





# Green Marketing: A Bibliometric Analysis

- K Ashwini\*

Research Scholar, School of Management Studies, IGNOU ash.ashwini010@gmail.com https://orcid.org/0000-0002-9833-0395

-M. S. Senam Raju

Professor, School of Management Studies, IGNOU mssraju@ignou.ac.in



## ARTICLE HISTORY

Paper Nomenclature: Review of Literature (RoL)
Paper Code: Paper Code: GJEISV16I1JM2024ROL2

Submission at Portal (www.gjeis.com): 12-Jan-2024

Manuscript Acknowledged:17-Jan-2024

Originality Check: 23-Jan-2024

Originality Test (Plag) Ratio (Drill Bit): 09%

Author Revert with Rectified Copy: 29-Jan-2024

Peer Reviewers Comment (Open): 31-Jan-2024

 $\textbf{Single Blind Reviewers Explanation}: 20\text{-}Feb\text{-}\ 2024$ 

Double Blind Reviewers Interpretation: 28-Feb-2024 Triple Blind Reviewers Annotations: 29-Feb-2024

Author Update (w.r.t. correction,

suggestion & observation): 15-Mar-2024

Camera-Ready-Copy: 20-Mar-2024

Editorial Board Excerpt & Citation: 28-Mar-2024

Published Online First: 31-Mar-2024

#### **ABSTRACT**

**Purpose:** Green marketing has emerged as a significant area of interest within the broader marketing domain, driven by growing environmental concerns and consumer demand for sustainable products and practices. The main aim of the paper is to get knowledge about green products and understand the concept of green marketing. In order to facilitate the researchers, this study provides a bibliometric analysis of green marketing research from 1995 to 2024.

**Design/Methodology/Approach:** The Scopus database was used to determine to identify year-wise publications, most cited papers, most prolific authors, countries and institutions. The Vosviewer software and biblioshiny was used to analyse keyword occurrence, co-authorship network and inter-country co-authorship network.

**Findings:** The findings of bibliometric analysis indicate that the highest number of green marketing publications were published in 2022. The highly cited research paper is green marketing In the direction of a background for understanding the gap between the attitude and purchase intentions on consumers'. The most prolific author on green marketing is H Hans, Prof in the college of Hospitality and Tourism Management at Sejong University . The highest number of papers on green marketing were published in the Journal of Business Ethics.

**Originality/Value:** This study offers a path to future researchers on the topic of green marketing by providing journals, authors, institutions, countries and keywords related data that are projecting the area of green marketing.

Paper Type: Review of Literature.

KEYWORDS: Sustainable Marketing | Environmental Marketing | Citation analysis | Co-citation analysis | Bibliometric Analysis | VOSviewer

#### \*Corresponding Author (Ashwini Et. Al)

- Present Volume & Issue (Cycle): Volume 16 | Issue-1 | Jan-Mar 2024
- International Standard Serial Number:
- Online ISSN: 0975-1432 | Print ISSN: 0975-153X
- DOI (Crossref, USA) https://doi.org/10.18311/gjeis/2024
   Bibliographic database: OCLC Number (WorldCat): 988732114
- Impact Factor: 3.57 (2019-2020) & 1.0 (2020-2021) [CiteFactor]
- Editor-in-Chief: Dr. Subodh Kesharwani
- · Frequency: Quarterly

- Published Since: 2009
- Research database: EBSCO https://www.ebsco.com
- Review Pedagogy: Single Blind Review/ Double Blind Review/ Triple Blind Review/ Open Review
- Copyright: ©2024 GJEIS and it's heirs
- Publishers: Scholastic Seed Inc. and KARAM Society
- · Place: New Delhi, India.
- Repository (figshare): 704442/13

GJEIS is an Open access journal which access article under the Creative Commons. This CC BY-NC-ND license (http://creativecommons.org/licenses/by-nc-nd/4.0) promotes access and re-use of scientific and scholarly research and publishing.





