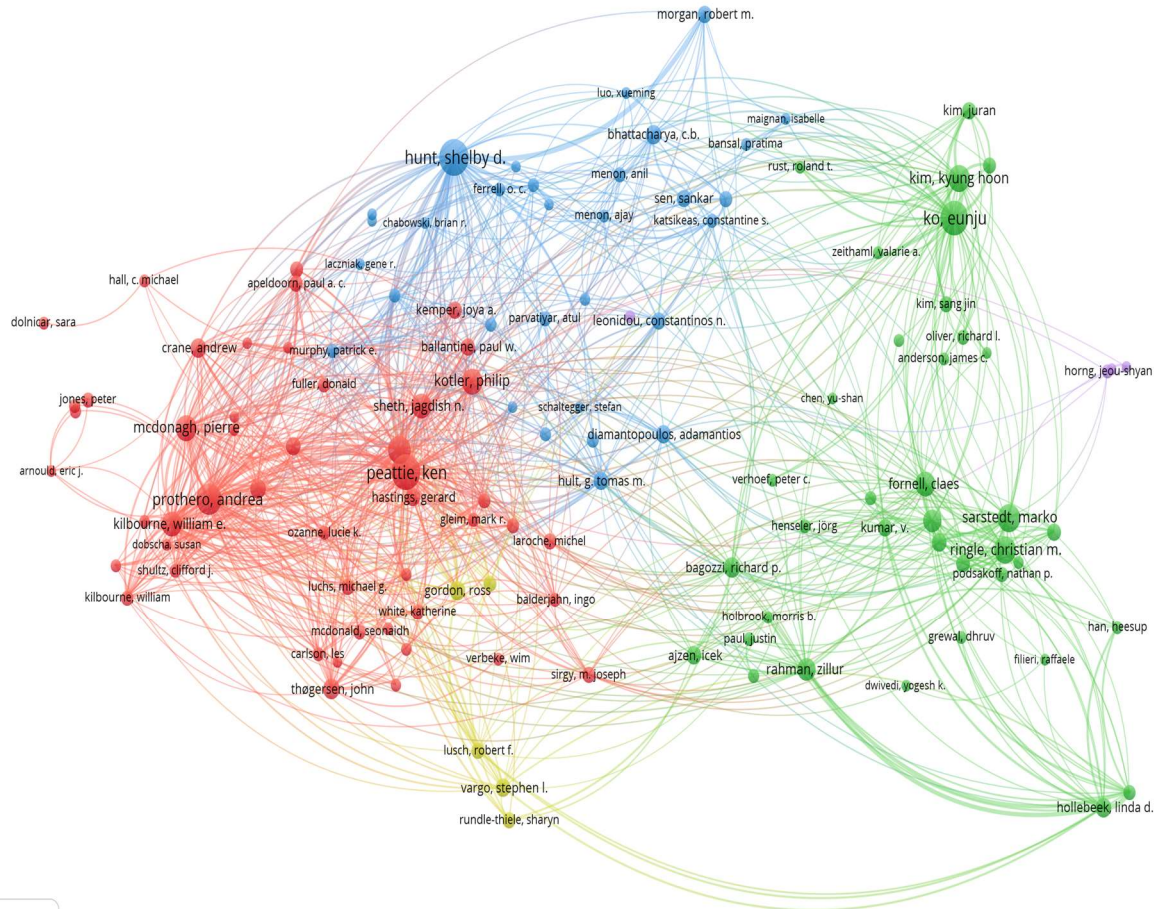


Source: VOSviewer Output

Figure 5 Citation analysis of county

Co -citation analysis of authors

Co-citation analysis identifies thematic clusters and the intellectual structure of a research field by examining how often publications are cited together. This method uncovers influential works but may potentially overlook newer or niche publications (Donthu et al., 2021). In this analysis, the "unit of analysis" is authors, focusing on those whose works are frequently cited together. It reveals patterns in the intellectual structure of the field and highlights key authors and their thematic connections. Figure 6 presents the co-citation analysis of 22,647 authors, with 126 meeting the threshold of 15 minimum citations. This analysis identified five distinct clusters within the field of sustainable marketing.



Source: VOSviewer Output
Figure 6 Co citation analysis of authors

Cluster 1 (Red): Focuses on sustainable marketing and its environmental impact, with key authors such as Peattie Ken, Sheth Jagdish N, Prothero Andrea, and Kilbourne William E.

