

Time for sustainable marketing to build a green conscience in consumers: Evidence from a hybrid review

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ARTICLE INFO

Handling Editor: Giovanni Baiocchi

Keywords:

Sustainable marketing
Green marketing
Bibliometric analysis
Framework-based review

ABSTRACT

Society has become increasingly socially and environmentally conscious owing to global environmental challenges, and COVID-19 has become an eye-opener. Although people have started developing a significant understanding of sustainable consumption, much work remains to be done in this field. Our study recapitulates the research that has been published in the area of sustainable marketing and sustainable consumer behavior over the last three decades. We conducted a hybrid literature review using bibliometric analysis combined with TCM (Theory-Context-Methodology) framework-based approach on a total of 1998 relevant papers published from 1991 to 2021. Our findings validate that the literature in this field has been on the rise, particularly since 2016. The subject area with the highest number of publications was Business & Economics (803). The USA is the major contributor, with (444) publications, followed by England (219) and China (416). The study also classifies the status of the extant literature, notable research gaps, and future research directions following a theoretical framework, empirical methods, and contextual phenomena. The study provides valuable insights into filling the “green attitude-behavior gap”. Given the growing tendency among consumers to go sustainable, this study offers practitioners a new perspective on the much-needed changes in the marketing strategy of companies selling sustainable products. Given the growing importance of people and companies being more environmentally and socially responsible, our study will help pave the way towards this much-desired goal.

1. Introduction

Consumers and businesses have developed remarkable knowledge of sustainable consumption as they become more conscious of the significance of environmental concerns and continue to search and utilize green products and services to promote eco-innovations, business performance, and knowledge competence (Kar and Harichandan, 2022; Khanra et al., 2021). Likewise, environmental concerns are a crucial concern for all businesses today that are venturing to balance corporate expansion with fewer adverse effects on natural resources in response to rising environmental regulations and societal demands (Ohlhausen and Langen, 2021). Investors are shifting their portfolios off polluting firms, which is anticipated to be hit hard by the onslaught of new climate regulations. For instance, the world's largest asset manager, BlackRock, is elbowing firms to achieve net-zero objectives by 2050. Furthermore, firms with better ESG ratings outperformed their rivals. As a result, there is presently an infusion of cash to invest in green business (Mendiluce,

2021).

Significant focus and effort have been invested in promoting sustainable development from both industrial and academic standpoints over the last few decades. Many firms have begun to make significant changes to their operations to fulfil this requirement. Simultaneously, many studies have been conducted on pursuing sustainability in practice and its consequences on enterprises, businesses, and society (Hunt, 2011). Assessing how the marketing function must adapt to sustainability has been a topic of discussion and research. The concept of sustainability extends beyond the narrow definitions of ‘green’ or ‘eco-friendly.’ The term sustainable marketing has evolved as a product of the sustainability agenda in the marketing field over the past 30 years. Earlier green marketing research primarily focused on product-related aspects, but now sustainable marketing has extended to the whole of the marketing mix—pricing, distribution, and promotion—(Kemper and Ballantine, 2019), it has become increasingly crucial to address the deceptive marketing strategy of greenwashing, which has gained

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<https://doi.org/10.1016/j.jclepro.2024.141188>

Received 17 April 2023; Received in revised form 31 December 2023; Accepted 7 February 2024

Available online 9 February 2024

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prominence in response to growing consumer demand for sustainable products (Boncinelli et al., 2023). The practice of greenwashing involves conveying false or untrue impressions or disseminating misleading information about a product, service, or firm that considers sustainability aspects (Sancak, 2023). Research highlights that greenwashing not only erodes consumer trust, but also undermines genuine sustainability efforts, ultimately hindering progress towards more environmentally responsible consumption (Zhang et al., 2018). It is imperative for sustainable marketing to cultivate green conscience in consumers, addressing the significant challenge in sustainable consumer behavior research known as the “green attitude-behavior gap.” This gap signifies the inconsistency between individuals’ environmental attitudes and their actual buying behavior (ElHaffar et al., 2020).

There has been a remarkable increase in green consumption research in recent years, as shown in Fig. 3, capturing the interest of academics and industry professionals. Consequently, it is common for several literature reviews to examine the state of the art in this field. There are a few reviews that seem relevant to the current work. In the article titled, “How to SHIFT Consumer Behaviors to be More Sustainable: A Literature Review and Guiding Framework,” White et al. (2019) examined the framework concerning the main factors influencing sustainable consumer behavior change. Their analysis is based on behavioral science literature. Our work encompasses literature from various fields, including business management, social science, and psychology. This study complements the SHIFT framework and offers theoretical and methodological underpinnings of the psychological framework. Furthermore, the study highlights the importance of conducting behavioral studies in developing countries, providing a foundation for future researchers to explore the SHIFT framework within these contexts and identify subject areas of focus. Another review is that of ElHaffar et al. (2020), which is based on the factors contributing to the green gap; the paper emphasizes that this gap is constantly evolving. Therefore, there is a pressing need for continuous reviews with robust insights. In this study, articles exclusively focusing on the motivations and/or barriers to green purchasing behavior were deliberately excluded from the scope. However, this exclusion limited the overall completeness of the review. The other reviews by Joshi and Rahman (2015) and Sharma et al. (2023) contribute to the factors affecting green purchase behavior. In addition, our study focuses on a statistical overview with a longer timespan for future researchers, offering a glimpse of the overall landscape and how comparative studies across countries may unfold. Our focus is on social psychological theories, specifically geared towards bridging the green attitude-behavior gap.

This study aims to describe and systematize the existing literature on sustainable marketing and sustainable consumer behavior. The objectives of the study include (a) to describe key contributors, authors, journals, and countries in this domain; (b) to explore the future application of various theories of sustainable consumer behavior; (c) to explore solutions for bridging the green attitude-behavior gap; and (d) to establish gaps in the existing literature, thereby determining the scope of future research agenda.

This study is essential because of its distinctive focus on addressing critical gaps in the existing literature on sustainable marketing and consumer behavior. The primary objective was to provide a comprehensive and systematic overview of the field, marking a departure from prior research that may have lacked a consolidated examination of sustainable marketing and consumer behavior. The research delves into unexplored territory by specifically aiming to bridge the green attitude-behavior gap, a persisting issue denoting incongruities between individuals’ environmental attitudes and their actual purchasing behavior. The acknowledgment of this gap highlights the inadequacy of previous studies in offering effective solutions to align consumers’ ecological beliefs with their actions, emphasizing this study’s novel contribution to the field. Furthermore, this study establishes gaps in the current literature by setting the stage for a robust future research agenda. This approach, facilitated by the Theory-Context-Methodology

(TCM) framework, not only identifies theoretical gaps, but also proposes avenues for applying cross-disciplinary theories that encourage researchers to explore unconventional perspectives, contexts, and methodologies. The incorporation of insights from bibliometric analysis adds a contemporary dimension, addressing the evolving nature of sustainability studies. From a practical standpoint, this study extends beyond theoretical contributions and offers both practical and policy implications. By presenting solutions to companies, this study aims to influence consumer behavior towards the acceptance and consumption of sustainable products. This dual approach, combining theoretical exploration and practical application, underscores the relevance of the study in not only advancing academic understanding, but also facilitating positive change in the real-world context.

