

THE IMPACT OF GREEN MARKETING ON GREEN PURCHASE BEHAVIOR- BIBLIOMETRIC LITERATURE REVIEW

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Abstract

The concept of green consumer behavior has emerged as a novel area of study within the field of marketing, garnering attention from both researchers and practitioners in contemporary consumer research. The primary objective of this study was to ascertain the influence of Green Marketing (GM) on consumer Green Purchase Behavior. The objective will be achieved through the consolidation of current research endeavors and the identification of areas of deficiency and potential avenues for future investigation. The research problem has been formulated with the following questions Does the implementation of Green Marketing strategies have a substantial and favourable impact on consumers' propensity to engage in Green Purchase Behavior? A Bibliometric Literature Review analysis was used. The study has produced several significant discoveries, one of which relates to the impact of Green Marketing Variables (specifically, Green Product, Green Marketing Channels, Green Promotion, and Green Price) on Green Purchase Behavior. Thus, Green Marketing practices influence consumer purchasing behaviour. Also, several studies indicate a weak correlation between GM and consumers' green purchasing behavior (GPB). On the other hand, one of the results, "Green Promotion" was the most significant variable that impacted consumers' purchase behavior. The findings of the study contribute to the existing body of knowledge on green marketing (GM) and green purchase behavior (GPB), enhancing our understanding in these areas.

Keywords: Sustainability, Green Marketing (GM), Green Purchase Behavior (GPB), Bibliometric Literature Review.

INTRODUCTION

Climate change, degradation of natural resources, and pollution are prominent environmental concerns that arise from the unsustainable patterns of global consumption. Additionally, there exists an urgent imperative to redirect economic endeavors, with a specific emphasis on sustainable development, in response to the prevailing concern regarding the climate crisis and environmental state (Troudi & Bouyoucef, 2020). Even with the strong disagreement between supporters and disbelievers of global warming, people awareness to start protecting the environment, and the need to protect environmental is a reality. Recently, Organizations are becoming more concern about the need for sustainability, so they are trying to find more ways to design process that focus on this aspect.

As a result of increased public awareness of environmental issues, there is a widespread inclination among individuals to support companies that are committed to environmentally sustainable products. (Thieme et al., 2015). Companies around the world have recognized the necessity to respond adequately to sustainability challenges, and as a consequence, they have changed their marketing programs (Capatina & Stoenescu, 2015). Therefore, a new concept has been used; Green Marketing (GM). GM differs from traditional marketing in that it

involves making fundamental changes to identify the customers' needs and satisfy them, but also focuses on environmental sustainability, unlike the traditional marketing that focuses on making a profit. Ideally speaking, concern for a healthy environment is the common point at which traders and clients meet (Caprita, 2015). Sutduean et al. (2019) have called for the implementation of sustainable strategies in the domains of product, pricing, promotion, and place. This is commonly referred to as the 4Ps. previously, the emphasis of green marketing primarily revolved around conventional elements such as labelling, incentive strategies, and packaging. However, the marketing landscape has evolved, and the environmental dimension has become increasingly significant. It is imperative for businesses to actively seek out secure and ecologically sustainable organizational strategies employed to carry out routine activities (Martins, 2021). Despite the evolution of marketing strategies towards incorporating environmentally-friendly concepts, the fundamental purpose of marketing remains unchanged: to generate desire, enhance awareness. The current research has effectively identified and defined four distinct characteristics that can be utilized in order to ascertain green marketing. The study focuses on the dimensions of "Green Product," "Green Marketing Channels," "Green Promotion," and "Green Price."

The escalating concerns and enhanced awareness of the environment have been ascribed to the intensified adverse consequences of human actions. Hence, the importance of initiating proactive measures, particularly in the realm of consumer behavior, becomes evident. In recent years, there has been a significant surge in scholarly attention towards the phenomenon of green purchase behavior (GPB) due to its profound environmental implications. (Jaini et al., 2020). Consequently, there is a need for a paradigm shift from traditional shopping behavior to green purchasing behavior to mitigate the adverse impact on the environment (Quoquab & Mohammad, 2017; Quoquab & Mohammad, 2019). Therefore, Green purchase behavior is a multidimensional form of ethical decision-making behavior and is regarded as an indicator of socially responsible behavior. The green consumer, as a socially responsible individual, considers the societal implications of their own consumption and endeavours to leverage their purchasing power in order to promote change in society (Joshi & Rahman, 2015).