Cluster 2 (Green): Addresses sustainable consumption and consumer perception, with influential authors like Sarstedt Marko, Ringle Christian M., Fornell Claes, and Kumar

Cluster 3 (Blue): Highlights the strategic business benefits of sustainable marketing, featuring authors such as Hunt Shelby D., Bhattacharya, and Katsalis.

Cluster 4 (Yellow): Explores business performance and strategic management, with prominent figures like Vargo Stephen L., Rundle-Thiele, and Lush Robert F.

Cluster 5 (Purple): Examines big data-driven sustainable marketing, with Horng Jeou-Shyan as a key author.

Each cluster in the Figure 6 reflects a different facet of sustainable marketing, viz., environmental impact, consumer perception, strategic business, strategic management and data-driven marketing.

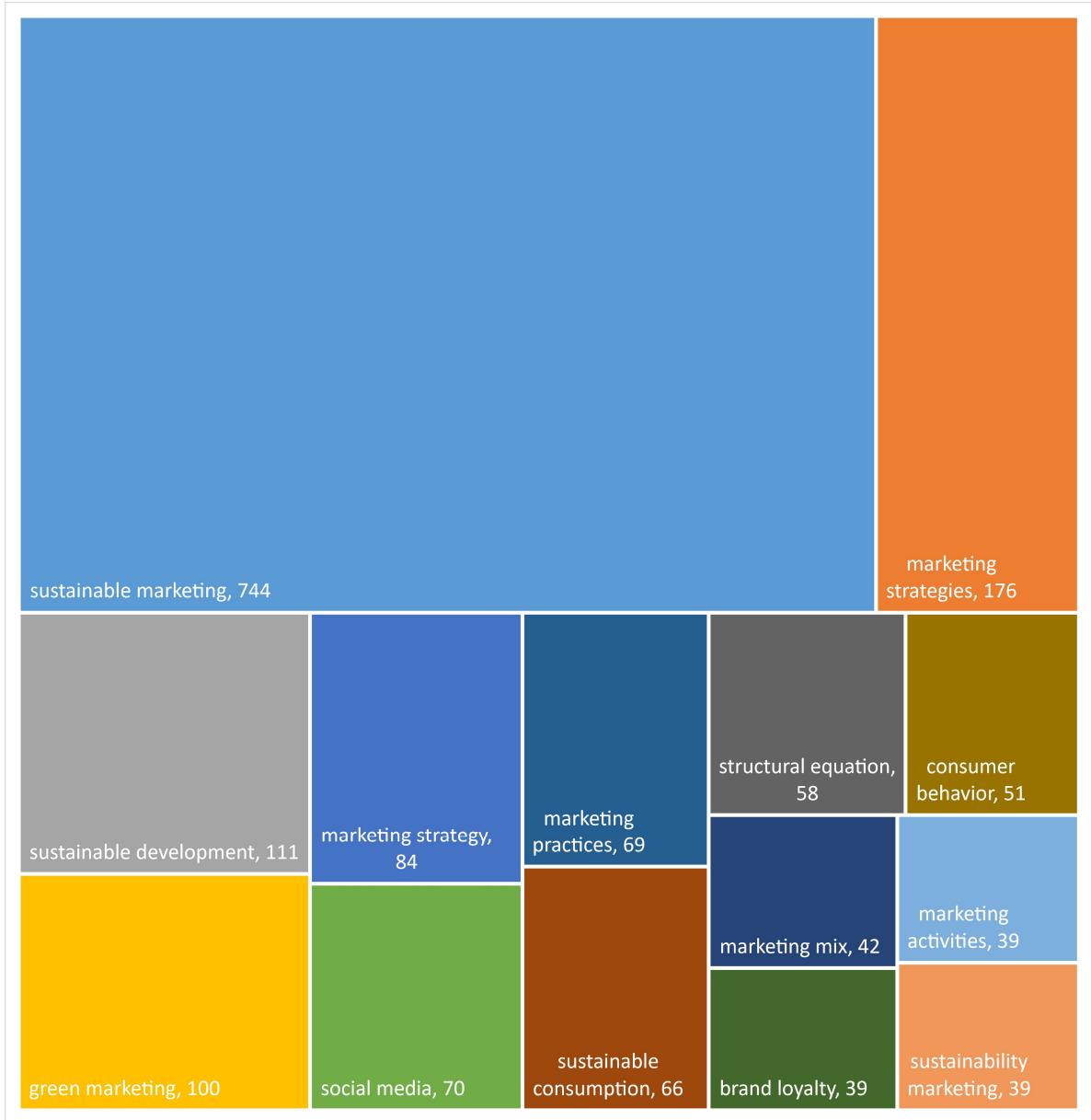
Knowledge foundations for Sustainable Marketing using keyword analysis