The paper is structured as follows: Section 1 introduces the study, and Section 2 focuses on the existing literature. Section 3 details the methodology employed to uncover previously unknown insights and the dataset used in this study. Section 4 examines the literature by revealing the leading publications, publication trends year by year, subject area categorization of publications, top-tier journals, top-tier authors, and top-tier countries in the domain with bibliometric coupling, co-authorship, and citation analysis. Section 5 discusses the status of extant literature, notable research gaps, and future research agendas. Finally, Section 6 concludes the study by highlighting its research and managerial implications and limitations.

2. Research background

Several review studies have explored various areas of green purchase behavior. Green purchasing involves purchasing environmentally friendly products while avoiding harm to the environment (Chan, 2001). In contrast, sustainable consumer behavior aims to encourage individuals to make decisions and take actions that are environmentally and socially responsible, thereby contributing to the long-term well-being of our planet and society (Trudel, 2019). Early research on sustainable behavior focused on defining ‘green customers’ to assess their viability as a distinct market segment. As a result, previous research has identified key socio-psychological and situational factors influencing environmental and sustainable behavior, such as gender, age, economic and cultural background, motivation and attitudes, and their connection to environmental concerns and social consciousness (Kinnear et al., 1974; Webster, 1975). Throughout the 1990s, studies on energy-saving and recycling held the researcher’s interest, with a noticeable trend towards ‘green advertising’ (Banerjee et al., 2013).

Post-2000s, there was a notable shift in research on sustainable consumer behavior. This shift marked a departure from earlier, broader explorations of environmentally conscious actions towards a more focused examination of consumers’ underlying decision-making processes. Researchers have begun exploring the motivations and psychological factors that drive individuals to engage in environmentally responsible behaviors (Peattie, 2010). A number of studies have been conducted during this period to determine why consumers make environmental choices, what influences their decisions, and how marketing and communication strategies can be used to promote mindful consumption (Gupta et al., 2023). This approach recognized that sustainable consumption was not just about knowing what is environmentally friendly but also about understanding the cognitive and emotional drivers that motivate individuals to act in sustainable and pro-social behavior (Sun et al., 2023). Table 1 illustrates the period-wise progression of research on sustainable consumer behavior and sustainable marketing, which has guided the formulation of key research questions for our study.

Sustainable marketing remains an area of research that has not received sufficient attention, as McDonagh and Prothero (2014) highlight. Moreover, only 2% of articles in the top 10 marketing journals were dedicated to sustainability (Purani et al., 2014). Previous review papers on sustainable marketing and sustainable consumer behavior

Table 1

Period-wise progression of research on sustainable consumer behavior and sustainable marketing.

TIME PERIOD	THEME/FOCUS	KEY REFERENCES
1990–1999	- Research focussed on defining sustainable consumer behavior, green customer, conceptualising environmental consciousness and ecologically linked behaviours such as recycling - Challenges in comprehending and understanding sustainability - Importance of sustainability for business in gaining competitive edge	(Kilbourne and Beckmann, 1998; Lele, 1991; Olander and Thøgersen, 1995)
2000–2009	- Research focussed on defining and strategizing green marketing - Factors influencing green purchase behavior and barriers to such behavior - Identifying, analysing and targeting green customers and green marketing campaigns	(Bridges and Wilhelm, 2008; Peattie, 2001; Rex and Baumann, 2007)
2010–2019	- Research focussed on understanding the gap between green purchase intentions and actual buying behavior - The impact of the COVID-19 pandemic on green consumption and behavior, such as the shift towards more sustainable products	(Carrington et al., 2010; Joshi and Rahman, 2015; White et al., 2019)
Post-2020	- Research explored psychological variables that can be used to shift sustainable consumer behavior - Focus has been to narrow the green attitude behavior gap - Role of social media in influencing green purchase behavior	(Chi, 2021; Kumar Kar and Harichandan, 2022; Tawde et al., 2023)

have typically focused on a narrower range of topics, such as defining sustainable marketing concepts or examining the factors affecting green purchase behavior (Kemper and Ballantine, 2019; Sharma et al., 2023). Our study not only aims to synthesize three decades of literature but also concentrates on bridging the green attitude–behavior gap. We employed a quantitative analytical approach to ensure systematic and unbiased assessment. This approach also allowed us to gauge the success of publications while elucidating the structural dynamics within the research area. This hybrid review attempts to provide valuable insights into “sustainable consumer behavior” and “sustainable marketing.” We base this analysis on 1998 articles published from 1991 to 2021. This study was an early adopter of the SPAR-4-SLR protocol for data collection. Additionally, our analysis offers a comprehensive evaluation and summary of the existing literature, identifies research gaps, and outlines the future research agenda for this critical sub-domain of marketing using the TCM framework.

3. Research methodology

3.1. Study design

We adopted a hybrid review that combines the tenets of a framework-based approach with a bibliometric approach. The TCM framework-based approach was adopted over other systematic approaches because an organized structure can assist robust, in-depth understanding of theories, contexts, and methodologies required to justify and undertake empirical research. We also combined reviewing papers as an analytical technique with bibliometric analysis to better understand the ‘context’ in TCM framework. We believe that

bibliometric reviews and TCM are complementary approaches. Bibliometric reviews can be used to track the progression of research on a particular topic over time and identify the most influential articles. TCM, on the other hand, can be used to understand the underlying structure of the literature and identify the relationships between different concepts, as shown in Fig. 1.

3.2. Data collection

We adopted a robust study design and rigorous data collection approach. To achieve this, we employed the Scientific Procedures and Rationales for Systematic Literature Reviews (SPAR-4-SLR) protocol (Paul et al., 2021), outlined in Fig. 2. This process involves the following steps.

3.2.1. Assembling

We analyzed publications spanning three decades from 1991 to 2021. We initiated our review in the 1990s as it marked the inception of green marketing research (Prothero, 2010). Our data collection was limited to 2021, aligning with the time when the data were retrieved. We selected the Web of Science database because of its widespread use among researchers and the significant impact of the papers published in this database (Bhardwaj et al., 2020; Dangelico and Vocalelli, 2017).

3.2.2. Arranging

We eliminated duplicate records and filtered documents based on subject relevance, excluding those that were not directly related to the scope of our study. Many bibliometric analyses suffer from a few documents that account for a substantial portion of total citations (Paul and Criado, 2020). Consequently, we retained 1998 papers for the bibliometric analysis. Further screening was conducted following systematic literature review phases III and IV, involving the systematic evaluation of titles, abstracts, and full papers, as depicted in Fig. 2. The resulting papers were reviewed to identify research gaps and to outline future research directions.

3.2.3. Assessing

Using Web of Science’s web portal, we generated comprehensive reports on citation analysis for 1998 publications. Data were exported to VOSviewer Software (Version 1.6.17) for additional analysis. We created tables to present the data and draw associations. Consequently, we generated a network map based on the distance. Research gaps and future research directions were explored using the TCM framework.

