Green Innovation in Marketing Research: A Systematic Literature Review and Bibliometric Analysis

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Abstract. This study critically reviews the main perspectives and topics in green innovation in marketing research. The purpose of this article is to provide an in-depth understanding of green innovation from a comprehensive overview, analyzing articles and bibliographic information through a systematic literature review (SLR). This study synthesized and analyzed 95 literature review studies obtained from the Scopus database between 1996 and 2021. There were two methodologies used for the analysis – the first was a literature review by tabulating data using excel sheets and bar charts and the second was a bibliometric review using the RStudio Cloud - Biblioshiny software. The approach taken was to analyze the number of citations, keywords, authors, journals, mapping themes, theories, and research methods. An in-depth analysis of the four main topics was carried out, these are green product, performance, green supply chain, and consumer behavior. Forty-four articles were comprehensively read to be used for discussion in this systematic literature review. Several future research opportunities suggested and discussed in this article were obtained.

Keywords: Green Innovation · Eco-Innovation · Marketing · Systematic Literature Review · Bibliometric Analysis

1 Introduction

Health problems are a global matter of concern. Health problems are of course also related to the quality of the environment around us. A new poll of more than 150,000 people in 142 countries has found that the most significant emitters of carbon dioxide are the countries where the citizens are least concerned about climate change and are among some of the most populous countries in the world [1]. Environmental problems, such as global warming, ozone depletion, smog, and water pollution, have largely influenced economic development and social advancement for the next generation [2]. Another factor is human health which is also greatly influenced by human consumption patterns. Most consumers generally enjoy a lot of foods that are high in salt, sugar, and saturated fat, this results in many people living with major health complications, such as obesity, diabetes, and heart disease [3]. Health issues are an important issue, especially in the post

Covid-19 pandemic. People are starting to pay attention to healthy lifestyles regarding what will be consumed and used in everyday life.

People's consumption patterns are closely related to what is offered by the company. Nowadays, companies are increasingly trying to produce products and services that are safe for consumers and the environment [2]. Everything that is around the community will have an impact on the quality of life of the community. Thus, efforts to produce environmentally friendly products become a basic foundation for the company. Green marketing is becoming increasingly important to promote environmental sustainability [4]. The term green marketing is used interchangeably with "sustainable marketing", "ecological marketing", or "environmental marketing". The term "green marketing" first appeared in the late 1980s as a continuation of what had been proposed by the American Marketing Association in 1975 as "ecological marketing". Green marketing or environmental marketing are all activities designed to generate and facilitate any exchange to satisfy human needs or wants, so that the satisfaction of these needs and wants is met, with minimal adverse impact on the natural environment [5].

With regard to green marketing, the development and manufacture of green products is a way for companies to support environmental sustainability and to achieve a competitive advantage [6, 7]. The term "green product" is used generally to describe products that can protect the environment by reducing the usage of toxic substances and causing less pollution and waste [8]. Therefore, green products offer potential benefits for the environment and human health [8]. Green innovation capability is needed so that companies are able to produce environmentally friendly products. For companies, green innovation needs special attention, because consumers, governments, and society, in general, are increasingly concerned about the depletion of natural resources and environmental pollution [9–11].

This literature review focuses on green innovation. Green innovation is one of the environmental strategies that involves a transformation in production procedures, which consists of reducing resource consumption, preventing pollution, and adopting an environmental management system in the field of business operations [9]. The term "green innovation" is often used interchangeably with "eco-innovation". When searching for green innovation and eco-innovation in the Scopus database using the keywords "green innovation" or "eco-innovation", 2521 documents were identified. In the literature review process, screening for topics related to the marketing field was carried out. After searching with the keywords "green innovation" OR "eco-innovation" AND "marketing", 95 documents were obtained. These 95 documents were used in the literature review process.