The primary objective of this study is to investigate the ecological implications of marketing strategies and their potential impact on consumer behavior towards environmentally friendly purchases. Subsequently, Vu et al. (2021) proposed that within the realm of contemporary consumer research, a novel framework related to the marketing discipline has emerged, responding to the needs of both marketers and scholars. This phenomenon has been stimulated by the widespread adoption of environmentally conscious consumer behavior, thereby warranting additional research in this field. The primary objective of this study is to examine the impact of green marketing on green consumer behavior. Specifically, the current research investigation aims to examine four primary elements of green marketing, particularly Green Product, Green Marketing Channels, Green Promotion and Green Price. Consequently, the study was centred on the synthesis of current research endeavours and the analysis of areas of deficiency and potential avenues for future research. The primary aim of this study is to utilize a bibliometric methodology to investigate the research question: Does the implementation of Green Marketing strategies have a substantial and favourable impact on consumers' propensity

to engage in Green Purchase Behavior? Therefore, the objective of the study is achieved by the resolution of this investigation. One notable aspect of this work, in contrast to other scientific publications, lies in its provision of a full literature assessment on the topics of sustainability, GPB and GM by:

- 1) Attempting to offer resolutions to research inquiries posited in previously published studies within these specific domains.
- 2) Assisting in the existing body of scholarly literature.

This paper starts as follows: In this section, we will begin by providing an introductory overview, followed by a comprehensive analysis of prior research conducted on the sustainable ideas of Green Marketing (GM) and Green Purchase Behavior (GPB). Additionally, we will explore the interconnections and interdependencies between these two concepts. Following this, the subsequent section will present the approach employed in addressing the research question. The subsequent section provides an analysis and discourse on sustainable notions (GM and GPB) by examining relevant literature. Lastly, the concluding section of this work serves to summarize the main findings and discuss their implications, as well as propose possible paths for further research.

LITERATURE REVIEW

1. Sustainability

The responsibility for the changes leading to the escalation of CO₂ levels, a significant greenhouse gas (GHG), may be predominantly attributed to human acts (Sharma & Gandhi, 2015). Nevertheless, there has been a growing acknowledgement among business organizations of the imperative to provide a sustainable environment for the well-being of future generations. Consequently, companies are now implementing corporate policies and adopting practices that are geared towards fostering the enhancement of the ecosystem, with the ultimate goal of achieving this objective (Ur Rashid et al., 2019). What we mean by "sustainability" it's the ability to meet the requirements of the current generation without risking those of the next. This notion comprises three fundamental components, specifically "environmental, social, and economic.

The concept of sustainability is gaining popularity as many tactics and techniques are being implemented to protect the environment. These strategies include Green Marketing (GM), Recycling, green manufacturing, waste reduction, and other similar approaches. These examples exemplify the range of strategies employed to achieve goals related to sustainability.

Marketing is the strategic endeavour of cultivating lasting connections with clients through the implementation of various techniques, including as promotional activities, pricing strategies, and the production and placement of goods and services. The term "green marketing" refers to the strategic development and execution of the conventional marketing mix, commonly known as the 4Ps (Product, Price, Place, and Promotion), with the objective of achieving economic objectives while ensuring the exclusion of any environmentally detrimental elements (Caprita,

2015). Gelderman et al. (2021) define Green Marketing as a strategy framework for environmental management, it emphasizes the prioritization of actions aimed at minimizing or preventing negative environmental effects. The major aim of this endeavor is to enhance the efficiency of product and service distribution by strategically optimizing factors such as planning, location, and pricing. Throughout the course of engaging in research pertaining to Green Marketing, researchers may come across an extensive number of terms that may initially appear to be interchangeable, but in reality, they are associated with distinct elements or specialized domains of study. According to Rahahleh et al. (2020) some of these terms are environmental marketing, ecology marketing, and sustainable marketing. The concept of Green Marketing was initially introduced in 1976, referred to as "Ecological Marketing." This term encompassed any marketing activities that aimed to address environmental concerns and potentially provide solutions to environmental problems (Dangelico & Vocalelli, 2017). On the other hand, "Environmental Marketing" is the external and internal factors that influence and drive an organization's marketing activities. The main feature of environmental marketing is "dynamism" which means the constant changes, due to technological advancement, innovations, and changes of customers' behavior. Additionally, another concept related to Green Marketing is "Sustainable Marketing" by promoting brands, products and services that have social responsibility and commitments to the environment. Thus, it integrates core business functions to ensure that the firms practice what they promote, without affecting the value proposition, and the trust of the customers.

Green Marketing (GM) is a marketing concept that revolves around the organization and incorporation of marketing strategies with the aim of positively influencing consumer preferences, as it encourages individuals to actively participate in the acquisition of ecologically sustainable items (Sutdewan et al., 2019). In their study, Liskova et al. (2016) put out the proposition that GM is:

- "Intuitive" it is imperative to acknowledge the absence of inclination to alter purchasing patterns. The act of procuring organic or sustainable items presents inherent difficulties that beyond those encountered when obtaining conventional commodities.
- "Integrative" It is of utmost importance to conduct a comprehensive analysis and integration of the diverse advantages linked to commerce, technology, social impact, marketing, and the environment.
- "Innovative" the concept of Invitational aims to promote the purchase of ecologically friendly items.
- Finally, "Informative" by disseminating knowledge through environmental education and promoting awareness.