4. Results: systematic analysis of the research field

4.1. Publication trends year-by-year

Year after year, the number of publications in the area has seen a rising trend, as shown in Fig. 3. The year 2020 had the highest number of publications. Furthermore, the actual number of articles published in 2021 will be substantially higher at the end of the year (as this study only considers papers published until July 2021). It is worth noting that 56% of the publications were published in the last five years (2016–2020), indicating a growing interest in the topic.

4.2. Subject area categorization of publications

Further examination of these academic works reveals that the subject area with the highest number of publications was Business and Economics (803), followed by Science and Technology (520). Table 2 shows that Environmental Sciences and Ecology and Social Sciences are ranked third and fourth, with 397 and 108 publications, respectively. It should be noted that the total number of publications will not add to 1998 because some outcomes are found in more than one discipline.

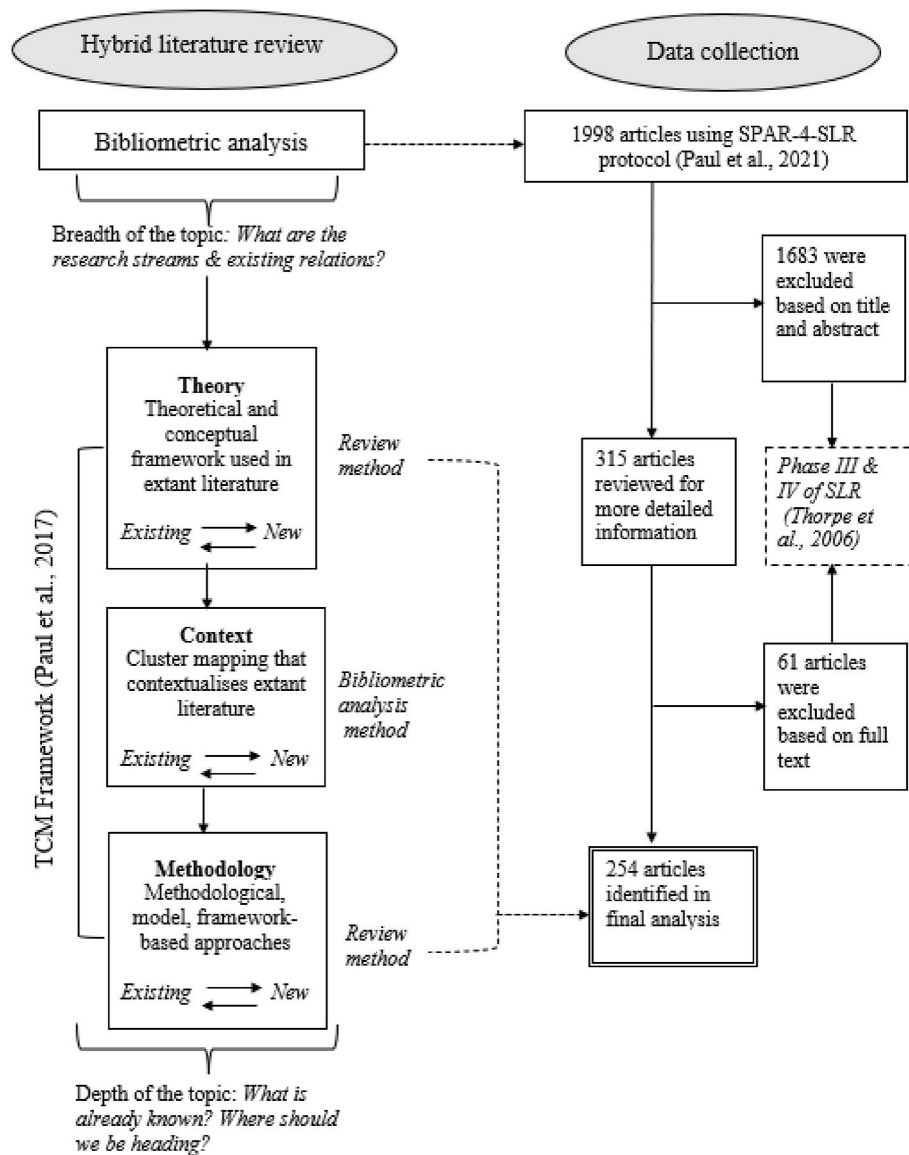


Fig. 1. Study design & sampling.

4.3. Top-tier journals

Web of Science's citation analysis report was utilized to collect and analyze the papers' meaningful information, totalling 57,746 citations. The journals with the highest number of citations are listed in Table 3. The *Journal of Business Research* was the top-ranked journal and published literature in this area for the first time in 2004. The second most productive journal was the *International Journal of Consumer Studies*, with 3383 citations and the recipient of the second-highest (100) articles. *Sustainability Journal*, which started publication in 2009, is the most recent of these and the recipient of the highest number (482) of articles. The *Journal of Cleaner Production*, *Business Strategy and the Environment*, and *Journal of Business Ethics* are the remaining journals, all of which have a higher number of citations proportional to the number of articles.

4.4. Top-tier authors

The list of the authors who have contributed to this domain is given in Table 4, based on the criteria that the minimum number of documents published by an author should be '6.' As we are targeting the top 10

authors, the minimum citation was on the default setting of '0' since changing the citation count did not change the list of authors. Chen, Yu-Shan has the highest number of citations, followed by Justin Paul, while Wang, Shanyong has the highest number of documents published in the area.

4.5. Top-tier countries

According to our findings, the United States had the most papers published among the countries where the majority of the research was conducted, with a total of 444 documents, the highest link strength of 220, and the highest number of citations of 17,916, as shown in Table 5. The total link strength attribute indicates the total strength of the co-authorship links of a given researcher with other researchers (Van Eck and Waltman, 2017). Based on the link strength of Australia, Germany, and India, we may infer that academic influence remains limited, possibly due to a lack of international collaboration or manuscript availability.

Our study revealed that publications in the United States accounted for 22% of the total citations. Thus, the analysis in this domain is heavily centered on the United States. Researchers and policymakers intuitively