The literature review was carried out by accessing articles through the Scopus database on the topic of green innovation or eco-innovation in the marketing research. The following was the procedure for performing a literature review: 1) identify document categories and a number of publications based on the topic of green innovation or eco-innovation in the marketing field; 2) identify top journals and authors; 3) mapping of research themes related to the topic; 4) identify the theory, and research method from previous research; 5) explain and discuss descriptive findings from the literature review; and 6) propose future research plans and conclusions.

2   Research Methods

The main purpose of a systematic review of the literature is to identify key scientific contributions to the area under study, then to help limit bias or systematic error, increase the legitimacy and authority of subsequent evidence and provide more reliable results for drawing conclusions and making decisions [12]. There were five stages used [13] in the literature review process.

2.1   Stage 1. Selection of Time Period

The documents reviewed were from 1996–2021. The selection of literature began in 1996 because in that year the topic of green innovation or eco-innovation articles was first obtained in marketing research. There was one article [14] found in 1996 entitled "Marketing Strategies and Market Prospects for Environmentally-Friendly Consumer Products". The study focused on the role that companies and their marketing strategies play in influencing consumer demand for green technology. In addition, managers recognized that there was a product performance gap in the use of green and conventional technology which was a major barrier to the diffusion of green products in the UK. Therefore, better green innovation efforts were needed to be able to produce green products.

2.2   Stage 2. Database Selection

Data was collected through the Scopus database. This choice was made because Scopus uniquely combines a comprehensive database of abstracts and citations and is supervised by experts in their fields [15]. In addition, many researchers have relied on the Scopus database to conduct literature reviews [8, 16–18].

2.3   Stage 3. Article Search Process

The initial search process used the keywords "green innovation" and "eco-innovation" which were accessed through the Scopus database and 2521 documents were found. In relation to the field of research in marketing, the limitation is in the field of marketing. A search with the keywords "green innovation" OR "eco-innovation" AND "marketing" obtained 95 documents. From these 95 documents, a literature review was carried out regarding the document category, the number of publications per year, top journals, top authors, and mapping of research themes.

A re-selection was carried out where the types of books, conference papers, reviews, and notes were not included in the next process, where 69 articles were obtained. Of the 69 articles on the public sector, agriculture, engineering, communication, human resources, and non-English articles that were not used in the subsequent literature review process, 44 articles were used in the discussion section.
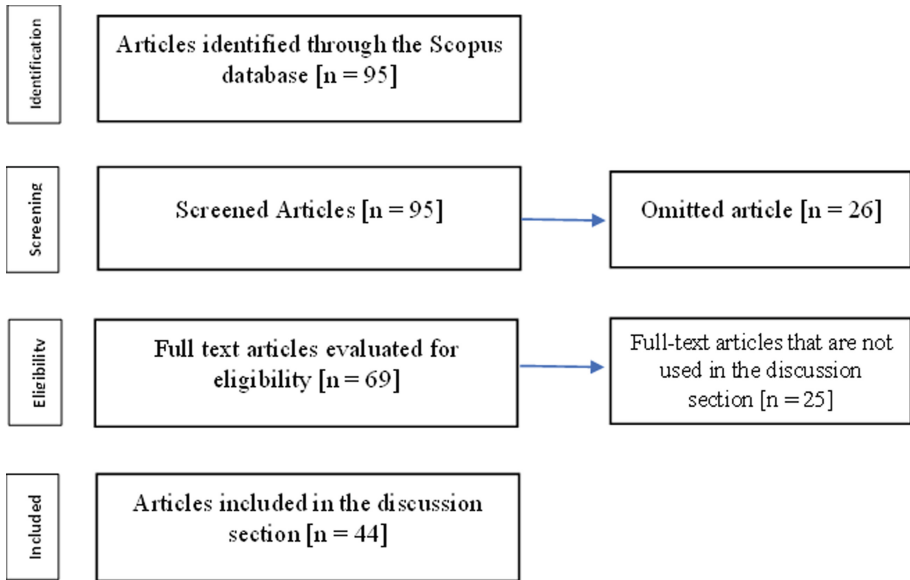
Fig. 1. Article Selection Process. Source: developed by the authors (2021)

2.4 Stage 4. Literature Review and Analysis

The basic analysis that was carried out in this literature review was the document category, the number of publications, journals, and authors who are in the top position, mapping research themes, theories, and research methodologies from previous studies, as well as explaining and discussing descriptive findings from the literature review. The data collection process used metadata from Scopus. Next, the analysis process used Bibliometric with R-Package and Biblioshiny [19].