This study will employ the following dimensions to assess the level of Green Marketing (GM):

1.1. Green Product: Numerous factors contribute to the characterization of a green product. For instance, durability, recyclability, renewability, low emission, and local manufacture are among the specific attributes that exemplify green products (Sharma & Foropon, 2019).

1.2. Green Marketing Channels: According to Rahahleh et al. (2020), the decision of the location and timing of product manufacturing holds considerable sway over customer appeal, just as the choice of where and when to market the product does. Educating the channels of distribution on why it's crucial to integrate the concept of sustainability into their everyday operations is the primary goal of this metric.

1.3. Green Promotion: The term pertains to the dissemination and exchange of authentic environmental data to customers who are engaged in the firm's activities (Rahahleh et al., 2020). Companies require of allocating significant resources towards effectively communicating environmental concerns, which presents a formidable undertaking (Gelderman et al., 2021; Grebmer and Diefenbach, 2020).

1.4. Green Price: The determination of prices for environmentally friendly items necessitates the careful consideration of consumers' price sensitivity and their inclination to pay a premium for products that exhibit enhanced environmental values. It is the customers' readiness to pay a premium that can effectively offset the costs associated with the production of eco-friendly products. Dangelico and Vocalelli (2017) assert that there are other factors that might contribute to an increase in product prices, such as elevated manufacturing costs due to stricter regulations or the utilization of higher-priced components to enhance product quality.

2. Green Purchase Behavior (GPB)

Since the mid-1990s, there has been a noticeable increase in the level of environmental and social awareness among individuals, particularly consumers. Since then, there have been notable shifts in consumer buying patterns with regards to environmental concerns (Naz et al., 2020). Additionally, it pertains to the acquisition of environmentally beneficial goods and the deliberate avoidance of ecologically harmful goods. (Martins, 2021). According to Kumar and Ghodeswar (2015), the two most important variables in green consumers' decision-making processes are:

- Essential factors influencing consumers include their environmental obligations, quest for information, self-interest, and dedication to environmental preservation.

External factors that have nothing to do with the product itself, but rather with the customers who buy it (things like pricing, promotion, and quality).

3. The Relationship between GM and GPB

The influence of marketing depends on its ability to change consumer choices and actions through the use of green marketing techniques. Consequently, according to Ali (2021), there exists a clear and compelling necessity to delve farther into the domain of knowledge in order to fully grasp the intricacies of customer purchasing behavior. Moreover, prior studies have demonstrated a restricted association between green marketing strategies and customers' green behavior. Furthermore, the impact of green marketing on consumers' purchasing choices has been acknowledged as the primary focal point in current research on green consumer's behavior (Kumar & Ghodeswar, 2015). Similarly, it is imperative to build a pivotal aspect of green marketing, specifically green consumers, these individuals exhibit conscientiousness in relation to the environmental impact of their consumption behavior, prompting them to modify their approach to making purchases. An emerging pattern among consumers is the inclination to exhibit a readiness to provide financial backing for environmentally sensitive attributes, including sustainability, recyclability, and non-toxicity. In response, the utilization of eco-labels has arisen as a mechanism to provide consumers with information regarding the qualitative characteristics of a certain product, by making the claim that the product conforms to pre-established criteria or standards (Grover & Bansal, 2019).

Acquiring a thorough comprehension of various dimensions of green purchasing behavior, encompassing the impact of green marketing on customer attitudes, intentions, and behaviors towards environmentally sustainable products, can yield substantial benefits for organizations in their quest for valuable insights (Carrete et al., 2012; Thøgersen et al., 2015).

METHODOLOGY

Bibliometric analysis is a popular method for finding and analysing a wide range of scientific data. A lot of scholars use this method to uncover emerging trends in a particular field, in journals and articles. It is used with the theoretical perspectives that examine the citation, by analysing articles, and other publications, especially if it related with scientific contents. The data in this analysis tends to be very big, and objective in nature (e.g., based on years, the subject areas, number of citation and keywords). It explains when a paper is written, how it's related to a particular topic, and the relevance of publications. The concept of bibliometric cantered around assessing the value of authors and journals, by statistical processes such as citation levels, which means the publication had a high value, and can be considered a good reference if it courteously cited. Therefore, it identifies the key topics and measures a certain indicator, such as the most important subject areas, or how a keyword has been used within a certain period, the most significant and relevant publications, and the most cited authors. The current study aims to assess the impact of Green Marketing on Green Purchase Behavior, by examining scientific papers and other scholarly publications.

4. Data Selection and Data Collection Procedures

The process of data selection involved conducting a comprehensive search within the domain of sustainability, specifically focusing on green marketing (GM) and its influence on green purchase behavior (GPB). This phase was crucial in addressing the research question and situating the present study within the broader body of research in this topic. The initial stage of the literature review process entailed conducting a comprehensive search within the Scopus database.