## Introduction

Concern nowadays is the harm that human activity does to the environment. Governments everywhere are attempting to reduce the effects of humans on the environment. The environment is a greater issue for our society nowadays. Acknowledging the emerging societal concerns, firms have started to adapt their actions and include environmental issues in their organizational operations. Green themes have been included in academic areas' literature. This also applies to marketing courses, where vocabulary like "green marketing" and "environmental marketing" is covered in the curriculum. Governments everywhere have tried to control green marketing because they are now so concerned about it. Green marketing, also known as sustainable marketing or environmental marketing, has gained considerable attention in recent decades due to increasing environmental consciousness among consumers and regulatory pressures on businesses. It entails the development and promotion of products and services that are environmentally friendly, as well as the implementation of sustainable business practices throughout the supply chain. As businesses seek to align with environmental values and address sustainability challenges, academic research in green marketing has flourished. Green marketing refers to the process of developing, producing, and recycling a product with the goal of minimising its negative environmental consequences. These days, the majority of businesses are moving towards green practices as a result of consumers' preference for eco-friendly items. This is done to draw in eco-aware clients. Since environmental issues are the main focus of green marketing, most companies aim to draw in clients by coming up with novel concepts and making use of available resources to create environmentally responsible products. The majority of academics, business professionals, and consumers are very interested in eco-friendly concepts and goods (Stal and Jansson, 2017). Customers in the eco-friendly market understand their obligation to the environment, implying that humans have a duty to protect it. This paper aims to provide a comprehensive bibliometric analysis of green marketing literature, elucidating its evolution, trends, and future directions.

# **Review of Literature**

The article relates the history of green marketing research to early studies on buyer behaviour and environmental management. (Polonsky, 1994) . The area has expanded over time to include a variety of subjects

such as company sustainability initiatives, green branding, green product development, and green consumption. The rise of multidisciplinary research to the connection of environmental science, economics, and marketing shows the growth of green marketing as a unique academic subject. (Chan, 2001). Prominent themes and foundational works in green marketing are identified through co-citation analysis. Studies on how consumers view environmentally friendly products, CSR programs, green supply chain management, and the contribution of laws to sustainability are a few of these.(Lyon & Maxwell, 2008) Furthermore, as societal and industry trends change, new fields like green innovation, the circular economy, and sustainable consumption patterns are becoming more popular in the research community. - Consumer attitudes towards ecofriendly products are impacted by a range of factors such as environmental consciousness, perceived advantages, and socio-demographic traits. (Chen & Chai, 2010) Studies have demonstrated that green marketing strategies, including eco-labeling and green advertising, can favorably impact consumers' purchasing intentions and their assessment of product quality. (Polonsky & Rosenberger, 2001). Implementing green marketing practices may pose challenges like consumer skepticism, lack of regulatory support, and higher production costs. However, it furthermore offers chances for businesses to gain a competitive advantage and enhance brand reputation. (Charter & Polonsky, 1999). With the growing concern for environmental sustainability, emerging trends in green marketing include the adoption of renewable energy sources, development of eco-friendly packaging, and promotion of circular economy principles (Kotler & Armstrong, 20).

### **Research Objectives**

The purpose of this study is to provide readers with a more thorough grasp of the latest advancements in green marketing research. This study uses bibliometric techniques to look at green marketing research trends, which will help professionals and academics as well as corporations make decisions. The following objectives are the focus of this study:

- 1. To investigate the availability of publications about green marketing, with special attention to the publishing date and place, keyword analysis, and citation count.
- 2. Examine the connection between the citation and cocitation of green marketing papers.

71

DOI: 10.18311/gjeis/2024 Vol 16 | Issue 1 | Jan-Mar 2024

# **Research Methodology**

Indicating the statistical structures of the research area including the no. of publication per year,

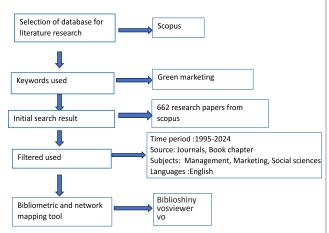


Figure 1: Research Methodology (Prepared by authors)

The image above defines the process that was followed to produce the final data set of 662 publications. Over the past thirty years, bibliometric approaches have been increasingly popular in science and research planning. A bibliometric study is an analytical method that uses quantitative

and empirical data to characterise the dynamics of the distribution of research papers over a certain topic and period of time. (Almind & Ingwersen, 1997; Persson et. al, 2009). Expanding their research opportunities, assessing a research group's influence, or examining the impact of a specific study are three reasons why bibliometric methodologies are used in numerous research domains. (Pilkington & Meredith, 2009). Bibliometric analysis facilitates the collection of tools for the quantitative evaluation of books. Citation analysis and content analysis are used as analytical methods (De Bellis, 2009). According to some academics, it's a method for producing scientific literature that enables evaluation of the rate of scientific and technical progress at a specific degree. It enables the placement of a nation in the global context, a company in a neighbourhood, and even individual academics inside their community (Okubo, 1997).