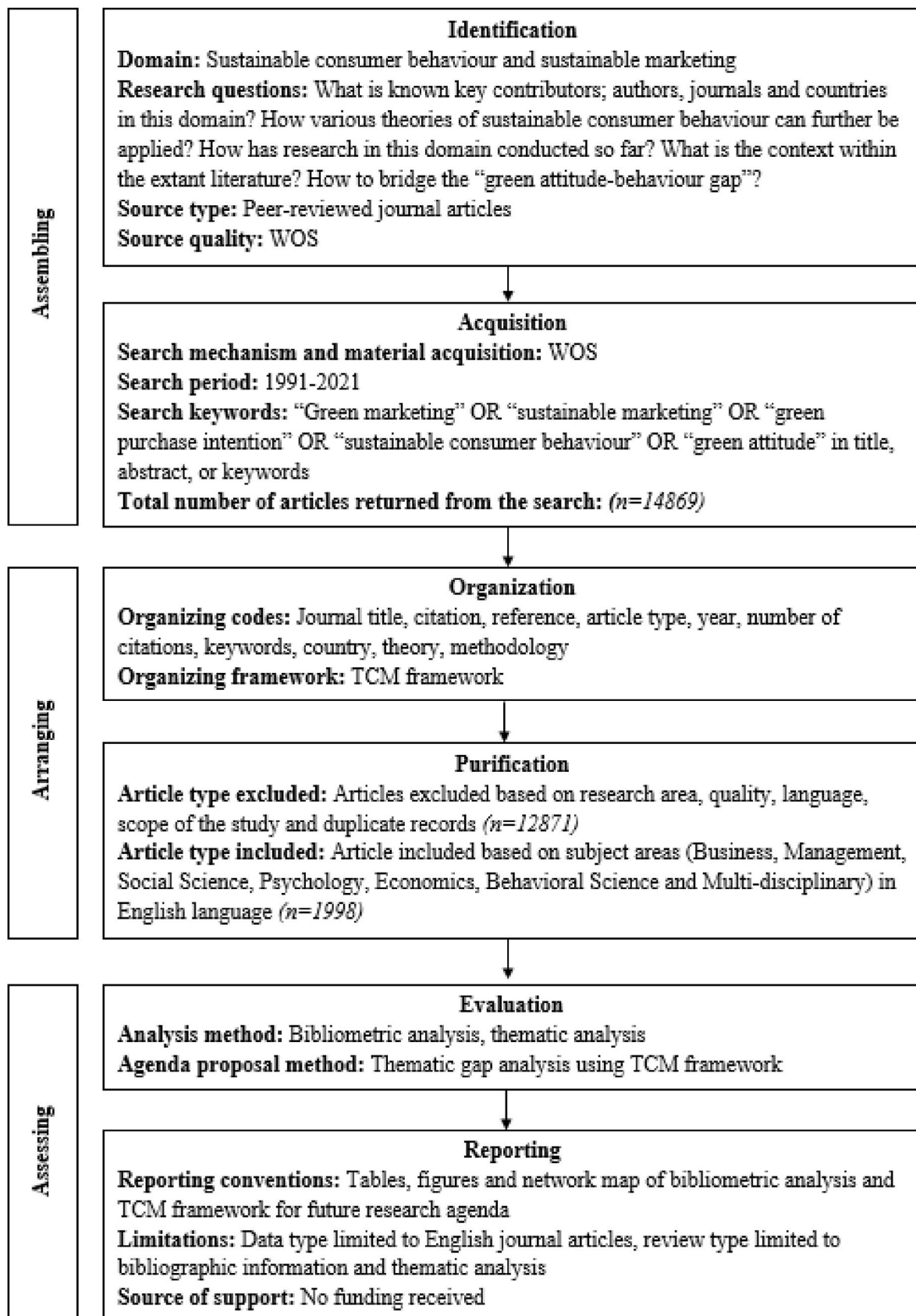


Fig. 2. Review procedure following the SPAR-4-SLR protocol (Paul et al., 2021).

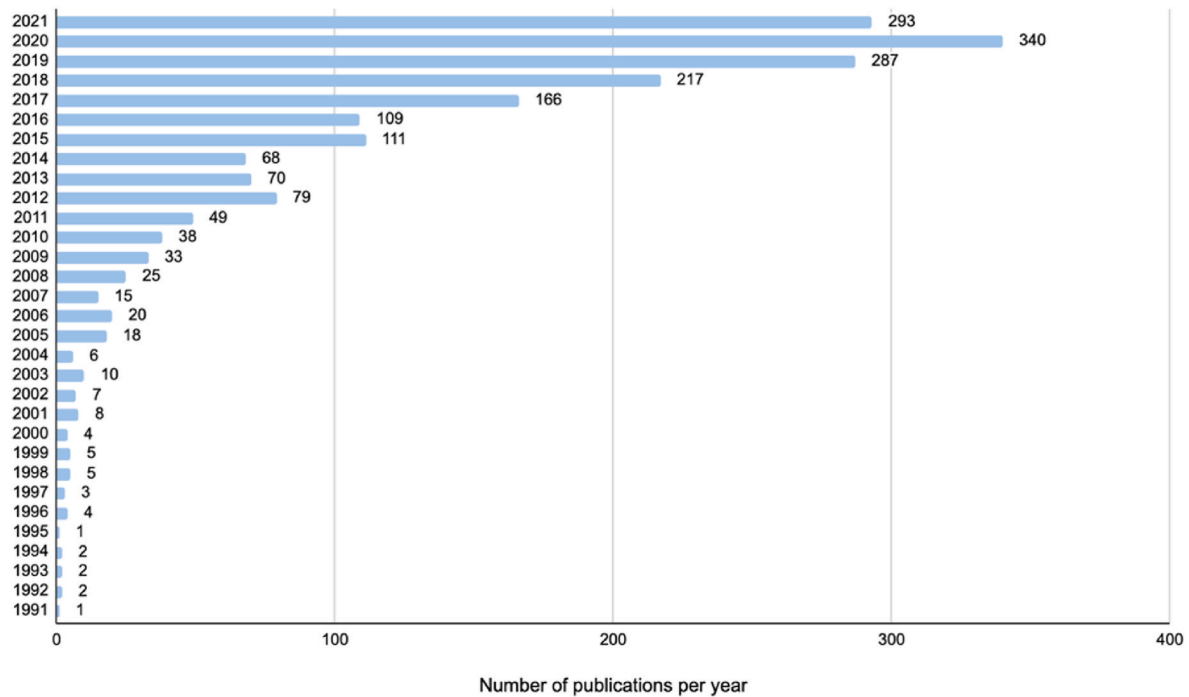


Fig. 3. Number of publications on per year basis (1991–2021).

Table 2

Publications based on the subject area.

Subject Area Category	Total publications
Business & Economics	803
Science & Technology	520
Environmental Sciences & Ecology	397
Social Sciences	108
Psychology	58
Public, Environmental & Occupational Health	30
Government & Law	24
Development Studies	26
Engineering	21
Public Administration	12
International Relations	10
Education & Educational Research	6
Communication	5
Computer Science	4

Table 3

Top-tier journals based on number of citations and articles.

Name of the Journal	Number of citations	Number of articles
<i>Journal of Business Research</i>	3633	66
<i>International Journal of Consumer Studies</i>	3383	100
<i>Sustainability</i>	2920	482
<i>Journal of Cleaner Production</i>	2752	70
<i>Business Strategy and the Environment</i>	2544	76
<i>Journal of Business Ethics</i>	2296	39

think that developing country behaviors tend to mirror those of developed country counterparts because most relevant literature is rooted in Western countries (Elhoushy and Lanzini, 2020). Although behavioral theories have been constructed and investigated in Western countries, particularly in the United States, their application in other cultures has received less attention (Chan and Lau, 2008). However, research on sustainable marketing in China and India reflects growing interest in sustainability.

Table 4

Top-tier authors based on the co-authorship.