The selection of this database as the principal source for data collection was based on its advanced features, easy accessibility, and extensive range of resources, including published works and working papers that are very significant and relevant in addressing the research inquiry. The next step was by searching based on the query “Title-Abstract-Keywords”, then the researcher identified the keywords that focused on “GM” and associated it with the “GPB”. The selected keywords employed to encompass all the subdomains of the research inquiries comprised. “Green Marketing” “Green Purchase Behavior”, “Green Buying behavior”, “Green Purchase Intention”, “Green Product”, “Sustainable Marketing” and “Consumer Behavior”.

The key words chosen have been used extensively to cover the impact of the "GM" on the "GPB". The objective of this study was to gather a substantial body of pertinent research in order to facilitate the attainment of a significant and conclusive outcome. Furthermore, most of the publications featured in these scholarly journals consist of studies that have employed either quantitative or qualitative research methodologies.

The database yielded a substantial number of publications, although most of them lacked a meaningful correlation and did not offer anticipated outcomes relevant to the research issue, particularly about the association between "GM" and "GPB". Given that, the researcher established a criteria to limit the scope of papers to those that directly address the study subject. First, only articles that included “sustainability” or “green” were selected. Secondly, selecting articles that focus on “Green Marketing “or any of its main dimensions (e.g., Green Product, Green Promotion, marketing mix) that focus on the relationship between “GM” and “GPB”.

Thirdly, the study only included studies published in the last five years; we need to follow current trends, as a large number of scientific articles are published every day, covering the latest advances in different disciplines. Therefore, the inclusion of articles was limited to those published between 2018 and 2023. The rationale for selecting this particular timeframe stems from the notable shift in the understanding and use of sustainability, particularly within the realm of sustainable development.

The growing awareness of sustainability-related concerns has prompted a need for further research in order to remain current, so more studies are needed to be up to date. In addition, it is important to consider the selection of publications based on specific "subject areas". This can be achieved by placing emphasis on four primary domains, namely Business, Management and Accounting, Environmental Science, Social Science, and Energy.

This approach is justified by the fact that a significant number of studies conducted in the previous year have concentrated their research efforts within these fields. Then, narrowing down the research articles to focus on document type, as they highlight the main objective of the author, overview of the conclusion and the key results of the research. After this the search narrowed down to a specific keyword, which are “Green Marketing”, “Sustainability” and “Green Purchase Intention”, as they are the areas of interest in this study. The next step was to focus on the language which is “English”. And finally, choosing articles that hold the most relevance to the key words, and the highest cited article.

Data Collection Procedure

The procedure of data gathering was carried out in a sequential manner, consisting of multiple steps. The initial phase involved conducting primary research within the source database. Then, there was a wide range of results (e.g., Keywords, subject areas, time). After this articles that matched the required criteria were selected, otherwise the remaining articles weren't included.

In the initial phase of the search process, a comprehensive set of 449 articles was obtained by employing the query "Title-Abstract-Keywords". In order to manage the enormous volume of papers and the expansive range of literature, the researchers employed inclusion criteria as a means to refine the focus of their investigation. In order to ascertain the presence of requisite information within the articles, a designated time period was incorporated to narrow down the search and evaluate the extent to which the articles encompass the desired content.

Following a comprehensive examination of the "Years" publication for pertinent data, the sample size of articles incorporated in this research study was reduced to 275. The number of articles is still broad. Therefore, another classification was used which is “Subject Areas” it focuses on four main areas, this narrows down the numbers to 247. Another criterion was used that dropped the number to 225; it was based on “Document Type” by choosing (Articles and Review). Reviewing the articles to only include the required “Keywords”, and those based on the source type, and written in “English” lowered the number to 100.

In order to exclude items that did not directly pertain to the relationship between "GM" and "GPB," a total of 42 articles out of 100 were selected based on their relevance to the keywords of the article. Finally, out of a total of 42 articles, 20 were found to have the highest number of citations. Figure 1.a, presented below, elucidates the systematic sampling procedure employed in this study, which resulted in the reduction of the initial pool of 449 articles to a final selection of 20.