Figure 7 illustrates a tree map visualization that highlights the top 10 keywords used in research related to sustainability marketing. The most prominent keyword is sustainable marketing with 744 occurrences, indicating a strong focus on promoting products and services based on their environmental and social benefits.

Following this, marketing strategies (176 occurrences) and sustainable development (111 occurrences) suggest significant research in integrating sustainability into broader marketing strategies and achieving sustainable development goals. Green marketing (100 occurrences) emphasizes the promotion of environmentally friendly products.

Additionally, marketing strategy (84 occurrences) reflects research into the specific tactics required for effective sustainable marketing. Social media (70 occurrences) appears as a key tool, highlighting its role in engaging consumers on sustainability issues. Marketing practices (69 occurrences) focus on practical applications and industry standards in sustainable marketing. Sustainable consumption (66 occurrences) and consumer behavior (51 occurrences) explore how marketing influences consumer decisions towards sustainable products. Structural equation (58 occurrences) indicates a methodological focus, particularly the use of structural equation modeling to analyze relationships between variables in sustainable marketing research.

These keywords collectively illustrate the diverse aspects of sustainable marketing research, spanning strategic planning, practical implementation, consumer behavior and methodological approaches.

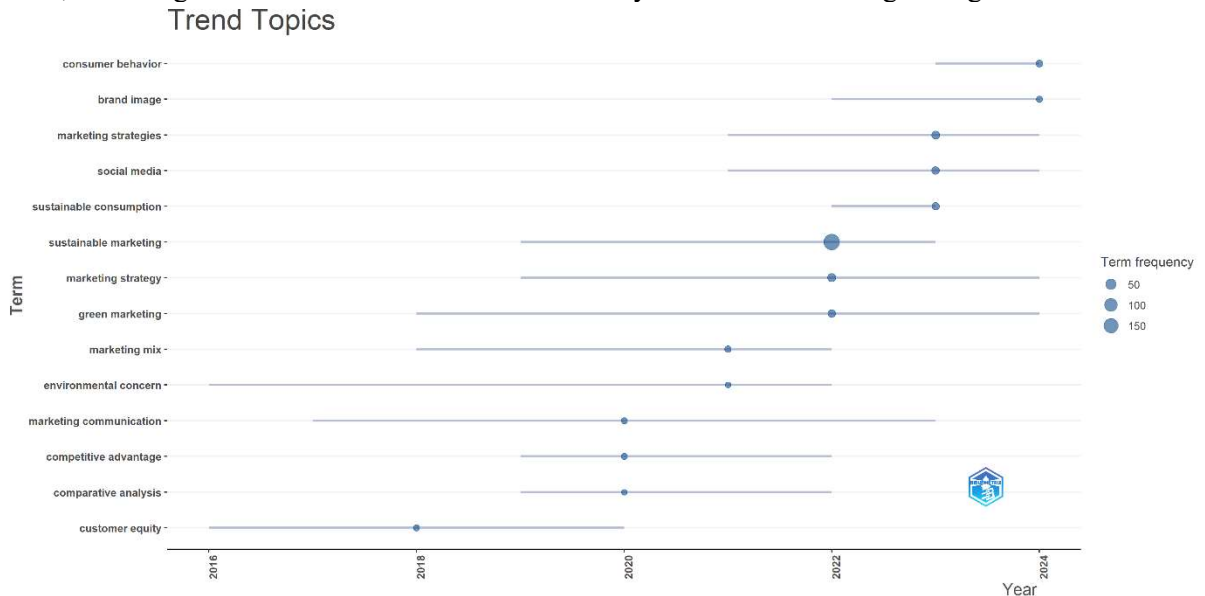


Source: Biblioshiny Output
Figure 7 Keyword analysis

Knowledge Clusters (Major Trending Topic) of Sustainable Marketing

The trend analysis of sustainable marketing research from 2016 (Figure 8) shows that sustainable marketing stands out due to its significantly larger circle, indicating a sharp rise in interest around “2022-2024”. Topics like "consumer behavior" and "brand image" remain consistently relevant across the years but show moderate growth compared to the surge in sustainability-related topics.

