

1 “Mapping the Landscape of Green Marketing: A Bibliometric Approach”

2
3 **Abstract:**The United Nations' Sustainable Development Goals (SDGs) are closely related to
4 Green Marketing, emphasising Environmental Sustainability and Responsible Consumption.
5 Green Marketing is a strategic approach that allows businesses to align their products,
6 services, and branding with eco-friendly practices. The primary objective of this study is to
7 perform a bibliometric analysis of "Green Marketing" within scholarly literature. Data was
8 collected from the SCOPUS database spanning 2013 to 2023. Initially, the dataset included
9 1,776 entries, but after a thorough filtering process, it was reduced to 339. The analysis was
10 conducted using the Bibliometrix library and the biblioShiny platform in RStudio. The year
11 2022 saw the highest number of publications, with 45 articles, marking a new peak. By
12 employing advanced bibliometric tools to analyse publication trends, citation analysis was
13 performed to identify key authors and significant works in the field of Green Marketing.
14 Additionally, co-occurrence analysis of keywords and thematic mapping were utilised.

15 **Keywords:** Green marketing, Sustainable marketing, Bibliometric analysis, UN’s SDGs,
16 CSR, Eco-friendly products, Consumer behaviour.

18 1.INTRODUCTION

19 Green marketing is a strategic approach that integrates environmental considerations into
20 various business endeavours. Interest in this topic developed in the late 1970s when the
21 American Marketing Association conducted a workshop on Green Marketing in
22 1975(Michulek, n.d.). From the marketing perspective,marketing and sustainability have
23 drawn a lot of interest from academics and are important in green marketing research. The
24 world aims to achieve the Sustainable Development Goals (SDGs) by 2030, and green
25 marketing is becoming increasingly vital in guiding various enterprises toward a more
26 sustainable future.Along with quality, pricing, and other considerations, consumers also
27 consider commercial characteristics like appearance and packaging, as well as safety, health,
28 and environmental effects(Witek, 2020). The Twelfth Sustainable Development Goal of the
29 UN says that Responsible Consumption and Production is a major issue for society today
30 because of the increasing scarcity of natural resources required to generate goods and
31 services(Prieto-Sandoval et al., 2022). As the interest in consumer resources increases,
32 businesses are seeing the advantage of green marketing (Haba et al., 2023). Also, consumers
33 are willing to spend extra for a cleaner, greener environment(Mishra & Sharma, n.d.).

34 Scholars have increasingly developed quantitative research methodologies for literature
35 reviews by moving from qualitative analysis of literature reviews to analysis of

36 literaturebased on the significance of green marketing research and the present state of
37 existing research(Liu et al., 2023). Our study fills the gaps in the body of current literature by
38 using bibliometric analysis to capture recent advances in green marketing. The paper is
39 organised as follows: Section 2 explains the methodology used to conduct the study. Section
40 3 presents and discusses the results;Section 4 presents the conclusion.

41 There are many studies conducted in the field of green marketing, but it is obvious that there
42 isn't a thorough, organised, and current assessment or review of green marketing conducted.
43 We try to perform a bibliometric analysis of green marketing. To perform this, we asked the
44 following research questions:

- 45 1. What are the publication patterns that exist in the field of green marketing in the years
46 2013-2023?
- 47 2. Are there any networks or groups of researchers that are concentrated on the aspect of
48 green marketing?
- 49 3. Which keywords are frequently used in scientific publications on green marketing?
- 50 4. Which papers are most cited in the field of green marketing?
- 51 5. Which journal publishes the most on green marketing?

52 **2.METHODOLOGY**

53 The bibliometric analysis method was used to assess and identify publishing patterns and
54 trends within green marketing. The data required for the analysis is extracted from the Scopus
55 database. Found the information by searching" green marketing" in Scopus; the information
56 was gathered between 2013 and2023. The initial data comprised 1776 datasets; after the
57 thorough filtering process, it was reduced to 339. The language is limited to English, and the
58 subject area is limited to business, management, and accounting. Document type selected to
59 articles only, and the keyword is green marketing.