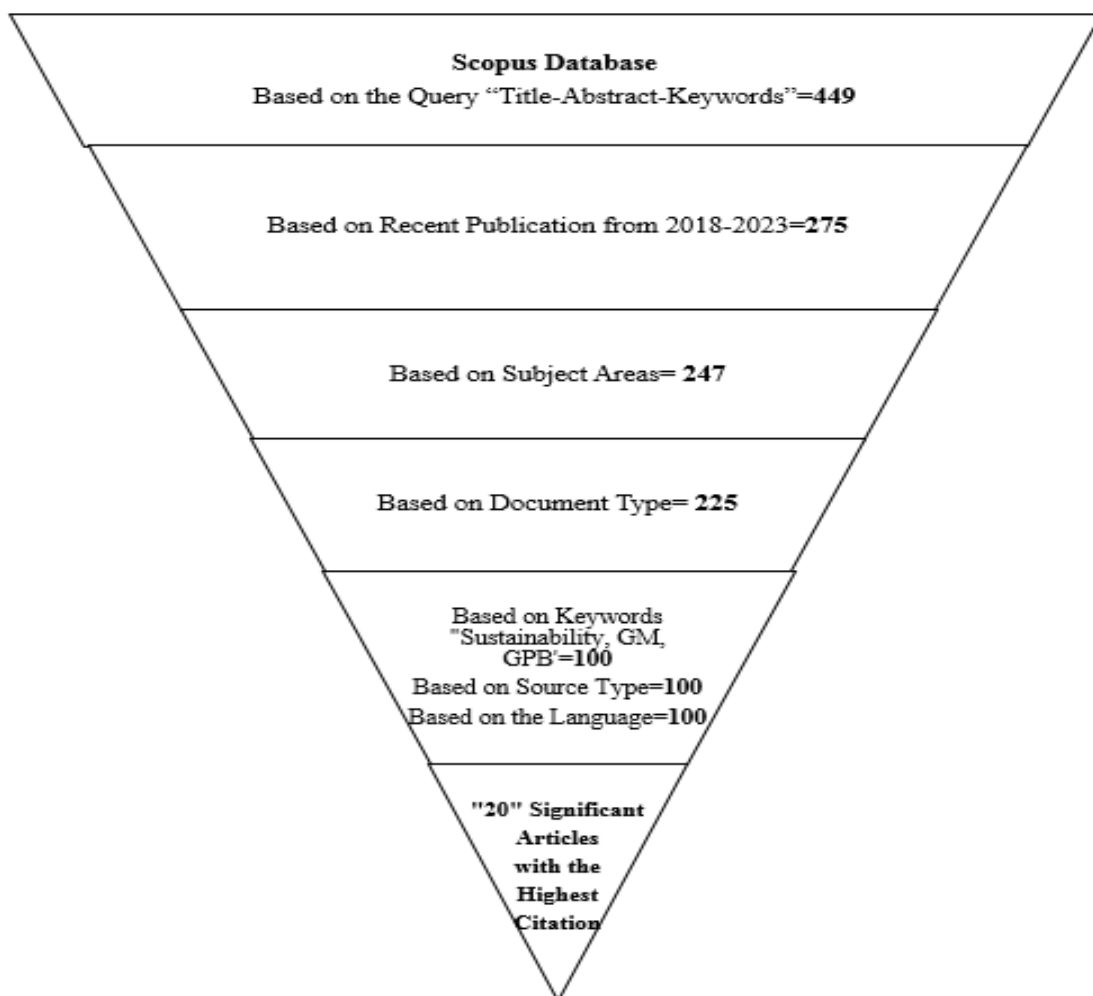


Figure 1: Comprehensive Depiction of the Sampling Procedures from Scopus Database

RESULTS AND DISCUSSIONS

1. Bibliometric Matrix Synthesis

The analysis of the selected publications is predicated upon key factors such as the author's, year of publication, title, and employed methodologies. The results of the chosen analysis are presented in Table 1 as depicted below. The present analysis played a crucial role in completing a bibliometric analysis of the key attributes of the chosen studies and their respective contributions to this research endeavour. Table 1 shows the characteristics of the studies that were sampled.

Table 1: The Summary of the 20 Articles Selected

No.	Author and Year of publication	Title	Country, sample size and participants	Applied methodologies and data collection method	Results
1.	Groening et al. (2018)	Green marketing consumer-level theory review: A compendium of applied theories and further research directions	A comprehensive Literature overview of 20 individual-level consumer behavior theories	1. Evaluated over 20 hypotheses at the consumer level, grouped into six categories 2. Employed snowball approach, starting with the term “green consumerism.” Each theory is accompanied by a detailed definition, an exploration of its application in the field of green marketing, and suggestions for potential areas of further research. 3. Completed a comprehensive literature search, by conducting a large-scale review.	The majority of research indicates that only a small number of customers are inclined to pay a premium for environmentally friendly products. Furthermore an individual's conduct in one environmental scenario does not necessarily translate into similar behavior in a different setting.
2.	Song & Kim (2018)	Green marketing consumer-level theory review: A compendium of applied theories and further research directions	N=829 US Customers from commercial marketing firm	1. A conceptual framework model was built by utilizing a diverse range of eight distinct categories of green apparel advertisements messages, then conducting a keywords-in-context (KWIC) content analysis with NVivo software 2. Using an online survey.	There are four key criteria that can be used to predict consumers' intention to buy green clothing. These include perceptions of quality, uniqueness, compassion and connection to nature. Significantly, the high purchase group, which includes 36% of consumers, is characterised by their perception of higher levels of apparel quality.
3.	Aagerup et al.(2019)	The persuasive effects of emotional green packaging claims	Three within-subjects: N=87, N=245, N=60 Consumers' purchase propensity for organic coffee, in the UK	1. The experimental design incorporates packaging that includes rational green claims, emotional green claims, and a neutral (control) claim. The introduction of measured variables is employed to evaluate the level of environmental commitment and information processing. A manipulated between-subjects variable is implemented to examine how distraction interact with preference for assertions related to sustainable choices. 2. Subjects experiment was carried out as a data collection method.	Consumers exhibit a preference for products that possess green claims as opposed to those with neutral claims. Consumers tend to favor products that feature emotional green claims over those that present rational green claims. The impact of this phenomenon is influenced by factors such as individuals' level of environmental commitment, information processing ability and distraction. The results exhibited statistical significance.
4.	Braga Junior et al. (2019)	Greenwashing effect, attitudes, and beliefs in green consumption	N=880 São Paulo city, Brazil Consumers	1. Structural model by using SmartPLS 2.0.M3 software to test the structural equation model	When the presence of greenwashing is identified in a product, it is commonly believed that the product loses its attributes of loyalty, satisfaction, and