2.5 Stage 5. Identifying Research Gaps

In this stage, the identification of research gaps from the selected articles was carried out. This research gap was then used as the basis for future research plans with the theme of green innovation in marketing (Fig. 1).

3 Literature Review

3.1 Document Category

Based on articles obtained through the Scopus database, the main information regarding the data is that the average publication per year is 4.6 from 1996 to 2021, the average citation of each document is 20.43, and the average citation per year for each document is 2.788 with 4996 references used. Most types of documents were articles with 69 articles and the second was in the form of conference papers as many as 14 documents. In the next literature review process, sorting was carried out where the documents used were in the form of articles (Table 1).

Table 1. General information of dataset

Description	Results
Main Information About Data	
Timespan	1996:2021
Documents	95
Average years from publication	4.6
Average citations per document	20.43
Average citations per year per doc	2.788
References	4996
Document Types	
Article	69
Book	3
Book Chapter	4
Conference Paper	14
Note	1
Review	4

Source: developed by the authors (2021)

3.2 Number of Publications per Year

The Scopus database yielded 95 publications on green innovation and eco-innovation in marketing research from 1996 to 2021.

From Fig. 2 it can be seen that the research trend continues to grow and this trend will continue to grow in 2021 and the following years. In 2019 the number of research in this field grew rapidly to 14 articles which later increased to 17 articles in 2020. By looking at these trends, this research topic deserves to be researched. Strengthened by the post-Covid-19 pandemic situation where health is an important factor for humans with the hope of better environmental conditions.

3.3 Top Journals

In this literature review, the identification of journals with the highest number of citations based on the topic of green innovation and eco-innovation in the marketing field was carried out. A citation is a reference where credit has been given by the researcher for the work done by the previous researchers and the more the number of citations there are the better the journal is [13]. The journal data in the first five orders are presented in Fig. 3.

The highest number of citations came from articles published in the Journal of Cleaner Production with a total of 313 citations. The journal is also the largest in terms of the number of articles produced. Second in line by the number of citations is the Journal of Marketing, followed by Business Strategy and the Environment, Journal of Business Research, and Sustainability.
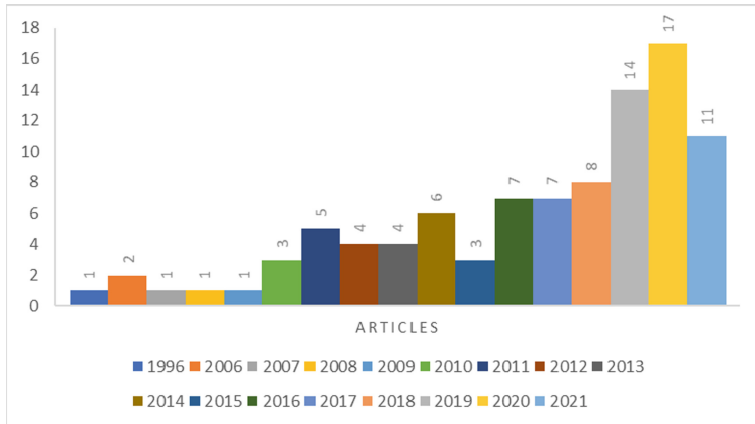
Fig. 2. Number of publications per year on green innovation. Source: Authors (2021)
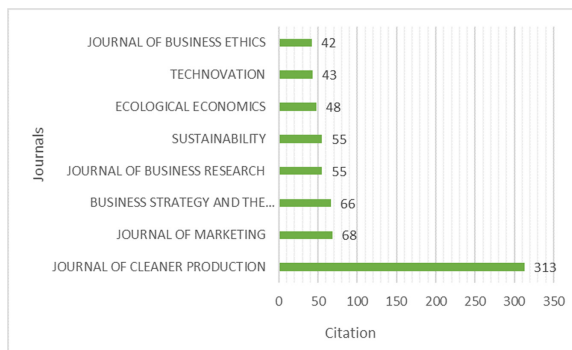

Fig. 3. Top Journals by Number of Citations. Source: Authors (2021)

3.4 Top Authors

Authors of articles who contribute to the top ten research can be seen in Fig. 3. The author who has the highest number of articles is Aryanto VDW with four articles (Fig. 4).

