


## GREEN MARKETING: A BIBLIOMETRIC ANALYSIS

**\*Meenu Suresh, \*\*Dr. S Priya**

### Abstract

The notion of "green," which has significantly transformed contemporary marketing practices and is utilized globally, is regarded as an extreme phenomenon in terms of consumers' efforts to maintain an environmentally conscious lifestyle and has, in particular, influenced their purchasing patterns. The development and promotion of products that minimize, eliminate, or even enhance the environmental impact negatively is referred to as "green marketing." This practice is considered to be an extension of "social responsibility." Due to the subject's significance and contemporaneity, green marketing research consistently generates fruitful literature. The primary objective of this research undertaking is to determine and analyze the characteristics of scholarly articles concerning green marketing through the utilization of bibliometric metrics. According to the study, the number of publications concerning green marketing increases annually, with the United States has the greatest volume of such publications.

**Keywords:-** Green Marketing, bibliometric analysis, scientific publication, co-authorship, citation analysis.

 Environmental concerns have become increasingly significant in both the business sector and public sphere worldwide. The issue of global warming is not limited to a select few prominent business entities or world leaders; rather, it affects every

ordinary citizen of our nation and the world. This concern extends beyond these individuals and encompasses the daily depletion of oxygen in the atmosphere. In this current state of global affairs, corporate entities have incorporated green marketing into their promotional

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strategies. This involves making environmental claims regarding the products themselves or the systems, policies, and processes of the companies that produce or sell them.

Green marketing is an essential tool and marketing strategy for promoting ecological development, resource conservation, and environmental preservation by integrating personal, economic, and social considerations. Green marketing is concerned with corporate social responsibility, sustainable marketing, socially responsible marketing, green marketing orientation, green marketing, corporate green product innovation, green marketing strategies, and so on. Given the significance and contemporaneity of the subject, green marketing research consistently generates a fruitful body of literature that examines it from multiple angles. Notwithstanding the increasing scholarly attention towards the field of green marketing, bibliometric research on this subject remains scarce. Bibliometrics is the application of statistical methods and mathematical notation to examine the scientific progression of a particular field of knowledge. Initially, the majority of scholars undertook a comprehensive examination of green marketing by reviewing relevant literature. The bibliometric analysis method enables the visualization of the quality and amount of literature by evaluating authors, publishing institutions, nations, and citation frequency. Bibliometric analysis provides a clear and succinct representation of current research trends and popular subjects. This study intends to contribute to a better understanding of the evolution

of green marketing research by analyzing the characteristics of scholarly publications on the subject using bibliometric indicators from the 'Scopus database'.

### **Green Marketing**

Green marketing is a term that encompasses several concepts such as ecological marketing, sustainable marketing, and green consumption. It involves incorporating environmental considerations into marketing efforts. Furthermore, green marketing, which is also referred to as environmental marketing and responsible marketing, encompasses the incorporation of value-generating transformations that benefit consumers, society, and the natural environment. Green marketing is a burgeoning marketing strategy that simultaneously safeguards or improves intergenerational inheritance capabilities while catering to the present demands of consumers and businesses. According to the American Marketing Association, green marketing is the marketing of products that are presumed to be environmentally safe. Green marketing encompasses a wide range of actions, such as product modification, improvements to the manufacturing process, packaging adjustments, and advertising modifications.

Green marketing comprises promotional endeavours that are created and executed with the intention of fulfilling human necessities while mitigating or eliminating adverse environmental effects. The notion of green marketing has been in existence since the inaugural Earth Day in 1970. However, the concept did not gain popularity until the 1980s, when increasing public concern for the

environment resulted in a need for greater availability of environmentally-friendly products and services. The green marketing movement encountered significant obstacles in the late 1980s, notwithstanding its expanding prominence, due to the dissemination of false information by numerous industries regarding their products and services. The concept of green marketing gained significant attention during the late 1980s and 1990s, following the outcomes of the inaugural symposium on ecological marketing, which was conducted in Austin, Texas (US), in 1975. Subsequently, numerous publications pertaining to green marketing were published. The concept of green marketing, which seeks to mitigate the social and environmental consequences of current products and production systems, refers to the marketing efforts undertaken to promote environmentally-friendly products. This concept has undergone evolution since its inception and is analyzed based on three distinct stages. They are:

*Ecological green marketing:* It refers to promotional initiatives that address environmental issues, which may manifest in both favorable and unfavorable ways.

*Environmental green marketing:* Marketing strategies in which themes such as clean technology, green customers, eco-performance, sustainability, and environmental quality arise, and the vulnerability of the environment and the people who live in it, as well as the threat of extinction, are stressed.

*Sustainable green marketing:* The implementation of environmental marketing strategies has led to the success

of green products and markets, which present advantageous prospects for environmentally conscious consumers. Moreover, endeavours to influence community behavior have been sustained through the execution of related activities.