			who engage in weekly or biweekly grocery shopping in supermarkets.	2. A quantitative research was carried out by an online survey	benefit, hence leading to consumer uncertainty during the consuming process. Customer attitudes and perceptions are significantly impacted by factors such as perceived loyalty, rewards, and satisfaction. The perceived risk component is mostly disregarded.
5.	Kautish et al. (2019)	The moderating influence of environmental consciousness and recycling intentions on green purchase behavior	N=312 Of consumers from India	1. The study employed a hypo-deductive research approach and developed a theoretical model that establishes a connection between the moderating effects of environmental consciousness and recycling intents on GPB. Analysed by structural equation modelling 2. A self-administered questionnaire	The influence of perceived consumer effectiveness (PCE) and willingness to be environmentally friendly (WEF) on green purchasing behavior (GPB) is strongly moderated by environmental consciousness and recycling intention.
6.	Nguyen et al. (2019)	Organic food purchases in an emerging market: The influence of consumers' personal factors and green marketing practices of food stores	N=609 Vietnam Citizens aged 18 and over, who purchase organic meat.	1. Structural equation modelling (SEM) 2. The data were obtained by a validated paper-based survey	The implementation of green marketing strategies has been found to have a substantial impact on consumers' tangible purchasing actions. The attitude of customers towards purchasing behavior of organic meat is highly influenced by their concerns regarding the environment, health, food safety, and their level of awareness about organic food.
7.	Pham et al. (2019)	Evaluating the purchase behavior of organic food by young consumers in an emerging market economy	N=289 Vietnam Young consumers under the age of 24	1. Structural equation modelling, exploratory factor analysis (EFA) 2. Performed three focus groups, each comprising of seven organic consumers, to facilitate the adaptation of the things to the research setting and to potentially develop new items. Administered paper-based survey	The presence of some obstacles, such as elevated costs, limited accessibility, had a substantial negative impact on both individuals' attitudes and their intention to make a purchase. The construction of attitudes towards organic food is influenced by various factors, including concerns about food safety, an individual's level of health consciousness, and exposure to food-related messaging in the media.
8.	Siyavooshi et al. (2019)	Effect of Islamic values on green purchasing behavior	N=270 Shiraz, Iran Persons attending a religious gathering	1. The population was divided into three groups (a control and two experimental groups). A pre-test was conducted for each group, a post-test was administered to each respective group in a similar manner. And using one-way analysis of variance 2. The information was obtained by the utilization of a questionnaire	Incorporating religious and environmental messages in advertisements for plant disposable containers has the potential to enhance consumers' inclination to make a purchase.

9.	Alamsyah et al. (2020)	The awareness of environmentally friendly products: The impact of green advertising and green brand image	N=102 Bandung City Supermarkets' customers	1. Structural equation modelling (SEM) using SmartPLS. 2. Data from the customers were obtained through a questionnaire	Green advertising is of considerable importance to customers as it has the potential to increase their awareness and understanding of environmentally conscious practices. Green awareness increases consumers' willingness to buy environmentally friendly products.
10.	Liao et al. (2020)	Examining the moderating effects of green marketing and green psychological benefits on customers' green attitude, value and purchase intention	N=319 Cambodia Consumers with at least a year's experience in buying green products	1. The survey data was analyzed using a statistically rigorous process, with the use of two software packages: SPSS and Smart PLS by using a structural model that was adopted to examine the relationship between constructs using the bootstrapping resampling technique 2. The questionnaire items were distributed to consumers through both online and offline addresses	The results of the study demonstrated a statistically significant and positive relationship between green customer value and attitude towards green products. It is observed that both the perception of green customer value and individuals' attitudes exhibit a favorable influence on their intention to engage in green purchases.
11.	Chou et al. (2020)	Identifying the critical factors of customer behavior: An integration perspective of marketing strategy and components of attitudes	N=977 Taiwan online consumers	1. Structural equation modelling (SEM) 2. An online survey was administered, was shared on the online platform of the greening community website	There is a strong and indirect relationship between attitude towards green products and the intention to engage in green consumption. The impact of perceived quality on the marketing mix and consumer willingness in relation to environmental concern is found to be statistically significant and positively correlated.
12	Chen et al. (2020)	Greenwash and green purchase behavior: the mediation of green brand image and green brand loyalty	N=600 Taiwan Consumers that possess prior purchasing experience of environmentally friendly products.	1. Structural equation modelling (SEM) 2. Data from the customers were obtained through a questionnaire	The findings indicate that the practice of greenwashing by companies has a detrimental impact on the green purchasing behavior of consumers. It not only directly impacts consumers' GPB negatively, but also indirectly affects it through the influence green brand image and consumers' green brand loyalty.
13.	Naz et al. (2020)	Green purchase behavior of university students in Hungary: An empirical study	N=1185 Hungary University students	1. Multiple regression and exploratory factor analysis (EFA) 2. An online survey was conducted utilizing a well-structured questionnaire	The primary factors that have an impact on the behavior of individuals when it comes to making environmentally friendly purchases are their willingness to pay (WTP) and their desire to engage in green shopping (GPI). The possession of environmental knowledge (EK) exerts a substantial