3.5 Research Theme Mapping

In R-Studio Cloud through Biblioshiny, it is possible to map research themes into four categories, namely Quadrant 1. Motor Theme, Quadrant 2. Niche Theme, Quadrant 3. Emerging or Declining Clusters, Quadrant 4. Basic Theme [20]. In Quadrant 1, these themes are both well developed and important for the structure of the research field; Quadrant 2's themes have well-developed internal ties but unimportant external ties and so, they have a marginal role in the development of the scientific field; In Quadrant 3, they are both weakly developed and marginal; In Quadrant 4, they are important for a research field but are not developed. The results of mapping the research themes are shown in Figs. 5 and 6. Topics in Quadrant 1 are topics that have a high level of development
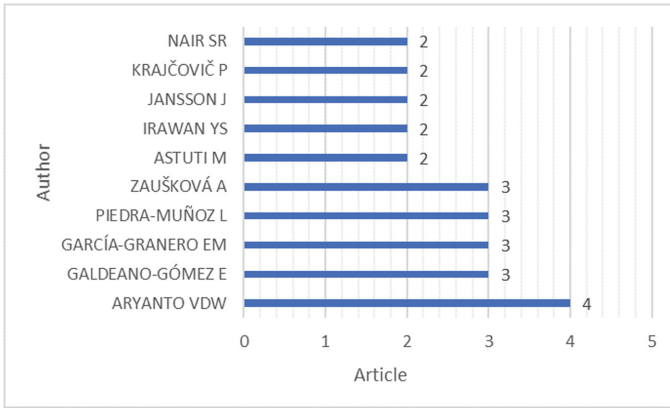
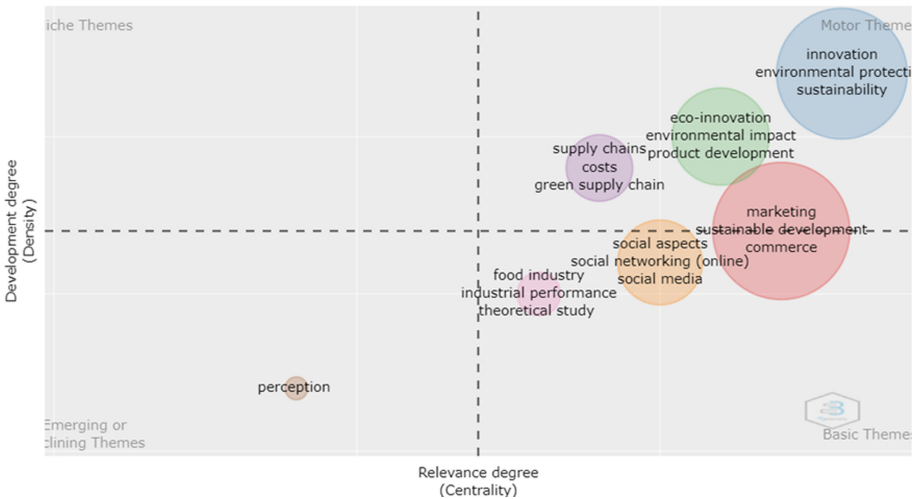**Fig. 4.** Top Authors by Number of Articles. Source: Authors (2021)

Fig. 5. Thematic Map. Source: developed by the authors using RStudio software (2021)

(development degree) and relevance degree between one subtopic and another in the field of green innovation. So, we can focus on the topics in Quadrant 1 that are used for future research directions. Figures 5 and 6 are the results of mapping the research themes.