### **Bibliometric Analysis**

Bibliometric analysis is a widely used and rigorous approach for investigating and examining substantial amounts of scientific data. In recent years, there has been a significant surge in the adoption of bibliometric analysis within the realm of business research. This surge can be attributed to two main factors: the development, accessibility, and availability of bibliometric software applications like Gephi, Leximancer, and VOS viewer, as well as scientific databases including Scopus and Web of Science; and the bibliometric methodology's cross-disciplinary penetration from information science to business research.

Furthermore, the widespread adoption of bibliometric analysis in the realm of business research is not a passing novelty; instead, it is a testament to its effectiveness in managing substantial quantities of scientific data and generating research with substantial influence. Bibliometric analysis is employed by scholars for a multitude of purposes, including but not limited to investigating the intellectual framework of the existing literature in a particular field and uncovering emergent trends in the performance of articles and journals, patterns of collaboration, and research constituents. Bibliometric analysis is a valuable tool for understanding and visualizing the accumulated scientific

knowledge and subtle changes in established domains. It achieves this by analyzing and interpreting enormous amounts of unorganized data using rigorous methods. Consequently, well-executed bibliometric studies have the potential to establish strong bases for advancing a field in innovative and significant ways. They provide scholars with the ability to obtain a comprehensive overview, identify areas of knowledge that need further exploration, generate new ideas for investigation, and position their intended contributions within the field.

**Objectives of the Study**

The primary objective of this study is to provide a concise and organized overview of the present state of research on green marketing by examining the relevant literature on the subject. The research endeavour is to ascertain and examine, by means of bibliometric metrics, the attributes of scholarly articles pertaining to green marketing that were included in the Scopus database between 1993 and 2023.

**Methodology of the Study**

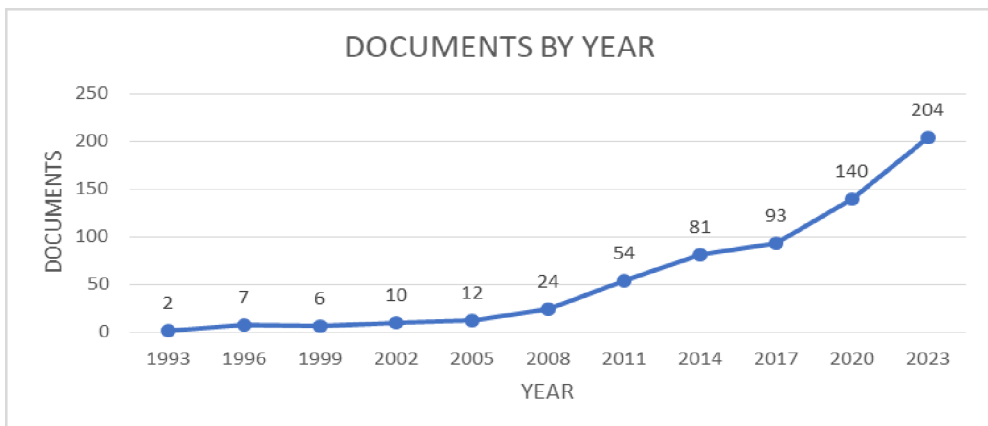
Descriptive and exploratory research was undertaken utilizing bibliometric techniques to analyze the data in order to determine the attributes of scientific publications pertaining to green marketing. The data for the analysis were acquired from the scientific database Scopus, which is today considered one of the most respected independent scientific databases in the world. A total of 1740 publications in the field of green marketing were retrieved from the Scopus database spanning the years 1993 to 2023. The publications were limited from 1740 to 1701 by limiting the specified languages to English exclusively. The Vos Viewer program was used to conduct a bibliometric analysis of co-authorship countries, keyword incidence, and co-citation of cited authors.

**Analysis of Data**

Figure 1 depicts the total number of publications in each year from 1993 to 2023. The green marketing-related

**Figure 1**

**YEARLY GREEN MARKETING RESEARCH PUBLICATION**



Source: Scopus

literature published between 1993 and 2023 indicates a rising trend in publication. These findings imply that green marketing has been a key subject of attention and concentration for academics in recent years. In 2023, there were a total of 204 publications, marking the highest number recorded. In contrast, the year 1993 saw the lowest figure, with a mere 2 publications.