60 The 396 results were imported into an Excel file, and no duplicates were found. The analysis
61 was conducted using the Bibliometrix library and the biblioShiny platform. RStudio software.
62 Trend analysis, network analysis, keyword

63 Table 1: An overview of the steps in the article (Michulek, n.d.)

The term used for	The term used for searching	The term used for searching	The term used for searching	The term used for searching
----------------------	--------------------------------	--------------------------------	--------------------------------	--------------------------------

searching				
Green marketing	2013-2023	Scopus	Bibliometric analysis	RStudio

64 Source:own processing

65 The analysis includes annual scientific production, average citation per year, three field plots
66 of keywords, references and authors, source impact factor, keyword analysis, trendy topics,
67 and thematic map.

68 3. RESULTS

69 3.1 BASIC INFORMATION

70 Based on the information obtained from the Scopus database from 2013 to 2023, the main
71 information about data comprises 339 articles focused on green marketing with 38.76 average
72 citations per document. This matrix represents the average number of times these articles are
73 referred to or cited for scholarly work. 497 distinct keywords plus identifiers associated with
74 the documents in this dataset. It refers to terms provided by the database to enhance keyword
75 searches and identify related concepts. A total of 847 unique authors has contributed to the
76 339 documents related to green marketing within this dataset. On average, each document has
77 contributions from 2.77 authors. This suggests collaboration among multiple authors for most
78 documents.

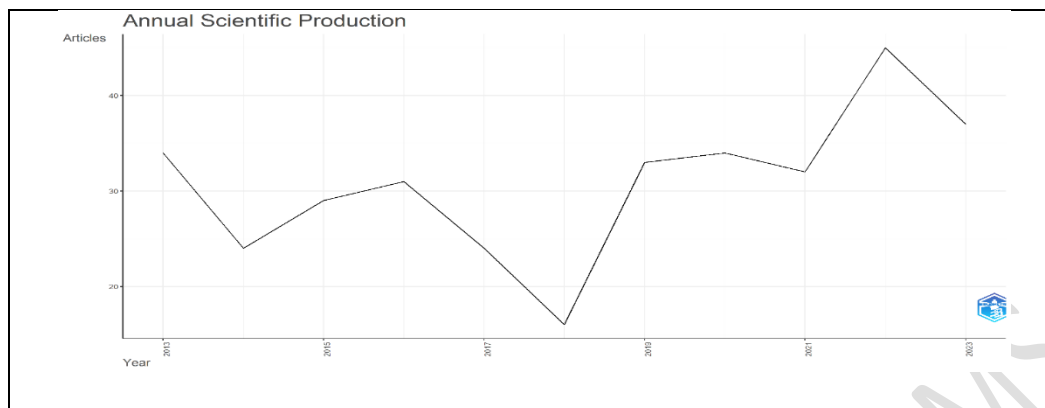
79 **Table 2: general information of the data set**

Description	Results
Main information about the data	
Timespan	2013-2023
Document-type article	339
Average citation per doc	38.76
References	19891
Keyword plus (ID)	497
Authors	847
Co-authors per doc	2.77
Single authors doc	45