There are four clusters in quadrant 1, cluster 1 relates to innovation, environmental protection, and sustainability; cluster 2 relates to eco-innovation, environmental impact, and product development; cluster 3 relates to supply chains, costs, and green supply chains; and cluster 4 relates to marketing, sustainable development, and commerce. The mapping results showed that there are quite a several theme clusters that can be developed for future research. This is because green innovation or eco-innovation has become a

Fig. 6. Network Map - Co-occurrence Network. Source: developed by the authors using RStudio software (2021)

keyword in the field of innovation research in recent years as one of the paths to the sustainability of an organization [21].

4   Discussion

4.1   Theoretical Foundations

From the articles that have been collected, mapping was carried out on the theoretical basis used by each article. Not all articles used a certain theoretical basis in the research carried out. After mapping, 22 theories were obtained as shown in Table 2.

The most widely used theories in the research were Resource-based Theory, Innovation Theory, Value-Belief-Norm Theory, and Institutional Theory. Other theories used for research on green innovation and eco-innovation are Upper Echelons Theory, Social Capital Theory, Theory of Planned Behavior, Stakeholder Theory, Learning Theory, Expectations Theory, Psychological Ownership Theory, Contingency Theory, Competence Bloc Theory, Decision Theory, Learning Theory of Organization, Attention-based Theory, Theory of Reasoned Action, Expectancy Value Theory, Fuzzy Set Theory, Cognitive Identity Theory, Signaling Theory, dan Resource Advantage Theory.

4.2   Method Used

After the theoretical mapping was carried out, mapping of the data analysis methods was carried out for each article. The following are the results of the mapping in terms

Table 2. Mapping theory

Theory	Number of Papers	Researcher
Stakeholder Theory	1	Ahmed & Streimikiene [22]
Learning Theory	1	Ardyan, Nurtantiono, Istiyanto, & Rahmawan [23]
Expectations Theory	1	Bartoszczuk [24]
Innovation Theory	4	Chen, Qie, Memon, & Yesuf [25], Jansson, Marell, & Nordlund [26], Yang & Huang [27], Yarış & Yazıcıoğlu [28]
Psychological Ownership Theory	1	Fang, Wu, Chang, & Hung [29]
Contingency Theory	1	Geng, Lai, & Zhu [30]
Competence Bloc Theory	1	Halila & Rundquist [31]
Upper Echelons Theory	2	Halila & Rundquist [31], Hao, Fan, Long, & Pan [32]
Social Capital Theory	2	Hao et al. [32], Li & Huang [33]
Institutional Theory	3	Hao et al. [32], Laosillapacharoen & Karuhawanit [34], Yang & Huang [27]
Value–Belief–Norm theory	4	Jansson [35], Jansson et al. [26], Kunamaneni, Jassi, & Hoang [36], Osburg [37]
Decision Theory	1	Karamaşa et al. [38]
Learning Theory of Organization	1	Laosillapacharoen & Karuhawanit [34]
Resource-based Theory	5	Liao [39], Lin, Ho, Sambasivan, Yip, & Mohamed [40], Toha, Johl, & Khan [41], Yang & Huang [27], Ardyan et al. [23]
Attention-based Theory	1	Moreno-Mondéjar, Triguero, & Sáez-Martínez [42]
Theory of Reasoned Action	1	Osburg [37]
Theory of Planned Behaviour	2	Osburg [37], Yarış & Yazıcıoğlu [28]
Expectancy Value Theory	1	Osburg [37]
Fuzzy Set Theory	1	Paparoidamis & Tran [43]
Cognitive Identity Theory	1	Paparoidamis & Tran [43]
Signaling Theory	1	Paparoidamis & Tran [43]
Resource Advantage Theory	1	Yang & Huang [27]