Author	Documents	Citation
Chen, Yu-Shan	7	923
Paul, Justin	6	761
Thogersen, John	7	682
Han, Heesup	6	432
Carrigan, Marylyn	7	321
Paladino, Angela	6	255
Lobo, Antonio	6	235
Wang, Shanyong	10	233
Kang, Jiyun	6	188
ko, Eunju	6	174
Minton, Elizabeth a.	6	169
Svensson, Goran	7	122
Kim, Kyung Hoon	6	77
Oh, Kyung Wha	6	41

Table 5

Top-tier countries based on citations and bibliometric coupling.

Country	Citations	Documents	Total link strength
USA	17,916	444	220
England	7911	219	128
China	7130	416	181
Australia	3306	139	83
Germany	3177	132	45
India	3123	83	33

5. Discussion: research gap & future research agenda

This section presents an in-depth analysis of the literature identified in the previous stage. We opted for the TCM framework to build structure and logic for identifying the research gap that requires future research direction, as summarized in Table 7.

5.1. Theory

5.1.1. Theory of reasoned action and theory of planned behavior

The Theory of Reasoned Action (TRA) and Theory of Planned Behavior (TPB) are predominantly used to understand consumer purchase intentions. TRA suggests a correlation between “attitude and action,” but often shows a weak link between environmental attitude and behavior (Roberts, 1996). For instance, Ramayah et al. (2010) found that environmental mindsets do not significantly influence green purchase intention. Therefore, relying solely on the TRA may not be sufficient to explain green purchasing behavior. Instead, we propose more robust hypotheses that consider factors such as perceived behavioral control, as seen in the Theory of Planned Behavior. This theory accounts for personal and situational elements such as choice availability (Mainieri et al., 2010). Gabler et al. (2013) also used TPB to explain green purchasing behavior, incorporating a trust component to assess the actual green impact.

5.1.2. Value-Belief-Norm theory

Value-Belief-Norm (VBN) theory, which utilizes beliefs as a mediator, elucidates the formation of environmental norms and attitudes among various consumer groups, not just the most committed greens (Stern et al., 2016). While the VBN theory faces challenges because consumers engage in both green and non-green behaviors (McDonald et al., 2012), a comprehensive compilation of values that activate environmental norms and green behavior would benefit scholars and practitioners (Perera et al., 2022). Future research could explore which beliefs have varying value-norm mediation effects.

5.1.3. Affordance theory

Affordance theory focuses on the perceived and actual features of objects, particularly the fundamental properties that dictate their use. Nissen et al. (2020) analyzed how affordances in public transportation and green spaces can help understand the relationship between young people’s well-being and sustainability. This theory holds the potential for design-oriented research, allowing the examination of specific affordances and interfaces of sustainable products to enhance sales. It also explores the influence of customer perceptions of green technology affordances on sustainable consumption behavior.

5.1.4. Consumer variety-seeking behavior theory

Consumer Variety-Seeking Behavior (CVSB), as suggested by Vermeir and Verbeke (2006), reflects individuals’ desire for variety in their consumption choices. Future research can explore several dimensions of this behavior. It could investigate consumers’ demand for diversity in sustainable product/service options and assess potential variations in this behavior across developed and developing countries or different cultures. Additionally, researchers might assess the applicability of the CVSB when comparing consumer purchasing behaviors for products with multiple sustainable features versus those with only one sustainable attribute. The CVSB could provide insights into the reasons behind consumers’ shifts from regular to sustainable brands.

5.1.5. Social learning theory (SLT) and social identity theory (SIT)

The two social psychological theories-social learning and social identity theory have been understudied in the context of understanding and encouraging sustainable consumer behavior (Shen et al., 2023). The SLT proposes that individuals learn by observing the behavior of others and evaluating the subsequent positive or negative consequences of that behavior (Bandura and McClelland, 1977). The SIT proposes that individuals are motivated to maintain a positive social identity and follow the norms and values of their group members (Hogg, 2016). Future research should focus on using these theories to develop marketing messages that appeal to their social identity, creating social norms that support sustainable behavior; for instance, a community could create a norm of daily dumping and composting. They could also make it

apparent that the community values and expected composting. The theory can also be expanded to understand pro-environmental behavior in green social media communities.

Table 6 presents the main propositions of the aforementioned theories when applied in the context of sustainable consumer behavior and sustainable marketing.

5.2. Context

Contexts narrate the circumstances that led to this investigation (Paul et al., 2017). We endorse the notion of cluster mapping by VOS-viewer to visualize how different clusters contextualize sustainable consumer behavior and sustainable marketing. Bibliometric analysis, which is used to show links between articles, is helpful for studying the context. Fig. 4 does not present all the articles, only those with a connection between them. The individual clusters are described below.

5.2.1. Blue cluster: sustainability

There are four components of sustainability: environmental, socially responsible, cultural consideration, and financial viability. By conceiving the triple bottom line-people, planet, and profits-organizations learned to extend their focus to include improving people’s lives and the health of the globe, rather than focusing solely on profits (Elkington, 2004). However, sustainability is dying owing to its overuse, dryness, and reduction to a buzzword. This is fading because it is associated with too many projects that do not achieve their claimed objectives (Keiner, 2006). There has been a growing interest in developing methods to improve the effects of products throughout their life cycle (Guinee, 2015). According to theoretical and empirical studies, a robust association exists between business sustainability and organizational effectiveness. Socially and environmentally responsible actions can increase profitability and improve customer perceptions of a company (Luo and Bhattacharya, 2018). Business strategies and innovation skills are transforming owing to new technology, expanding production, and process innovation possibilities. With Industry 4.0, the environmental effect of a product, procedure, or service can be minimized. This

Table 6
Findings of theories applied in sustainable consumer behavior and sustainable marketing.

Theory	Findings
Theory of Reasoned Action (TRA) & Theory of Planned Behavior (TPB)	TRA states a significant correlation between ‘attitude and action’. The weakness of TRA is overcome by ‘perceived behavioral control’ in TPB. Moreover, relying solely on TRA may not be sufficient to explain green purchasing behavior.
Value-Belief-Norm (VBN) Theory	Uses beliefs as a mediator which helps to clarify how environmental norms and attitudes are formed for all sorts of customers, not just the most committed greens.
Affordance theory	It can aid in analysing how affordances in public transportation and green spaces can help understand the relationship between young people’s well-being and sustainability.
Consumer variety-seeking behavior (CVSB)	It suggests that marketers should concentrate on providing a variety of sustainable items, giving consumers an occasion to experience them, and conveying to them the advantages of sustainable products. Marketers can therefore raise the probability that consumers will switch to sustainable products and make more sustainable decisions.
Social learning (SLT) & Social identity theory (SIT)	In SLT, individuals learn by observing the behavior of others and evaluating the subsequent positive or negative consequences of that behavior. Whereas SIT proposes that individuals are motivated to maintain a positive social identity and follow the norms and values of their group members.