80 Source: biblioShiny

81 3.2 NUMBER OF PUBLICATIONS PER YEAR

82 Figure 1: Annual scientific production



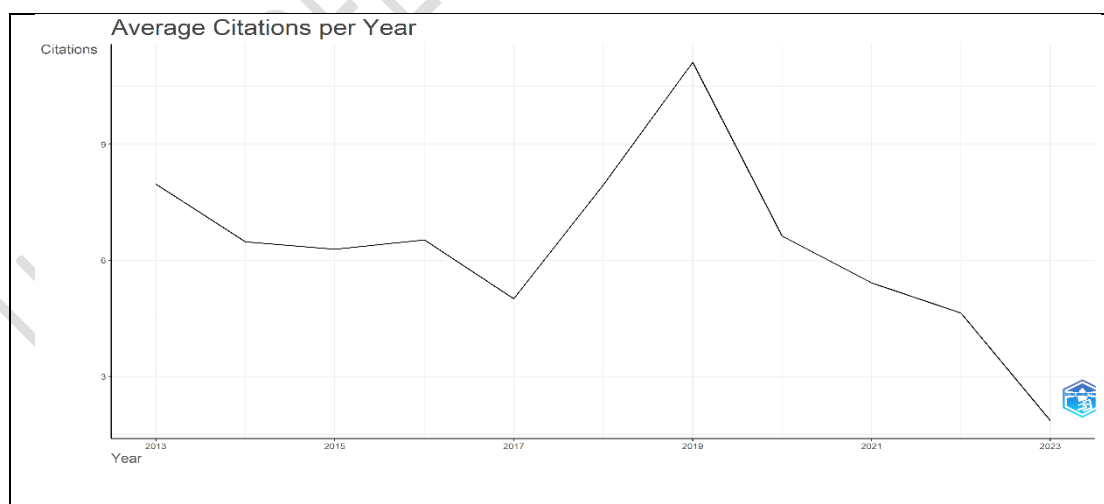
83 Source: biblioShiny

84 339 articles were extracted from the Scopus database on green marketing. From the figure,
85 there is an upward trend in publications after 2019 and a slight decline in 2023. It is clear that
86 the greatest number of publications in the year 2022 is 45, that is, after the COVID-19
87 pandemic, slight changes have arrived in human thought about their health and well-being.

88 3.3 AVERAGE CITATIONS PER YEAR

89 A citation is a reference in which the author of the research appreciates the contributions of
90 earlier scholars; the greater the number of citations, the higher the quality of the
91 publication(Silintowe & Made Sukresna, 2023).

92 Figure 2: Average citation per year

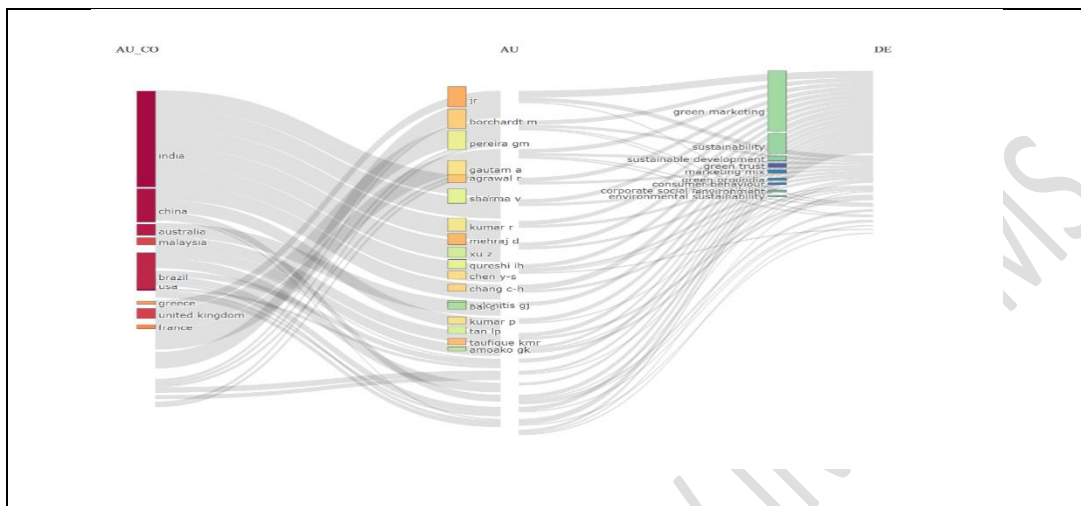


93 Source: biblioShiny

94 The highest number of mean citations is in the year 2019, with a value of 9.26.

95 3.4 Three-field plot

96 In a three-field plot, the important elements are shown in multicoloured rectangles. It shows
 97 major components in articles and their relationships. The components may be authors,
 98 keywords, references, countries, etc. The higher the rectangle, the greater the connection. The
 99 grey line connects them. Figure 3: three field plots