Table 3. Mapping method

Approach	Data analysis	Researcher
Quantitative	SEM	Ahmed & Streimikiene [22], Chen et al. [25], Ardyan et al. [23], Fang et al. [29], Aryanto [44], Aryanto, Wismantoro, & Widyatmoko [45], Herman & Anggraeni [46], Hur, Kim, & Park [47], Li & Huang [33], Meidute-Kavaliauskiene, Çiğdem, Vasilis Vasiliauskas, & Yıldız [48], Osburg [37], Yarış & Yazıcıoğlu [28]
	SEM-PLS	Astuti, Prawoto, Irawan, & Sugiono [49], García-Granero, Piedra-Muñoz, & Galdeano-Gómez [50], Laosillapacharoen & Karuhawanit [34]
	Regression	Alhadid & Abu-Rumman [51], Bartoszczuk [24], Geng et al. [30], Hao et al. [32], Liao [39], Mourad & Ahmed [52], Osburg, Strack, & Toporowski [53], Pujari [54], Rawashdeh [55], Tsai, Chuang, Chao, & Chang [56], Yang & Huang [27]
	Cluster Analysis	Geng et al. [30], Jansson et al. [26]
	Experiment	Jasrai, Kaur, & Kashyap [57], Kaenzig & Wüstenhagen [58], Paparoidamis & Tran [43]
Qualitative	Case study	Halila & Rundquist [31], Wong, Turner, & Stoneman [14]
	Grounded Theory	Sun, Wu, & Yin [59]
Mixed Method		Kunamaneni et al. [36]
Conceptual Papers		Gajdzik & Burchart-Korol [60], Imai [61], Muntean & Stremtan [62], Piekarski & da Luz [63], Kuo & Smith [64], Kushwaha & Sharma [65], Pereira & Vence [66], Rashid et al. [67], Toha et al. [41]

of the method of each article (Table 3). It can be seen that most of the research used a quantitative approach with Structural Equation Modeling (SEM) data analysis. There is still very limited research that uses a qualitative and mixed-method approach. This is an opportunity for future research.

4.3 Topic Classification

After mapping theory and method, the following explains what articles are included in certain themes based on larger research studies given the results of the literature review conducted by researchers (Table 2). The articles were sorted so that the themes regarding the public sector, agriculture, engineering, communication, human resources, and non-English articles were not used in the subsequent literature review process, resulting in 44 articles (Table 4).

Table 4. Classification of green innovation research topic

Topic	Researcher
Green product	Wong et al. [14], Pujari [54], Muntean & Stremtan [62], Gajdzik & Burchart-Korol [60], Halila & Rundquist [31], Tsai et al. [56], Herman & Anggraeni [46], Liao [39], Bartoszczuk [24], Lin et al. [40]
Performance	Pujari [54], Pereira & Vence [66], Piekarski & da Luz [63], Sarkar [68], Alhadid & Abu-Rumman [51], Rashid et al. [67], Yang & Huang [27], Herman & Anggraeni [46], Kushwaha & Sharma [65], Ardyan et al. [23], Aryanto [44], Li & Huang [33], Aryanto et al. [45], Astuti et al. [49], Oncioiu, Ifrim, Petrescu, & Bîlcan [69], Rawashdeh [55], Hao et al. [32], Laosillapacharoen & Karuhawanit [34], Moreno-Mondéjar et al. [42], Setiawan, Aryanto, & Andriyansah [70], Toha et al. [41], Ahmed & Streimikiene [22], Geng et al. [30], Meidute-Kavaliauskiene et al. [48], Yarış & Yazıcıoğlu [28]
Green supply chain	Li & Huang [33], Laosillapacharoen & Karuhawanit [34], García-Granero et al. [50], Sun et al. [59]
Consumer behavior	Jansson et al. [26], Jansson [35], Mourad & Ahmed [52], Hur et al. [47], Osburg [37], Osburg et al. [53], Jasrai et al. [57], Kunamaneni et al. [36], Paparoidamis & Tran [43], Chen et al. [25]