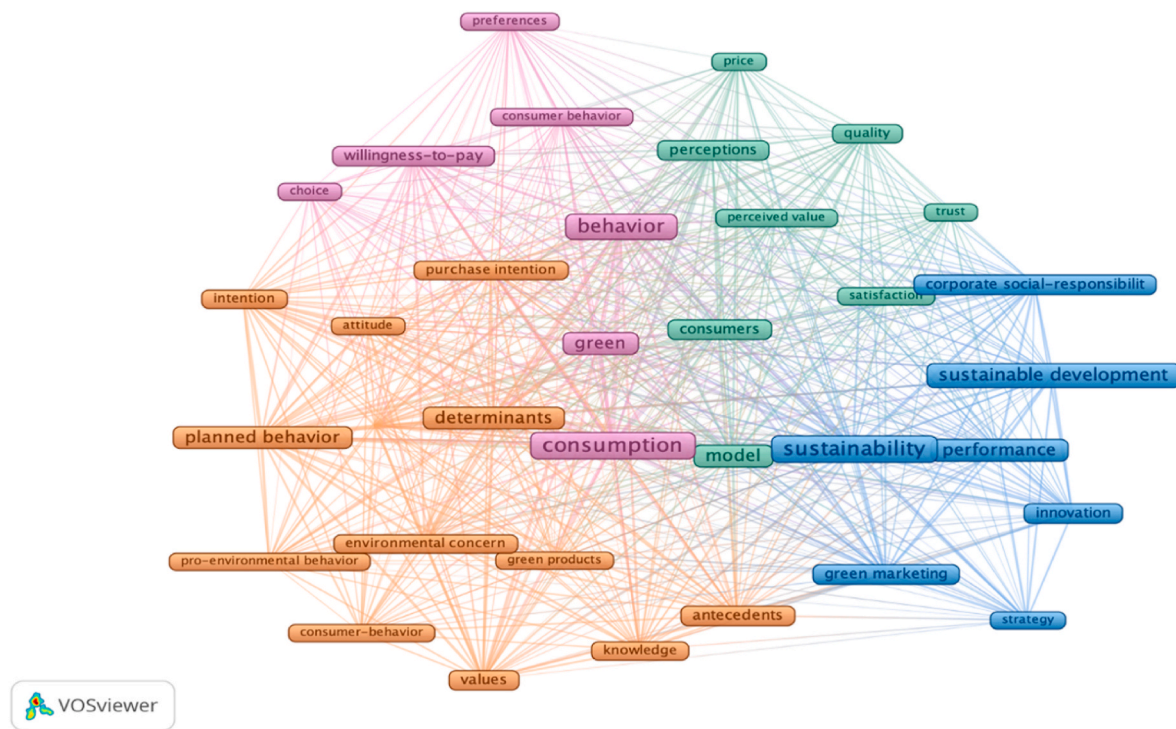


Fig. 4. Keywords map based on co-occurrence analysis.

is likely to contribute to the advancement of digitally sustainable operations that will aid Sustainable Development Goals (SDGs) (Ejmont et al., 2020).

5.2.2. Orange cluster: determinants of sustainable consumer behavior

Joshi and Rahman (2015) uncover factors influencing green buying behavior, differentiating between individual (emotions, habits, perceived behavioral control, perceived consumer effectiveness, values and personal norms, trust, and knowledge, among others) and situational factors (price, product availability, subjective norm/social norm and reference group, product attributes and quality, store-related attributes, brand image, and eco-labelling). According to Johnstone and Tan (2015), Green stigma, green reluctance and perceived difficulty of becoming green are the major variables affecting green behavior. Gupta and Ogden (2009) highlight the importance of social and psychological aspects in influencing green purchasing decisions. Social elements comprise a green brand's credibility, consumers' in-group identification, and the anticipation of other people's involvement, whereas psychological aspects include a green product's perceived efficiency and preference. Park and Lin (2020) established that a product's utilitarian value impacts green purchasing intentions along with previous green purchase behavior. However, self-expression and environmental concern influence behavior via the conciliation of intentions. Environmental engagement, information utility, and green trust were also found to have secondary impacts on behavior (Wei et al., 2017).

5.2.3. Pink cluster: green attitude-behavior gap

Environmental concerns are significant at the micro level, because most people want to change their consumption habits and buy more sustainable, biodegradable, and environment-friendly items. Nonetheless, polls and surveys consistently reveal a disconnect between what consumers say and what they do regarding purchasing behavior (Gleim and Lawson, 2014). This discrepancy is known as the "green attitude-behavior gap", "green intention-behavior gap" or "motivation-behavior gap" (Park and Lin, 2020).

The factors that contribute to the green gap are price, lack of availability, poor quality perception, green image, and preference for non-

green products (Wiederhold and Martinez, 2018). Additional hurdles to green buying behavior include prioritizing egoistic advantages and pragmatic heuristics, and choosing not to participate in the considerable cognitive work necessary to pick a green product (ChiuMei-Shiu, 2012). There are two types of green gaps: (a) the gap between environmental attitudes and the action of purchasing eco-friendly items and (b) the gap between an individual's attitude towards a particular green product and the actual event of buying it (Perry and Chung, 2016). The difference between the gaps mentioned above reveals a fundamental error that most studies make, especially given the TPB's demand that attitude be compared to actual behavior rather than some other attribute.

5.2.4. Green cluster: bridging the green attitude-behavior gap

Research in this area focuses on the consumer's psychological state after encountering inconsistent green purchasing behavior and the many coping methods that might help consumers maintain a rational and logical mindset. These coping methods indirectly impact the green gap by explaining unethical behavior and lowering guilt (Litvine and Wustenhagen, 2011). Individuals who engage in inconsistent green purchasing behavior have poor green views, a lack of reason, and social consciousness. To close this gap, consumers must be exposed to green products. If people do not want to buy green, they should "self-nudge" their inner drive to do so (Torma et al., 2018).

Previous research has demonstrated that changing the internal variables in the TPB can successfully bridge the green gap. Interventions that reaffirm attitudes, subjective standards, and perceived behavioral control (Loy et al., 2016) can close this gap. Interventions that alter the time window for buying are successful (Manzoor and Akoglu, 2017). For instance, coupons with a short expiry date, promotions with a time constraint, and on-the-spot product testing. Furthermore, altruism can overcome the value-action gap for green companies because customer altruism is favorably influenced by sustainability awareness, which improves consumer purchase intention, green brand loyalty, and green brand evangelism (Panda et al., 2020).

Greenwashing negatively impacts green purchasing consumer behavior but also indirectly affects green brand image and customer loyalty. Hence, businesses should reduce such greenwashing practices

and improve their green brand image and green brand loyalty (Chen et al., 2018). SHIFT (White et al., 2019) is one study that has made headway in addressing sustainable consumer behavior. It emphasizes the significance of understanding how social influence, habit formation, individual self, feelings and cognition, and tangibility may be employed to bridge the attitude-behavior gap. Fig. 5 shows the findings of bridging the green attitude-behavior gap.