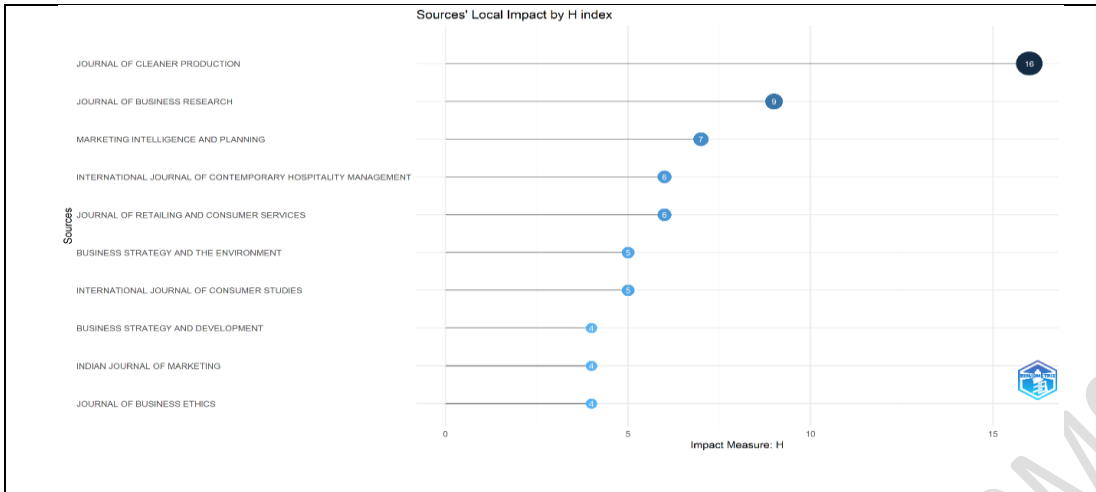
100 Source: biblioShiny

101 It is the three-field plot of green marketing, which describes the relationship between country,
 102 author, and keyword. The keyword is on the left, the author is in the centre, and the country is
 103 on the right. The primary keyword used is green marketing, and it has 60 items, sustainability
 104 in 20, and sustainable development in 5 items, showing their relationship between multiple
 105 countries. India, China, and Australia are the leading nations, and Jr., Borchardt, m and
 106 Pereira are the leading authors.

107 3.5 SOURCES LOCAL IMPACT

108 The H-Index of the journal offers quantifiable measurements of its impact factor. The Hirsch
 109 index, or H-index, is the total number of published articles (h) by a writer or journal that have
 110 each been mentioned at least h times in other publications(. & Anand, 2022)

111 Figure 4: Sources' local impact by H index



112 Source: biblioShiny

113 The Journal of Cleaner Production, Journal of Business Research, and Marketing Intelligence
 114 and Planning are the journals with the highest impact with respective H indexes of 16, 9, and
 115 7.

116 **3.6-WORD ANALYSIS**

117 The word cloud, created using the keyword plus, shows the words in different sizes according
 118 to how often they have appeared in all of the publications. While the rather random word
 119 placement, the key phrases are positioned in the centre.

120

121

122 Figure 5: word cloud



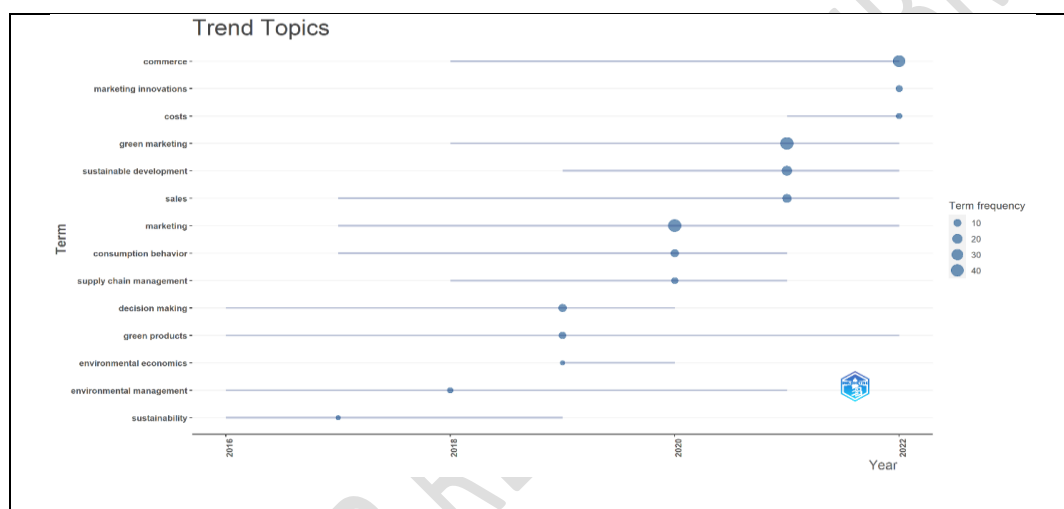
123 Source: biblioShiny

124 From Figure 5, the most often occurring word was marketing, followed by green marketing
125 and commerce.

126 3.7 TREND TOPICS

127 The topic trends assess how different themes have developed throughout time, allowing one
128 to determine which subjects have recently gained popularity and which have been popular for
129 a while. It is also influenced by how frequently the word comes up in research on the current
130 topic.