Green product – Researchers view that companies develop and introduce green products to respond to consumer pressure [14] and laws [14, 46], however, the gap in product performance using green and conventional technologies has been a major barrier to the diffusion of green products. With the development of the company's efforts to produce green products, the company implements an environmental management system, namely the ISO 14001 standard, and a quality assurance system, namely ISO 9001 [60]. Green products themselves include different meanings and benefits for different people according to Tsai, et al. [56]. From the consumer's perspective, green products are expected to increase user safety and reduce the possibility of harmful risks from toxic substances [56, 62]. From the producer's perspective, green products are products resulting from the effective use of recycled resources, with responsible production processes using biodegradable materials to produce new products [56], the input of environmental ideas is to generate new production processes, new products, new markets, and new customers [39] and to increase the brand value of the product [40]. From a public perspective, green production involves reducing social costs in the long run [56]. The advantages of innovation in the use of technology generally contribute to the success of the product because of its novelty [31]. However, in manufacturing green products, the most significant barriers faced by companies in implementing eco-innovation are lack of funds, information, difficult access to capital, relatively high technology costs, risk of market demand and uncertain returns on investment, lack of economic incentives, and fiscal, and administrative barriers [24].

Performance – Pro-environmental innovation that was carried out by the company of course has a goal, namely to increase company efficiency [55], improve environmental performance [30, 48], improve marketing performance [23, 44–46, 70], improve financial performance [49], improve market performance through new product development processes [54], improve company performance [27, 34, 42, 51, 65, 69] moderated by environmental management behavior [51], moderated by institutional pressure [27], through supply chain management [34], supporting the company's competitive advantage [22, 23, 63, 66] and corporate sustainability [41]. Performance measurement on the environmental efficiency of eco-product projects will be the main driver to ensure the success and failure of eco-industrial projects [68]. Strengthened by the ability of environmental innovation in the use of technology (with product innovation and process innovation), non-technology (with marketing innovation, organizational innovation, and institutional innovation) [67], and environmental regulation [32]. Improved performance of green innovation also requires attention to green supply chain practices including internal activities and external activities related to logistics environmental management relationships, such as management support, environmental audits, environmental design, and recovery of investments that are important for the company's green management [33]. Other benefits of green innovation are improving business image, creating economic value, service value, and new markets [28].

Green supply chain – Eco-innovation (EI) is a complex process involving product, process, organizational, and marketing dimensions, each with its own determinants, characteristics, and contributions to environmental business performance [50]. Good innovation performance requires various supports. Green supply chain practices are one of the things that need to be considered to achieve environmentally-friendly innovation performance. Li & Huang's [33] research added a moderating variable, namely relational bonding. The result is that relational bonds, namely financial bonding, social bonding, and structural bonding, moderate the relationship between green supply chain practices and green innovation performance. Other studies use green supply chain management as a mediating variable between environmental orientation and company performance [34]. Green supply chain management in this study consists of green purchase, green customer cooperation, and green investment recovery. The eco-innovation level can be seen from several factors, namely product EI, process EI, organizational EI, and marketing EI [50]. However, according to other studies, there are risks in implementing green innovation. Green innovation risks include risks in R&D, manufacturing risks, marketing risks, and service risks under global value chains, particularly for the manufacturing industry [59].

Consumer behavior - Efforts made by companies in implementing green innovation are of course expected to influence consumer intentions and even actual purchases of green products produced. The consumer group that has the highest level of pro-environmental belief is also the group that has adopted the highest level of eco-innovation [36] which is called "ecovator" in a study, a combination of the words "ecological" and "innovator" [26]. The results of the study also found that the groups most likely to adopt eco-innovations were at a higher level, namely women, more educated, and had higher incomes [26]. Other research, on the other hand, found that there were no differences between men and women and that there were differences for different ages [52, 57], there