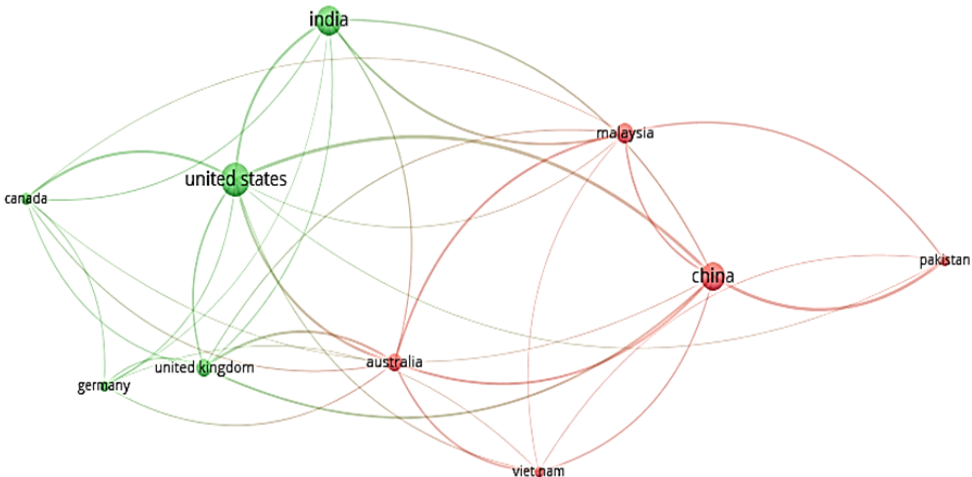
This table 1 shows the most productive countries for green marketing publications based on co-authorship. Co-authorship analysis investigates the relationships and collaborations between authors within a specific study domain. It can be seen that the United States has the highest production volume, with 285 publications on the subject, exceeding the

**Table 1**  
**CO-AUTHORSHIP COUNTRIES OF GREEN MARKETING**

Country	Documents	Citation	Total Link Strength
China	200	5114	57
United states	285	18911	56
Australia	79	3719	45
Malaysia	108	2269	30
United kingdom	85	7255	30
India	231	6418	29
Canada	38	5067	20
Pakistan	31	309	19
Vietnam	29	675	13
Germany	33	1027	11

*Source: Scopus*

**Network Visualisation**



*Source: Self processing*

second and third places, India (231) and China (200).

The minimum number of documents for one country was set at 1, and the minimum number of citations for a country was set at 1, which reduced the number of countries from 107 to 96. The number of countries to be selected was 10. The United States has the most extensive collaboration network in green marketing research, with India, the United

Kingdom, Canada, and Germany highlighted in green. The second collaboration network was developed by China researched in partnership mainly with Malaysia, Australia, Pakistan and Vietnam. The second collaborative network was established by China in conjunction with Malaysia, Australia, Pakistan, and Vietnam, which are emphasized in red.

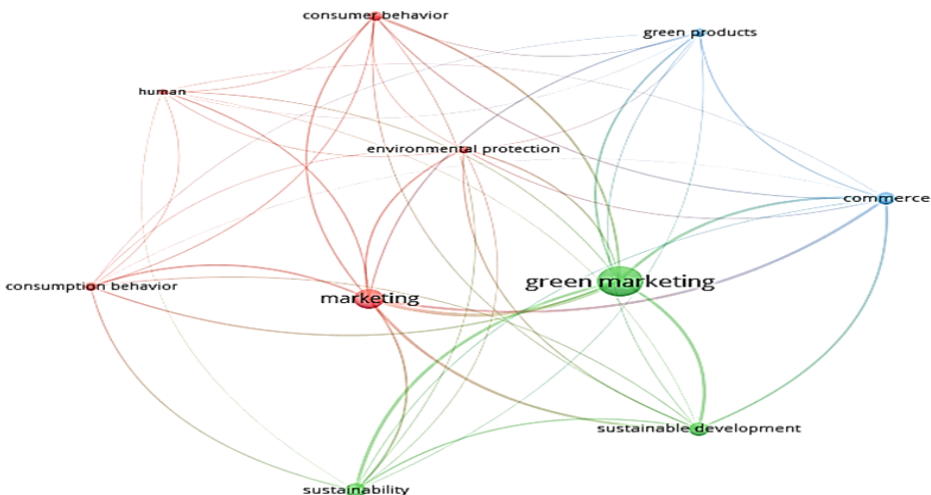
Table 2 provides a quantitative summary of the occurrences of the

**Table 2**  
**Occurrence of Keywords in the Scientific Production on Green Marketing**

Keyword	Occurrences	Total Link Strength
Green Marketing	975	927
Marketing	442	827
Sustainable development	209	449
Commerce	183	436
Sustainability	223	343
Consumer behavior	96	207
Consumption behavior	89	195
Environmental protection	65	169
Green products	83	162
Human	35	89

Source: Scopus

**Network Visualization**



Source: Self processing

keywords. This table revealed that the most commonly used keywords for green marketing during the period 1993–2023 were green marketing with 975 occurrences, followed by marketing with 442 and sustainability with 223 occurrences.