# **Results and Finding**

The year wise publication on green marketing from 1995-2024 are shown in figure 2. From 1995 to 2018, there were hardly any articles published, However starting from 2019, many papers have constantly published. Within 90 publications, green marketing researched showed impressive development in 2022. This surged in articles was a result of academics rising interest in green marketing.

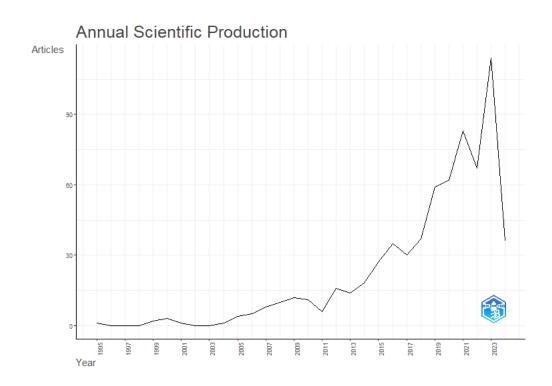


Figure 2. Annual scientific publication over years Source: (Scopus database)

72



#### **Most Prolific Authors**

The details of the authors of green marketing publications are shown in Figure 3. According to our research, the author who has written most frequently about green marketing is H Han with 9. The second most prolific author on green marketing is A Kumar by 5 documents. The third most prolific author is S Gupta by 4 documents followed by Y Li, Y Liu, X Wang. some other prominent author in this area is C Barbarossa, KW Green, LE Herman and R Kumar. The top 10 contributors in this field are given below

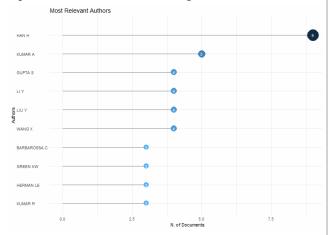


Figure 3: Top 10 Author Published in Green Marketing Source: (Scopus database)

#### Country-Wise cited on Green Marketing

The country wise cited on green marketing by the nations of the researchers is shown in Figure 4. In papers, contributions from a total of 63 nations were identified. The India tops this list with 4460 publications, followed by Korea and the United state with 1471 and 1051 papers respectively. China published 914 papers. Italy and United kingdom published 633 and 604 papers respectively. Sweden, Germany, Malaysia and Iran published 521,477,373, and 364 papers. This research makes it evident that the top four nations on the list have published more than 50% of the publications on green marketing .

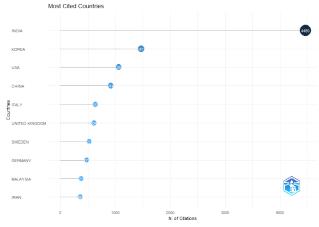
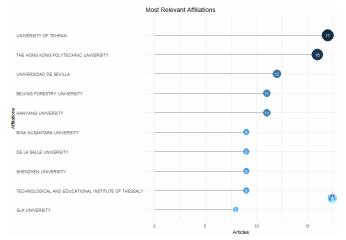


Figure 4: Most Cited Countries
Source: (Scopus database)

# Institution Wise Publication on Green Marketing

The institutions with the highest number of publications in green marketing research are shown in Figure 5 . Only institutions with five or more articles published have been taken into account. In terms of green marketing publications, University of Tehran is in the lead with 17 publication. The Hong Kong Polytech University has published 16 research papers followed by Universidad University and Beijing Forestry University that have published 12& 11 papers respectively. Hanyang University & Bina Nusatara University, have published 11, papers respectively. The following four institutions in this list have published five papers each De La Salle University; Shenzhen University; Technological and Education Institute of Thessaly, GLA University