131 Figure 6: trend topics



132 Source: biblioShiny

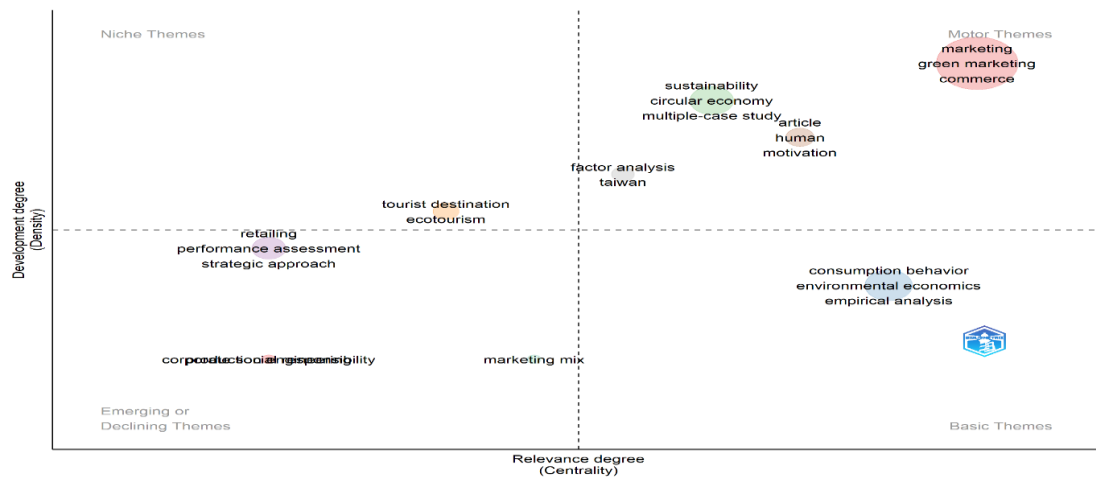
133 The term is used more frequently when it is higher in the graph and more recently when it is
134 further to the right (. & Anand, 2022). The trend topics are commerce in 2022, followed by
135 marketing innovation and cost.

136 3.8 THEMATIC MAP

137 The thematic map shows how different themes have changed over time so that one may
138 determine which subjects have been popular recently. co-occurrence network clusters in the
139 thematic mapping study were displayed as bubbles in a graph based on Callon's centrality and
140 density rank(Afzaal et al., n.d.). The cluster's word occurrences determine the bubble
141 size(Afzaal et al., n.d.)Research topics can be mapped into four categories in R-Studio Cloud
142 using Biblioshiny: Quadrant 1. Motor Theme, Quadrant 2. Niche Theme, Quadrant 3.
143 Emerging or Declining Clusters and Quadrant 4. Basic Theme (Silintowe & Made Sukresna,
144 2023).

145 Figure 7: thematic map

146



147

148

Source: biblioShiny

149 The top right quadrant is a driving theme that needs further investigation and research
150 because of its high density and centrality. There are four clusters in the motor theme; Cluster
151 1 relates to marketing, green marketing, and commerce. Cluster 2 relates to
152 sustainability, circular economy, and multiple case studies. Cluster 3 relates to human
153 motivation and Cluster 4 relates to factor analysis. The mapping results indicated that a good
154 number of these clusters could be explored further in the study to come.

155 4. FINDINGS AND DISCUSSIONS

156 A number of the shortcomings of the current study must be addressed. Initially, a small set of
157 bibliometric approaches was used to analyse the published papers' content. Several data
158 analysis techniques were probably used. Similar to this, data searches need to be widened by
159 using several search engines and search terms to identify additional articles. An additional
160 issue with the study is that publications were selected based just on titles and abstracts rather
161 than full contents. While acknowledging certain limits of the studies is crucial, it's as vital to
162 remember that these studies' shortcomings are typical of the bibliometric analysis area as a
163 whole.