5.2.4.1. Future scope of bridging the green attitude-behavior gap. Combining traditional and modern marketing strategies can bridge the green attitude-behavior gap. According to Johnstone and Lindh (2018), new communication methods should be developed to account for influencers' increasing importance. It is worth noting that influencer messaging focuses on the personal advantages of green behavior rather than the benefits to the environment as a whole. Celebrities can also cause current institutions to change (social norms, values, beliefs, practices, etc.) (McKeown and Shearer, 2019). Followers' cognitive, emotional, and behavioral engagement with celebrities can essentially strengthen their actual sustainable behavior patterns (Pilgrimene et al., 2020). More research is needed to investigate the impact of celebrities or influencers on consumer environmental knowledge and awareness and how this can change attitudes regarding SCB. Our comprehension of how Internet influence is exercised is limited (Zafar et al., 2021). The product's packaging must be aligned with its non-green equivalents, and it should carry transparent pricing and labelling to increase the purchase of green products. We also foster the use of prominent messaging and dynamic interactive tools in the marketplace, such as free trial kiosks and pricing comparison screens (Chang et al., 2019), which might encourage people to purchase alternative green products.

A promising way to bridge this gap is to use digital applications to promote green product offers and promotions. Further research on the impact of high-tech tools on green consumer behavior is needed to support this claim. Learning models have been demonstrated to effectively encourage, advocate, and compel new consumption patterns (Vermeir and Verbeke, 2006). Further research is required to determine whether this concept can be applied to green consumption.

Behavioral nudges have proven successful in transforming people's attitudes in the realm of health and wellness. As a result, these nudges can improve green purchasing behavior. Green nudges are helpful for both high- and low-involvement purchasing choices (Torma et al., 2018). Additional research on this topic may help in closing the gap. The notion of 'boost' (Hermann, 2022) may also bridge the green gap by using current consumer competencies and knowledge about green products. Most research on green consumerism focuses on the emotional aspect of the purchase, particularly negative emotions such as guilt (Antonetti and Maklan, 2014). Investigating the influence of pleasant emotions on green buying, such as pleasure, humor, and nostalgia (Youn and Dodoo, 2021), is another fascinating line of inquiry.

5.3. Methodology

Within the realm of sustainable marketing, studies have predominantly employed various methodologies. Quantitative approaches, such as structural equation modelling, exploratory and confirmatory factor analysis, and multiple regression, have been prevalent in investigating factors influencing intention, attitude, and decision towards a green product. Furthermore, statistical methods, such as ANOVA, t-tests, chi-square statistics, and partial least squares, have been applied to test the relationships between green purchase intentions and self-concept, self-identity, trust, and environmental awareness on green purchase intentions (Zameer and Yasmeen, 2022). Additionally, econometrics tests, the decision-making trial and evaluation laboratory (dematel) method, and hierarchical regression analysis were used to explore the effects of the green marketing mix and eco-labelling strategies on entrepreneurial orientation, competitive advantage, brand equity, and eco-innovation of the business. Future research could employ big data analytics to track consumer buying habits and determine which products are more popular among sustainable consumers to better targeting the consumers.

Future research can undertake longitudinal or seasonal analysis to delve deeper into sustainable consumer behavior. Qualitative methods, such as interviews, case study development, and data mining, have been relevant in understanding consumer attitudes, consciousness, and knowledge regarding sustainable products. Although online qualitative techniques, such as netnography and scenario-based experiments, have seen limited use, they offer future research directions. Moreover, mixed methods, which combine quantitative and qualitative approaches, have been less common in studying attitudes and consumer behavior but have found widespread application in research related to sustainable consumption, sustainable development, and sustainable marketing orientation. In addition, emerging techniques such as neuromarketing, social network analysis, and behavioral economics warrant further investigation in the context of sustainable consumer behavior research.

Systematic analysis and meta-analysis are popular techniques for statistical assessment of literature to extract themes, theories, methodologies, and structural insights. These methods have been employed in the field of sustainable marketing primarily to identify the gap between consumer attitudes and actual green purchasing behavior. However, few well-structured reviews are grounded in both theory and methodology, and have been published in reputable journals (Paul and Criado, 2020). While conducting reviews on broad themes can be valuable for providing a comprehensive understanding of the field, it is also important for researchers to undertake thematic reviews on less popular sub-themes. Such focused reviews can deepen the theoretical base of this area and offer momentum for its development.

Furthermore, a framework is a powerful tool for structuring and synthesizing data across sustainable marketing-related issues. Some of the recent frameworks include the Antecedents, Decisions, and

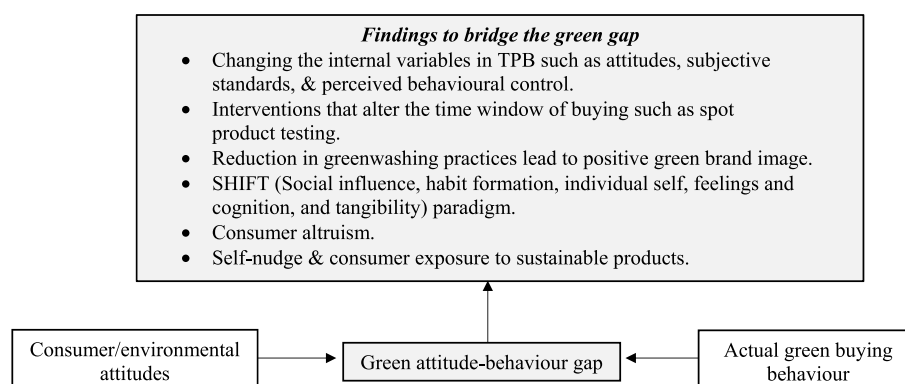


Fig. 5. Findings of Bridging the green attitude-behavior gap.

Outcomes (ADO) framework by Paul and Benito (2018), the Theory, Constructs, Characteristics, and Methodology (TCCM) framework by Paul and Rosado-Serrano (2019), and the 7 P framework (Potential, Path, Process, Pace, Pattern, Problems, and Performance) framework by Paul and Mas (2020). The application of such frameworks holds the potential to structure future research agendas and to generate new insights. Fig. 6 provides an overview of the number of articles that employed quantitative, qualitative, and mixed-methods approaches to conduct research in the area.

In continuation of the aforementioned discussion, following the TCM approach, a summary of future research directions is presented in Table 7.

6. Implications

6.1. Theoretical implications

Bibliometric Analysis and Cross-Disciplinary Theories: The study underscores the importance of bibliometric analysis in gauging growth and trends in sustainable marketing research. By employing cross-disciplinary theories, such as social learning theory and social identity theory, this study suggests a theoretical contribution that goes beyond traditional frameworks. This approach enriches the theoretical foundation of sustainable marketing, offering researchers avenues to explore unconventional perspectives on the green attitude–behavior gap.

Integration of Emerging Methodologies: The inclusion of emerging methodologies such as big data analytics and neuromarketing opens new theoretical possibilities. This study encourages researchers to explore innovative approaches for a deeper understanding of sustainable consumer behavior. By highlighting the potential of these methodologies, this study contributes to the evolution of theoretical frameworks in sustainable marketing by aligning them with contemporary research tools.

Longitudinal Analysis of Literature Trends: This study's emphasis on the temporal dimension of literature trends, particularly the noticeable increase since 2016, suggests a theoretical evolution in response to changing societal and environmental dynamics. This temporal lens provides insights into the adaptive nature of theoretical frameworks in sustainable marketing, indicating an ongoing dialogue between academia and the shifting consumer consciousness landscape.