**Figure 5: Most Relevent Author** Source: (Scopus database)

#### **Keyword Occurrence Analysis**

To regulate how commonly keywords have been used in published Green Marketing studies, keyword occurrence analysis is approved. Research themes and subjects that have been frequently recognized by researchers can be identified thanks a lot to our study. All the terms related to green marketing that have given the idea five or more times in the Scopus database from 1995 to 2024 are included. The text drawing out from map that the VOSviewer software displayed showed the association between keywords by measure the distance between various relations. A closer immediacy among two or more phrases signifies a more important connection between them (Dolhey, 2019). The network map of keyword co-occurrences is shown in Figure 6 . The 692 total occurrences of 20 keywords have been utilised in the green marketing study. This map shows how different lines connect certain terms to one another. These lines represent the co-occurrence of keywords in different papers within the studied data set.

73

DOI: 10.18311/gjeis/2024 Vol 16 | Issue 1 | Jan-Mar 2024

Table 1: Keywords ehich Occurred at Least Five Times in Green Marketing Research

| Keyword                  | Occurrences |
|--------------------------|-------------|
| Sustainability           | 95          |
| Sustainable Development  | 95          |
| Eco-Friendly             | 68          |
| Environmental Protection | 62          |
| Green Marketing          | 51          |
| Green Products           | 31          |
| Marketing                | 29          |
| Eco-Friendly Products    | 27          |
| Environmental Impact     | 27          |
| Purchase Intention       | 23          |
| Consumption Behavior     | 21          |
| Perception               | 21          |
| Environmental Management | 19          |
| Green Chemistry          | 19          |
| Product Development      | 19          |
| Recycling                | 19          |
| Green Economy            | 18          |
| Environmental Economics  | 17          |
| Commerce                 | 16          |
| Environment              | 15          |

Source: (Scopus database)

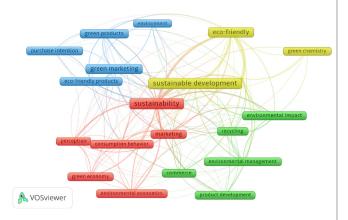


Figure 6: Keyword Occurance

Source: (Scopus database)

#### Inter country Co-Authorship Network Analysis

The purpose of this investigation was to identify which country's writers had collaborated with the greatest number

of writers from other countries in figure 7. The collection from green marketing publications revealed a total of 85 Nations 40 were connected to one another in term of co-authorship. According to VOSviewer program with total connection Strength of 142.00. Seven clusters were formed Cluster I: (Austria, Belgium, Denmark, Germany, Hungary, Italy, Norway, Poland and Sweden) Cluster II: (Canada, China, Hong Kong, Iran, Malaysia, Nigeria, South Korea, Turkey and United State) Cluster III (Australia, Czech Republic, France, Lithuania, Thailand, Ukraine and Vietnam) Cluster IV (Greece, India, Romania, South Africa and Spain) Cluster V (Egypt, Pakistan, Saudi Arabia and United Arab Emirates) Cluster VI (Bangladesh, Indonesia, Taiwan and United Kingdom) Cluster VII (Brazil and Portugal).

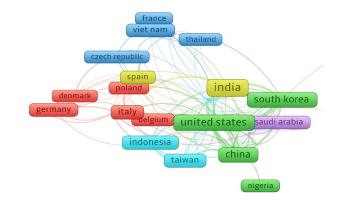




Figure 7: Inter country Co-Authorship Network Analysis
Source: (Scopus database)

## **Citation Analysis**

Citation analysis is a core scientific mapping approach that is predicated on the idea that citations signify the formation of intellectual connections. when one publication refers to another (Appio et al., 2014). The analysis controls the most important articles in the research field. Contempt the fact that there are several methodologies to evaluate the significance of publications in a research field, Stremersch, Verniers, and Verhoef (2007) As a outcome of using citations, one can study the foremost articles on a topic to obtain a greater understanding of its academic dynamic forces. The below figure.8, shows the citation analysis. The following figure lists authors who have cited other people's work. The bubble grows in size with the amount of citations; a smaller bubble indicates that the author in question has earned less citations. Due to shifts in study subject trends, colours are determined by the year an article was published. Based on author works, year, subjects, etc., all of the citations are grouped together. Authors who are cited more are given in the below Figure 8 shows the Citation analysis of authors.