164 To summarise the study, the results obtained from the bibliometric analysis show there is a
165 future perspective on how green marketing might develop and go forward. The study
166 discovered that green marketing, circular economy, and human motivation have a longer-term
167 and future impact by analysing theme mapping.

168 **5. CONCLUSION**

169 This bibliometric research explores the extensive amount of academic literature on green
170 marketing and finds it to be a vibrant and expanding topic that is closely related to the
171 Sustainable Development Goals (SDGs) of the UN. The study was conducted through
172 rigorous data collection and sophisticated bibliometric tools, showcased a significant surge in
173 publications, particularly in 2022, significantly increasing academic interest and relevance in
174 this domain. The analysis, utilising advanced techniques such as citation analysis, co-
175 occurrence analysis of keywords, and thematic mapping, identified pivotal works, influential
176 authors, and emerging themes within the realm of Green Marketing. It underscores the
177 importance of Environmental Sustainability and Responsible Consumption in shaping
178 contemporary business strategies, emphasising the integration of eco-friendly practices into
179 products, services, and branding.

180 The insights gleaned from this comprehensive bibliometric study not only contribute to the
181 understanding of Green Marketing but also offer valuable guidance for researchers,
182 practitioners, and policymakers aiming to align their initiatives with sustainable practices,
183 thus advancing the objectives outlined in the UN's SDGs. The keywords identified in this
184 analysis serve as essential markers in understanding the evolving landscape of consumer
185 behaviour, eco-friendly product development, and the broader context of Sustainable
186 Marketing.

187

188

189 **REFERENCE**

190

191 . N., & Anand, A. (2022). A Bibliometric Analysis of Green Accounting Research. *Journal of*
192 *Commerce & Trade*, 17(1), 76–84. <https://doi.org/10.26703/jct.v17i1-13>

193 Afzaal, M., Qasem, F., Sardaraz, K., Saglietti, M., Wang, H., Peng, Z., & Alkhamash, R.
194 (n.d.). *Bibliometric, network, and thematic mapping analyses of metaphor and discourse*
195 *in COVID-19 publications from 2020 to 2022*.

196 Habu, H. F., Bredillet, C., & Dastane, O. (2023). Green consumer research: Trends and way
197 forward based on bibliometric analysis. In *Cleaner and Responsible Consumption* (Vol.
198 8). Elsevier Ltd. <https://doi.org/10.1016/j.clrc.2022.100089>

199 Liu, L., Cui, H., & Nie, Y. (2023). Cite Space-Based Bibliometric Analysis of Green
200 Marketing. *Sustainability (Switzerland)*, 15(12). <https://doi.org/10.3390/su15129840>

201 Michulek, J. (n.d.). *Green marketing: A Comprehensive bibliometric analysis*.
202 https://doi.org/10.36708/Littera_Scripta2023/1/1

203 Mishra, P., & Sharma, P. (n.d.). *GREEN MARKETING IN INDIA: EMERGING*
204 *OPPORTUNITIES AND CHALLENGES*.

205 Prieto-Sandoval, V., Torres-Guevara, L. E., & García-Díaz, C. (2022). Green marketing
206 innovation: Opportunities from an environmental education analysis in young
207 consumers. *Journal of Cleaner Production*, 363.
208 <https://doi.org/10.1016/j.jclepro.2022.132509>

209 Silintowe, Y. B. R., & Made Sukresna, I. (2023). *Green Innovation in Marketing Research: A*
210 *Systematic Literature Review and Bibliometric Analysis* (pp. 4–22).
211 https://doi.org/10.2991/978-94-6463-076-3_2

212 Witek, L. (2020). Green Marketing: The Environmentally-Friendly Attributes of Products and
213 Decision to Purchase. *Folia Oeconomica Stetinensia*, 20(2), 451–467.
214 <https://doi.org/10.2478/fofi-2020-0059>

215
216
217
218
219
220
221
222
223
224
225
226
227
228
229
230