					and positive impact on the green purchasing behavior (GPB) of customers.
14.	Tsai et al. (2020)	Exploring the effect of Starbucks' green marketing on consumers' purchase decisions from consumers' perspective	A comprehensive literature overview of Starbucks marketing strategy	<ol style="list-style-type: none"> 1. Starbucks Marketing Strategy 2. Influential network relation map (INRM) was developed to depict the connections between indicators and sub-indicators, utilizing the findings obtained from the DEMATEL analysis. 3. The study employed the decision-making trial and evaluation laboratory (DEMATEL) approach to investigate the interrelationships among evaluation indicators. 	This analysis identified four aspects, comprising a total of 14 criteria that influence the impact of Starbucks' green marketing strategies on consumers' purchasing choices.
15.	Marzouk & Mahrous (2020)	Sustainable Consumption Behavior of Energy and Water-Efficient Products in a Resource-Constrained Environment.	N=519 Egypt Consumers	<ol style="list-style-type: none"> 1. Partial Least Squares Structural Equation Modelling (PLS-SEM) 2. A mixed-methods strategy was employed to gather data, utilizing in-depth interviews, a focus group, and an online survey 	The findings indicate the importance of self-preference, public media influence, considered moral obligation, and perceived behavioral control in elucidating the factors contributing to energy and water conservation.
16.	Sharma (2021)	Consumers' purchase behavior and green marketing: A synthesis, review, and agenda	N=232 systematic literature review	<ol style="list-style-type: none"> 1. The use of a thematic analysis facilitated the identification of three prominent themes: personal variables influencing green purchasing behavior, the act of green purchasing itself, and the green marketing mix 2. Using a systematic review in order to formulate a decision-making model for green purchasing 	Barriers such as insufficient environmental awareness, pricing concerns, perceived dangers, corporate image, trust, and willingness to pay have been recognized as factors contributing to a disparity between customer attitudes and actual purchasing behavior for green products.
17.	Witek & Kuźniar (2021)	Green purchase behavior: The effectiveness of sociodemographic variables for explaining green purchases in emerging markets.	N=650 Poland consumers	<ol style="list-style-type: none"> 1. Pearson's Chi-square test for independence was used to examine relationships. 2. The data were collected using a questionnaire-based online survey 	Various sociodemographic characteristics have an impact on both the awareness and purchasing behavior of green products. There is a positive correlation between individuals' personal financial position and their expressed intention to purchase green items.
18.	Riskos et al. (2021)	Ecolabels and the attitude-behavior relationship towards green product	N=571 Greece Supermarkets' buyers	<ol style="list-style-type: none"> 1. Structural equation modelling (SEM) 2. Data from the customers were obtained through a questionnaire 	The legitimacy of ecolabels is crucial in generating good attitudes towards the procurement of green products and encouraging involvement in ecolabel programs. The concept of attitudes towards

		purchase: A multiple mediation model			purchasing green products and interaction with ecolabels were emphasised as significant mediators within this framework.
19.	Guerreiro & Pacheco (2021)	How green trust, consumer brand engagement and green word-of-mouth mediate purchasing intentions	N=302 Portugal consumers	<ol style="list-style-type: none"> 1. Structural equation modelling (PLS-SEM) 2. A questionnaire was undertaken to collect data by employing two green advertisements, one featuring a high involvement product and the other featuring a low involvement one. 	Customers' expectations regarding greenwashing do not have a direct impact on their decisions to make green purchases. It is observed that the relationship between greenwashing expectations and green purchase decisions is mediated by factors such as green trust and green word-of-mouth. Similarly, the perception of greenwashing has a notable impact on consumer brand engagement.
20.	Machová et al. (2022)	The Impact of Green Marketing on Consumer Behavior in the Market of Palm Oil Products	N=527 Slovakia consumers	<ol style="list-style-type: none"> 1. Crosstab and Pearson's chi-square tests, Cramer's V2 2. A questionnaire survey was utilized 	There exists a significant correlation between consumer attitudes towards the acquisition of products containing palm oil and their awareness of the presence of palm oil in said products. There is a connection between the consumer's inclination to abstain from purchasing specific items that have adverse environmental effects and the generational cohort to which the consumer belongs. The correlation between the variables was found to be lacking in strength in both instances.