Online ISSN: 0975-1432 | Print ISSN: 0975-153X

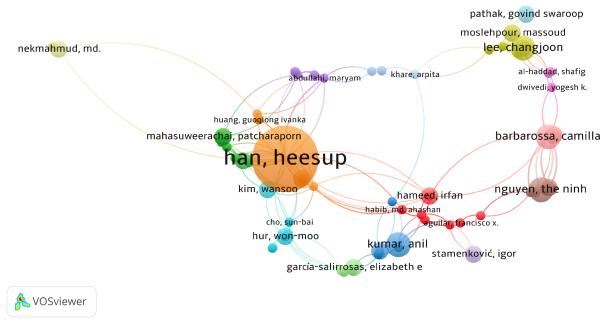


Figure 8: Citation Analysis Source: (Scopus database)

## **Discussion and Conclusion**

This study presents the bibliometric analysis of several green marketing publications that were published between 1995 and 2024. The Scopus database has generated 662 articles in total.. This focused on the annual trend of green marketing publications. It also enumerated the papers and authors that have made the maximum citations, as well as the countries and institutions that have rewarded significantly to the study. This research also involved examing of the coauthorship, intercountry, and keyword occurrence networks. These research provide path to aspirant green marketing researchers by prominence journals, authors, organisations, and countries that are recognized in the subject as well as terms that are commonly used in the study. Green marketing study is increasing and reached its peak in 2022. The highly cited paper on green marketing examine the connection between the purchase intention towards organic or ecofriendly or susitanable products on consumer. The most prolific author on green marketing is H Hans, Prof in the college of Hospitality and Tourism Management at Sejong University. The Journal of Business Ethics published the most papers on green marketing. The majority of authors are from Korea, United state etc.. indicating the nation's importance in the network of international co-authorship. This reserach also examined international co-authorship networks into seven clusters, with Austria, Belgium, Denmark, Germany, Hungary, Italy, Norway, Poland and Sweden evolving cluster.In conclusion, this bibliometric analysis delivers valued visions into the evolution, structure, and dynamics of green marketing research. By mapping the intelligent countryside and identifying key trends, this study pays to a deeper understanding of the field and informs future research agendas. Green marketing, with its focus on sustainability and societal impact, is dignified to play a crucial role in shaping the future of green marketing practice.

# Implications of the Study

Numerous ramifications advance the study of green marketing. First, there appears to be growing interest in this topic, as seen by the publishing data broken down by year and the publications receiving the most citations. study students can also find papers and potential areas for their future study by looking through author-wise publications and journals that regularly issue pieces on green marketing. Comparable green marketing surveys conducted by other nations show a high level of interest in this area. This study supports the geographical variety of green marketing research regarding authorship, journal publication, and institutional ties. Third, an article's term can serve as a symbol for its primary goal, and its recurrence illustrates how the green marketing concerns that scholars have concentrated on as well as the variety of settings in which studies on green marketing have been carried out. Fourth, a research has a bigger impact when it covers a vast geographic region and produces findings that are applicable globally. Thus, academics can collaborate both domestically and internationally through co-authorship network analysis and intercountry co-authorship network analysis. Finding papers, publications, and other pertinent subjects in the field of green marketing research across a variety of historical periods is made easier by these results.

# Limitations of the Study

while our work on green marketing has many benefits, there are a few limitations that suggest ranges for future investigation. In this study, we only considered papers indexed in the Scopus database, which means that any publications not included in Scopus were not analyzed. Researchers in the imminent may want to explore other databases like Web of Science and Google Scholar, among others. Secondly, it's important for future researchers to expand their work and

75

DOI: 10.18311/gjeis/2024 Vol 16 | Issue 1 | Jan-Mar 2024

offer a more comprehensive understanding of this subject. The third limitation of this research is that the bibliometric analysis places greater emphasis on numbers than on the relationships between authors, affiliations, and concepts. Future studies may want to focus on meta-analyses and systematic analyses of the literature. The mainstream of previous research on green marketing was done in progressive marketing, according to the country-by-country analysis and the network of international co-authors. The analysis of green marketing research in emerging marketplaces will now be possible for upcoming studies.