"Green marketing" and "sustainable consumption" also begin to rise in frequency starting around 2020, reflecting an increased focus on environmentally conscious marketing strategies.



Source- Biblioshiny Output

Figure 8 Trending topics

Future research direction in sustainable marketing

The future research direction lies in the sustainable marketing as envisioned in thematic mapping (Wanda & Ratih, 2024). The map having four quadrants (Figure 9) offer unique insights on the state and potential of research themes in sustainable marketing. 14 clusters were identified each representing a distinct field of focus to understand the research domain. The map is based on keywords, and defined by the variables of centrality and density. In this framework, higher centrality and density indicate more relevant and well-developed themes. The development of a selected theme is assessed by its density, while its importance is determined by its centrality.

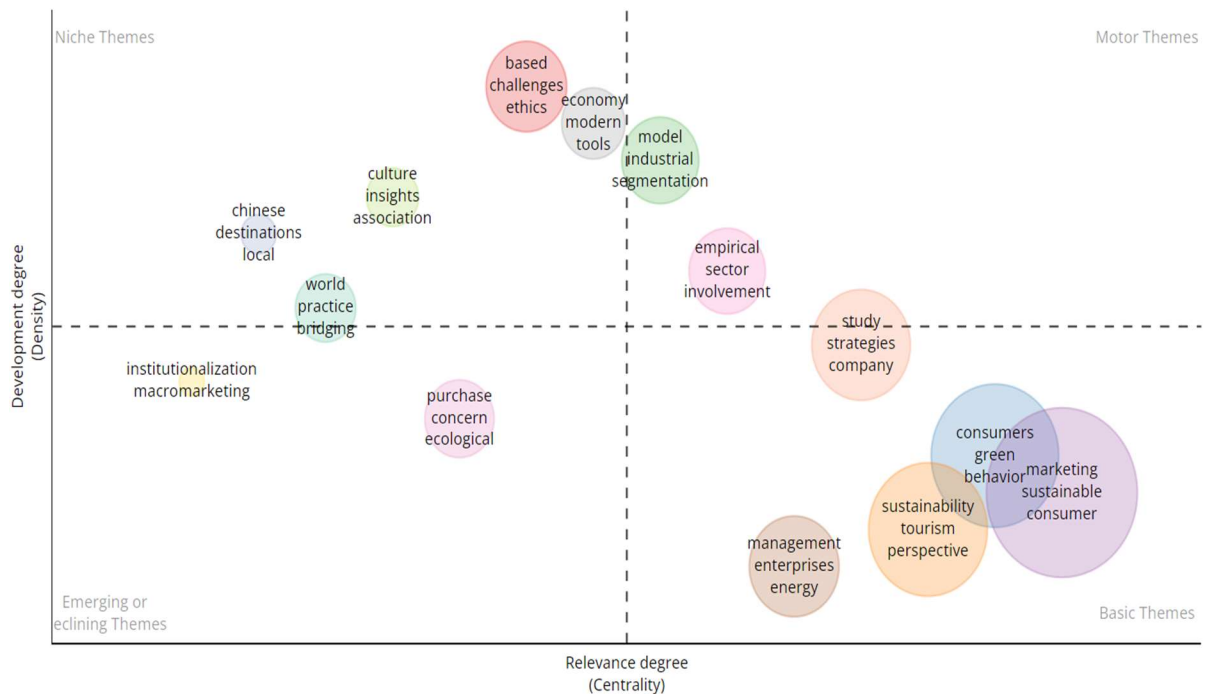
Bottom-Left Quadrant: Declining or Developing Themes

This quadrant represents increasing or declining issues in the field of sustainable marketing. Themes such as "institutionalization," "macro marketing," and "purchase concern" have low centrality and density, indicating that they have not yet been fully integrated into the larger research environment or are becoming irrelevant. These topics are regarded as early-stage concepts that have not garnered much attention from scholars.

Bottom-Right Quadrant: Basic Themes

This quadrant depicts the key issues in sustainable marketing research. Themes such as "Consumers," "Green Behavior," and "Sustainable Consumer" are very central but low in density. These topics are well-known and thoroughly researched, and they have been shown to serve as the foundation for sustainable marketing studies. The lower density means that there may be less

innovation or specialization in these areas, underlining the need for additional research and improvement.