The minimum number of occurrences of a keyword was set at 1,

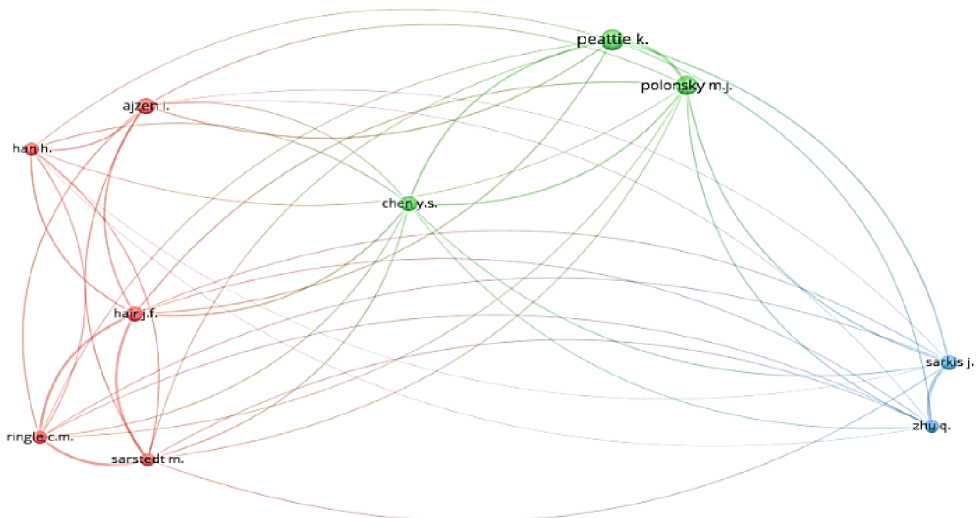
which reduced the number of keywords from 5555 to 1385. The selection of keywords was restricted to a maximum of 10. The keywords were categorized into three clusters based on their sorted order. The cluster with the highest number of elements is depicted in the colour red. In the red cluster, the term “marketing” is the most frequent, appearing 442 occurrences and having total link strength

**Table 4**  
**Co-Citation of Cited Authors**

Author	Citations	Total Link Strength
Hair j.f.	438	3150
Peattie k.	819	2805
Sarstedt m.	312	2796
Polonsky m.j.	661	2668
Ringlec.m.	300	2665
Sarkis j.	400	2473
Zhu q.	306	2314
Chen y.s.	418	1911
Ajzeni.	466	1828
Han h.	328	1512

*Source: Scopus*

**Network Visualization**



*Source: Self processing*

of 827. The second cluster is depicted in the colour green. The term “green marketing” is the most commonly mentioned, appearing 975 times with a total strength of 927. The final and smallest cluster, denoted by the colour blue, contains only two keywords.

The most frequently co-cited authors in the field of green marketing are displayed in this table. According to this table, Peattie k is the author who received the most co-citations with 819 citations, followed by Polonsky m.j. with 661 citations and Ajzeni with 466 citations. The table demonstrates that Ringlec.m is the author with the fewest citations, with only 300 citations from the top ten most cited authors.

The authorship threshold for the minimum number of documents was established at 1, and the citation threshold for the minimum number of citations was set at 1, resulting in a reduction of the total number of authors from 1618 to 1250. The total number of authors to be selected was ten. The predominant cluster is depicted in red, encompassing the authors Hair j.f., Sarstedt m., Ringlec.m., Ajzeni., and Han h. The author with the highest total link strength i.e. 3150, which is associated with the red cluster, is Hair J.F. Peattie K., who appeared in the second-largest cluster, which is denoted by the colour green, is the second-highest author in terms of total link strength.

### Findings

This study indicates that there is a consistent annual growth in the quantity

of publications pertaining to green marketing. The study revealed that the United States dominates the field of green marketing with the biggest output volume, surpassing India and China, which ranked second and third, respectively. The study findings indicate that from 1993 to 2023, green marketing emerged as the most frequently employed keyword in scholarly publications pertaining to green marketing. In the domain of green marketing, Peattie k. is the most frequently co-cited author, followed by Polonsky m.j and Ajzeni.

### Conclusion

Green marketing, an approach rooted in social responsibility, entails the creation and promotion of products that either reduce or eliminate adverse impacts on the natural environment, or even enhance it. By employing bibliometric analysis, this study sought to present a succinct and structured synopsis of the current state of research on green marketing. The study concluded that green marketing has emerged as a significant area of focus and interest among scholars in recent times, as evidenced by the steady growth of scholarly publications pertaining to this topic. The study clearly demonstrates a consistent increase in the literature pertaining to green marketing. In the initial year of the database (1993), only two articles were published on this subject, but in the most recent year analyzed (2023), there were a total of 204 publications. Therefore, it can be asserted that the significance of green marketing is progressively growing in the present global landscape.



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