## References

- Almind, T. C., & Ingwersen, P. (1997). Informetric analyses on the world wide web: Methodological approaches to 'webometrics'. Journal of Documentation, 53(4), 404-426
- Appio, F. P., Cesaroni, F., & Di Minin, A. (2014). Visualizing the structure and bridges of the intellectual property management and strategy literature: a document co-citation analysis. Scientometrics, 101, 623-661.
- Chan, R. Y. (2001). Determinants of Chinese consumers' green purchase behavior. Psychology & marketing, 18(4), 389-413.
- Chen, T. B., & Chai, L. T. (2010). Attitude towards environment and green products: consumers' perspective. Management science and engineering, 4(2), 27.
- De Bellis, N. (2009). Bibliometrics and citation analysis: from the Science citation index to cybermetrics. Scarecrow Press.

- Dolhey, S. (2019). A bibliometric analysis of research on entrepreneurial intentions from 2000 to 2018. Journal of Research in Marketing and Entrepreneurship, 21(2), 180-199.
- Lyon, T. P., & Maxwell, J. W. (2008). Corporate Social Responsibility and the Environment: A Theoretical Perspective. Review of Environmental Economics and Policy, 2(2), 240-260.
- Okubo, Y. (1997). Bibliometric indicators and analysis of research systems: Methods and examples. In OECD Science, Technology and Industry Working Papers. Paris OECD Publishing.
- Pilkington, A., & Meredith, J. (2009). The evolution of the intellectual structure of operations management-1980-2006: A citation/co-citation analysis. Journal of Operations Management, 27(3), 185-202.
- Polonsky, M. J. (1994). An Introduction To Green Marketing. Electronic Green Journal, 1(2). https://doi. org/10.5070/g31210177
- Polonsky, M. J., & Rosenberger III, P. J. (2001). Reevaluating green marketing: a strategic approach. Business horizons, 44(5), 21-21.
- Polonsky, M. J., & Rosenberger, P. J. (2001). Reevaluating Green Marketing: A Strategic Approach. Business Horizons,
- Stål, H. I., & Jansson, J. (2017). Sustainable consumption value propositions: Exploring product-service system practices among Swedish fashion firms. Sustainable Development, 25(6), 546-558
- Stremersch, S., Verniers, I., & Verhoef, P. C. (2007). The quest for citations: Drivers of article impact. Journal of Marketing, 71(3), 171-193.

#### **GJEIS Prevent Plagiarism in Publication**

DELNET-Developing Library Network, New Delhi in collaboration with BIPL has launched "DrillBit: Plagiarism Detection Software for Academic Integrity" for the member institutions of DELNET. It is a sophisticated plagiarism detection software which is currently used by 700+ Institutions in India and outside. DrillBit is a global checker that uses the most advanced technology to catch the most sophisticated forms of plagiarism, plays a critical function for students and instructors and tag on a fully-automatic machine learning text- recognition system made for detecting, preventing and handling plagiarism and trusted by thousands of institutions across worldwide. DrillBit - Plagiarism Detection Software has been preferred for empanelment with AICTE and NEAT 3.0 (National Education Alliance for Technology) and contributing towards enhanced learning outcomes in India. On the other hand software uses a number of methods to detect AI-generated content, including, checking for repetitive phrases or sentences and AI-generated writing. As part of a larger global organization GJEIS (www.gjeis.com) and DrillBit better equipped to anticipate the foster an environment of academic integrity for educators and students around the globe. DrillBit is GDPR compliant with privacy by design and an uptime of 99.9% and have trust to be the partner in academic integrity (https://www.drillbitplagiarism.com) tool to check the originality and further affixed the similarity index which is {09%} in this case (See below Annexure-I). Thus, the reviewers and editors are of view to find it suitable to publish in this Volume-16, Issue-1, Jan-Mar 2024.