Source- Biblioshiny Output

Figure 9 Thematic mapping of research in sustainable marketing

Top-Left Quadrant: Specialized but Isolated Themes

The top-left quadrant contains well-developed specialist topics that differ from mainstream study on sustainable marketing. Themes such as "Culture," "Insights," and "Based Challenges Ethics" are complex but not central. These issues have been widely researched in specific circumstances, but they do not have a strong connection to the field's central principles. Despite being off the main research agenda, these topics provide vital insights and advanced skills in their respective subfields.

Top-Right Quadrant: Well-Developed and Central Themes

The top-right quadrant comprises advanced and fundamental themes related to sustainable marketing. Topics like "Model," "Industrial segmentation," and "Empirical sector involvement" are heavily centralized and dense, demonstrating their importance and sophistication. These topics highlight the field's significant contributions and suggest future research areas.

Future research directions and Limitations of the study

Based on an analysis of these clusters, we propose nine prospective areas of sustainable marketing:

1. Exploring ethical marketing by addressing greenwashing and promoting transparency in sustainability claims.

2. Developing sustainable tourism marketing strategies, focusing on eco-friendly travel and destination promotion and practices.
3. Investigating the role of management and enterprises in driving sustainable marketing practices across industries.
4. Examining the influence of green behavior on consumer choice of sustainable products.
5. Conducting empirical studies in sector-specific industries like fashion, food, and technology.
6. Analyzing sustainable consumption patterns and the impact of ecological concerns on consumer choices and product adoption.
7. Studying the influence of sustainable company strategies on brand loyalty, long-term consumer relationships, and market positioning.
8. Assessing the societal and environmental impacts of marketing at a macro level.
9. Measuring global sustainable consumption considering local values and cultural contexts.

In addition, the limitations of this study address the scope of future research directions. Bibliometric analysis used in the study is subject to publication bias (Abdelwahab et al., 2024) as it depends on the published literature in English on selected categories. Incorporating empirical studies, alternative databases (Scopus or Web of Science), and software (CiteSpace or SciMat) could be explored as they would reveal different perspectives on understanding the evolution and future directions in sustainable marketing to build on existing knowledge.

Conclusion

The 431 articles related to sustainable marketing were analysed through Dimensions AI database and bibliometric software (R-Bibliometrix Biblioshiny and VOSviewer). A notable increase in publications post 2018, reflects on the importance of sustainable marketing. “Towards Sustainability: The Third Age of Green Marketing” (Peattie, 2001) is the most (337) cited publication, underscoring its pivotal influence in this area. Furthermore, *Sustainability* is regarded as the leading journal in this field. Kim K H, Kim J, and Sun Y are prominent contributors to this discipline. The United States of America is considered as a significant contributor. The co-citation analysis identified five distinct groups of prominent authors highlighting the collaborative character of sustainable marketing research. The study found four major trends: sustainable marketing, consumer behavior, green marketing, and sustainable consumption. Thematic analysis identified existing research areas such as industrial segmentation and empirical sector participation, as well as developing themes such as institutionalization and macromarketing. Basic themes include green behavior and sustainable consumption, whereas motor themes concentrate on industrial segmentation, an important area for future research.

Theoretical contributions

The present investigation provides an extensive analysis of the current state of sustainable marketing research, offering scholars insights into publication trends, influential publications, prominent authors, journals, and leading countries. The findings would enable scholars to focus on critical areas, position their research strategically, and foster collaborations. The analysis of the study revealed key themes like environmental impact of sustainable marketing, sustainable consumption, strategic business benefits of sustainable marketing, business performance and strategic management, and big data-driven approaches. The thematic clusters and their

interconnectedness could be exploited by researchers to pinpoint core areas of focus within the field to understand the evolution of sustainable marketing research.

Trending topics like consumer behavior, green marketing, and marketing strategy, and emerging themes like institutionalization and macro marketing, offers guidance for exploring under-researched areas. The results of the study provide scholars with a framework to engage with high-impact themes and contribute to the advancement of the sustainable marketing discipline. For the policymakers, these insights would help to formulate policies promoting sustainable practices and regulatory frameworks. Thus, these trends and thematic connections, would enable scholars and policymakers to align their efforts to promote sustainable development in the marketing sector.

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