2. Most Cited Years

Figure (1.b) shows the most cited years from 2018 until 2023. A dramatic upward shift started to act from 2018 until 2022. The most cited year was 2022, with 1070 citations. It can conclude that articles the focus on “Sustainability”, "Green Marketing" and "Green Purchase Behavior" began to rise significantly. Furthermore, the need to find and guide the transition to a sustainable future means that sustainability research is becoming increasingly important. As for the year 2018 it had the lowest citation, with only 19 citations, which indicates that the “Sustainability” and “sustainable development” were still in their early stages.

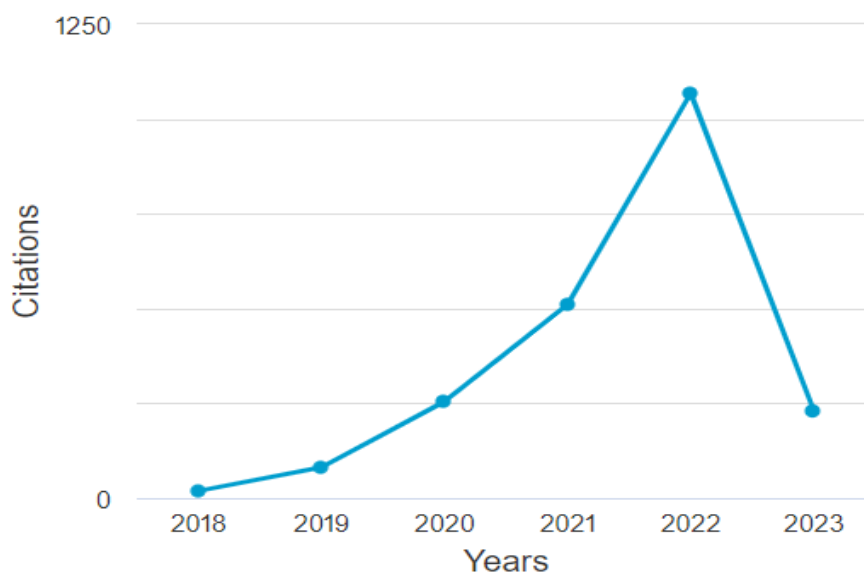


Figure 2: Years that were most cited from Scopus Database

CONCLUSIONS

The principal objective of this study was to elucidate the knowledge framework of the scholarly literature pertaining to the association between GM and GPB. Given the scarcity of research on the precise effects of GM factors on GPB, the utilization of bibliometric approach assumes a significant role in offering insights into the influence of GM variables on GPB. The findings provided an answer to the research question “Does the implementation of Green Marketing strategies have a substantial and favourable impact on consumers' propensity to engage in Green Purchase Behavior?” implications, research limits and future research opportunities have been identified.

According to the results of the articles that were chosen as a sample in this study, there is a significant impact of GM variables on GPB. Thus, GM practices significantly enhanced consumers purchase behavior. “Green Promotion” was the most significant variable that impacted customer purchase behavior. On the other hand, “Green Products” and “Price” were

the second highest that have a significant positive influence on GPB. However, despite the diverse perspectives associated with consumer purchasing behavior, there is a lack of studies that have specifically examined the variable of "Green Marketing Channels" within the context of this research. This highlights the need for future investigations in this area. Moreover, some studies show that there is a weak relationship between GM and GPB, as few customers may behave in an environmental context, but it is not necessary transferred into a comparable behavior in other situations. These results are consistent with some studies and conflict with others. Hence, this study provides an avenue for the exploration of additional significant information and underscores the significance of conducting further research on these subjects in order to address existing gaps in the literature.

The objective of this study was to garner attention through the examination of a representative collection of scholarly articles. The extent of scholarly investigation pertaining to all genetically modified variables was constrained. Additionally, the "Green Marketing Channel" variable was not mentioned at all, this might encourage the efforts to conduct future research focusing on this aspect. This study concludes the impact of GM on GPB, but the relationship has not been understood well due to some inconsistencies among relevant studies. Hence, further investigation is warranted to actively engage in addressing this matter, with the aim of acquiring more comprehensive insights into this correlation.

The study has limitations. It was initially intended to utilize logical methods based on prior research to categorize journals, publications, keywords, time, and subjects. However, some possible items are absent from the Scopus database. The second problem pertains to the inadvertent omission of specific Green Marketing terms during the analysis. Although the citation database is reliable, it is necessary to take into account the possible self-citations, which could lead to an overestimation of the influence of particular articles. Lastly, a potential constraint is the limited number of publications that have addressed the link between Green Marketing and Green Purchase Behaviour. These limitations suggest potential areas for future research that could be explored by investigating a wider range of significant results.

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