were also differences in results based on income and education level [52]. Thus, marketing activities for green products need an appropriate target market [53]. The results of other studies show that adopters of innovations exhibit higher levels of personal and social norms, attitudes, and new pursuits and perceive a higher relative advantage and compatibility than non-adopters [35]. Green brand preference is also influenced by green brand image, green brand satisfaction, green brand trust, and green brand awareness [52]. It is interesting from the results of the study that consumers tend to disagree that they are aware of environmental promotions or that they recognize the meaning of environmental slogans and labels for their chosen brands. Product purchases are usually more associated with individual values perceived by consumers, namely customer satisfaction which increases customer retention and reduces price sensitivity [47], attitudes towards environmental product aspects, attitudes towards innovative product aspects, and subjective norms [37]. In other words, different types of eco-innovations may elicit different consumer responses, depending on how consumers use cues from different categories to understand the innovation and develop their expectations, preferences, and adoption intentions [43]. This is reinforced by the results of other studies showing that green innovation effectively promotes green purchase intention and behavior, and highly innovative consumers are more likely to experience novelty and are more willing to buy [25].

5   Future Study

Based on the literature review that has been done, there are several recommendations regarding future research.

First, research on green innovation is mostly aimed at manufacturing companies, there is still limited research conducted in the service sector. Although there have been several studies in the service sector, they can still be explored more deeply in the eco-innovation efforts carried out in the service sector, for example, in the hospitality industry, delivery services, restaurants, retailers, etc.

Second, research was mostly done by only looking at it from one point of view, for example from the consumer or the company. It is necessary to study more comprehensive research by looking at two sides, such as consumers and companies, or three sides, namely consumers, companies, and the government.

Third, from the consumer's point of view, it was found that there were inconsistent results with regard to purchasing behavior of green products in terms of gender, age, income, and education level. It is necessary to conduct research with longitudinal data to observe the causal relationship at different stages.

Fourth, judging from the research method used, qualitative research is still very limited. With qualitative research, it is expected to get more in-depth information through in-depth interviews about the green innovation process that occurs within the company. Also, in terms of why consumers are willing to buy green products and why they are not willing to buy green products. With in-depth interviews, more comprehensive results will be obtained.

Fifth, based on the results of bibliometric analysis, it is found that research with four clusters in quadrant 1, cluster 1 relates to innovation, environmental protection, and sustainability; cluster 2 relates to eco-innovation, environmental impact, and product

development; cluster 3 relates to supply chains, costs, and green supply chains; and cluster 4 relates to marketing, sustainable development, and commerce are still the main themes that can still be developed. This is in line with the efforts of all of us to protect the limited natural resources for the sustainability of all human life.

Sixth, it is interesting to research marketing communication through digital media about green products to increase public awareness of using environmentally friendly products to be able to educate consumers about the presence of environmentally friendly products around consumers.

6 Conclusion

Research on green innovation and eco-innovation in marketing research can still be developed by continuously increasing consumer awareness to behave in a green manner which in the end is expected to be interested in buying and using environmentally friendly products. The main finding in this literature review is that there is still little research on green innovation in the field of marketing in the service sector, there is still very limited research with a qualitative approach, it is still open for research on four clusters in quadrant 1, where cluster 1 relates to innovation, environmental protection, and sustainability; cluster 2 relates to eco-innovation, environmental impact, and product development; cluster 3 relates to supply chains, costs, and green supply chains; and cluster 4 relates to marketing, sustainable development, and commerce related to the big theme of green innovation. The implication of the study conducted is that the theme of green innovation has developed very significantly in recent years. There is still much room for future research. Green innovation efforts by companies can continue to grow if they are supported by government regulations and consumers who care about the presence of environmentally friendly products and appreciate the company's efforts in running an environmentally friendly business. It takes more effort from companies to introduce products or services that have a green label. Through marketing communication activities, this can be done by providing intensive information to the public so that they are more aware of the presence of environmentally friendly products. Thus, the suggestion for future research is that research with a qualitative approach can be carried out in order to obtain more in-depth information and triangulate data from the point of view of consumers, producers, and the government. In addition, green innovation in the service sector still requires development, and it will be interesting to research marketing communication through digital media on green products to increase public awareness. Based on the findings of the literature review, it is clear that more research on green innovation and eco-innovation in the field of marketing is required.

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