#### **Annexure 16.1.8**

| Submission Date | Submission Id      | Word Count | Character Count |
|-----------------|--------------------|------------|-----------------|
| 23-Jan-2024     | 1642237 (DrillBit) | 2555       | 17607           |

| Analyzed Document                                   | Submitter email          | Submitted by | Similarity |
|---|--------------------------|--------------|------------|
| 5.2 RoL2_Ashwini_<br>GJEIS Jan to Mar 2024.<br>docx | ash.ashwini010@gmail.com | K Ashwini    | 09%        |



76 Online ISSN: 0975-1432 | Print ISSN: 0975-153X Vol 16 | Issue 1 | Jan-Mar 2024



## Reviewers Memorandum

Reviewer's Comment 1: The phrase "Green marketing" which refers to the tactics employed by businesses to promote ecologically friendly goods and procedures, has gained a lot of popularity recently. A bibliometric study in this paper has provided insightful information on the patterns, trends, and development of this topic. The authors have explored a wide range of topics including publishing trends, authorship patterns, citation networks, and thematic emphasis as it digs into the abundance of academic literature on green marketing paving way for future researchers.

Reviewer's Comment 2: The author's choice of subject is multidisciplinary in nature as green marketing studies is enhanced by the contributions of authors with varying academic backgrounds and geographical regions. The study elucidates the influence of seminal works and leading scholars in shaping the trajectory of green marketing research. The authors' contributions serve as foundational pillars upon which subsequent studies build, demonstrating the cumulative nature of scholarly inquiry.

Reviewer's Comment 3: The study underscores the evolving methodologies employed in green marketing research, ranging from quantitative analyses of consumer behaviour to qualitative investigations. This review study highlights the role of citation networks in delineating intellectual lineages and knowledge dissemination within the green marketing domain. Overall, the author has made efforts to cover most concepts of bibliometric analysis.



K Ashwini and M. S. Senam Raju "Green Marketing: A Bibliometric Analysis" Volume-16, Issue-1, Jan-Mar 2024. (www.gjeis.com)

https://doi.org/10.18311/gjeis/2024

Volume-16, Issue-1, Jan-Mar 2024 Online iSSN: 0975-1432, Print iSSN: 0975-153X Frequency: Quarterly, Published Since: 2009

Google Citations: Since 2009

H-Index = 96 i10-Index: 964

**Source:** https://scholar.google.co.in/citations? user=S47TtNkAAAAJ&hl=en

Conflict of Interest: Author of a Paper had no conflict neither financially nor academically.



The article has 09% of plagiarism which is the accepted percentage as per the norms and standards of the journal for publication. As per the editorial board's observations and blind reviewers' remarks the paper had some minor revisions which were communicated on a timely basis to the author/s (Ashwini & Raju), and accordingly, all the corrections had been incorporated as and when directed and required to do so. The article provides a brief examination of the developments and trends on "Green Marketing: A Bibliometric Analysis". Using exacting bibliometric techniques, it finds ground-breaking publications, significant writers, and new lines of inquiry. The study's conclusions, which shed light on regional and subject clusters in research activity, are insightful for both academics and professionals. This methodological diversity enriches the field and facilitates a nuanced understanding of the concept. After comprehensive reviews and the editorial board's remarks, the manuscript has been categorized and decided to publish under the "Review of Literature" category.

# Acknowledgement

The acknowledgement section is an essential component of academic research papers, as it provides due recognition to all those who contributed their hard work and effort towards the writing of the paper. The author/s (Ashwini & Raju) express their sincere gratitude to all those who assisted in the research process and made this paper a possibility. Lastly, the reviewers and editors of GJEIS deserve recognition for their pivotal role in publishing this issue, without whom the dissemination of this valuable research would not have been possible.

# Disclaimer [

All views expressed in this paper are my/our own. Some of the content is taken from open-source websites & some are copyright free for the purpose of disseminating knowledge. Those some we/I had mentioned above in the references section and acknowledged/cited as when and where required. The author/s have cited their joint own work mostly, and tables/data from other referenced sources in this particular paper with the narrative & endorsement have been presented within quotes and reference at the bottom of the article accordingly & appropriately. Finally, some of the contents are taken or overlapped from open-source websites for knowledge purposes. Those some of i/we had mentioned above in the references section. On the other hand, opinions expressed in this paper are those of the author and do not reflect the views of the GJEIS. The author has made every effort to ensure that the information in this paper is correct, any remaining errors and deficiencies are solely their responsibility.