TCM Framework for Research Gap Identification: The application of the TCM framework in identifying research gaps serves as a theoretical cornerstone. This systematic approach provides a reference point for researchers at different stages of their work, facilitating structured exploration of theoretical nuances. It not only reviews the existing literature but also establishes a roadmap for future theoretical developments by identifying areas that need further exploration within the sustainable marketing domain.

Table 7

A summary of future research directions.

Future research direction	
Theory	• Use TPB to analyze more characteristics of sustainable consumer behavior such as belief salience measurements, habitual behaviours, self-efficacy, moral standards, and affective beliefs. • Investigate which kinds of values are plausible to trigger environmental norms and sustainable behavior. • Investigate which beliefs have distinct mediation effects on the value-norm connection. • Examine the effectiveness of particular affordances and interfaces of sustainable products to enhance consumer engagement and boost sales • Examine the influence of consumer perceptions of green technology affordances on sustainable consumption behavior • Examine consumer's need for variety in their sustainable products or service alternatives • Does consumer variety-seeking behavior vary in developed and developing countries or across cultures? • Investigate why people convert from regular to sustainable brands. • Examine in more detail to find connections between sustainable and unsustainable products • Extend social learning and social identity theory to examine pro-social behavior in social media communities • Explore the development of marketing messages that appeal to the social identity of sustainable consumers
Context	<i>Bridging the green attitude-behavior gap</i> • Investigate the influence of pleasant emotions such as nostalgia, humor and pleasure on sustainable purchase decision • Explore more green nudges in both high and low-involvement purchasing choices • Examine influencer characteristics and their effect on persuasion and the stimulation of sustainable behavior • Comparative approach on social media influencers versus celebrities and their effectiveness in promoting sustainable/prosocial behavior • Examine the congruency between the sustainable/prosocial cause and the influencer • Explore the use of digital applications to promote sustainable product offerings and promotions • Examine the effectiveness of prominent messaging and dynamic interactive tools in the marketplace, such as pricing comparison screens
Methodology	• Conduct more multi-study approach-based research • Conduct mixed-method research • Conduct more framework-based research • Adopt longitudinal research design to understand consumer behavior over a time • Adopt more online qualitative techniques such as netnography and scenario-based experiments • Employ emerging approaches such as big data analytics and neuromarketing

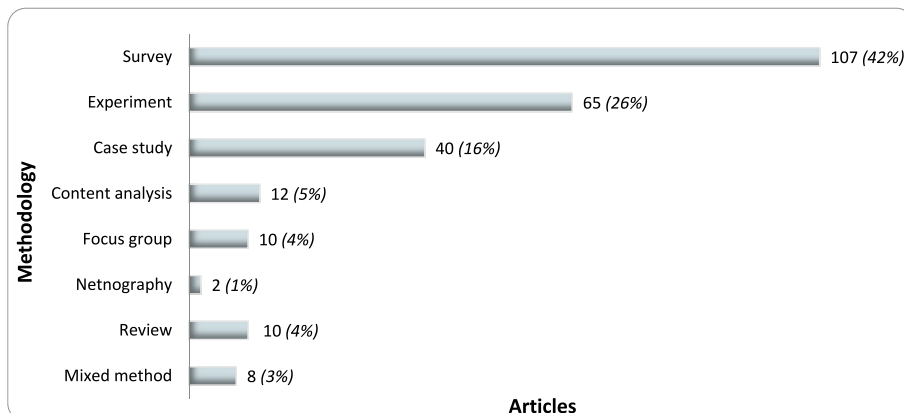


Fig. 6. Summary of methodological approaches.

Global Perspective Through Country Analysis: The analysis of countries based on citations and bibliometric coupling introduces a global perspective on sustainable marketing research. By identifying the major contributors and potential research hotspots, this study implies a theoretical shift towards acknowledging diverse cultural contexts. This encourages researchers to integrate regional perspectives, ensuring a more comprehensive understanding of sustainable marketing theories applicable on a global scale.

6.2. Practical and policy implications

Combatting Greenwashing for Enhanced Consumer Trust: The study offers practical insights for marketers by addressing the issue of greenwashing. It highlights the negative impact of greenwashing on both consumer behavior and brand loyalty. This calls for designing strategies to reduce greenwashing practices, focusing on transparent communication and content creation to build sustainable trust. This aligns with the need for companies to genuinely embrace sustainability, ensuring that marketing efforts align with authentic, environmentally conscious practices.

Strategic Use of Influencer Marketing: Recognizing the role of trust in sustainable consumer behavior, the study proposes influencer marketing as a strategic tool. Practical implications involve designing content that emphasizes the personal benefits of green behavior and fostering trust through influencer endorsements. This approach not only enhances brand loyalty, but also capitalizes on the potential for positive word-of-mouth marketing, ultimately reducing costs for marketers.

Emotional Appeals in Marketing Strategies: The identification of positive emotions such as joy, humor, and nostalgia as key influencers of green purchasing behavior offers practical guidance for marketing managers. The study suggests incorporating these emotions into marketing messages to appeal to consumers' emotions. Marketers must consider developing campaigns that evoke these emotions, aligning with the idea that positive emotional associations can drive sustainable purchasing decisions.

Transparent Pricing and Labelling: To bridge the green attitude-behavior gap, the study recommends focusing on transparent pricing and labelling. This calls for marketing strategies that clearly communicate the value proposition to consumers, emphasizing individual benefits rather than just environmental advantages. This approach aligns with growing consumer demand for products that offer personal value alongside sustainability, guiding marketers in crafting messages that resonate with these preferences.

Social Identity and Community Building: The study suggests leveraging social identity and community building in marketing strategies to foster a sense of commitment towards a green community. Thus, campaigns must be designed that align with consumers' social identities and use influencer marketing to build a sense of belonging. This approach addresses the social aspect of sustainable consumption and guides marketers to create connections that extend beyond individual choices to broader community values.

Long-Term Commitment to Sustainability: Unlike the passing trend, this study emphasizes the enduring importance of environmental and social responsibility. This has significant policy implications, advocating a long-term commitment to sustainable practices. Policymakers are encouraged to create and enforce regulations that promote transparency, discourage greenwashing, and incentivize companies to adopt sustainable practices. This study implies that policies supporting sustainability are not only necessary but are likely to become more critical over time.

Consumer Education Initiatives: Recognizing the need for a shift in consumer attitudes, the study highlights the importance of educational initiatives. Companies and policymakers must invest in educational campaigns to increase the awareness and understanding of sustainable consumption. By promoting consumer knowledge, these initiatives can contribute to building a green conscience, aligning with the long-term

goals of sustainable marketing strategies.

7. Conclusion

The primary objective of the study was to discover and synthesize prior research in the field of sustainable marketing and sustainable consumer behavior and to pave the way for bridging the green attitude behavior gap. This was achieved by examining the progression, volume, and trends in knowledge development in this area. Our analysis provides a comprehensive insight into future research directions concerning theoretical underpinnings, methodological approaches, and contextual aspects of sustainability and sustainable consumer behavior.

The present study is based on a sample of the Web of Science database records. Many studies on sustainability have been published in other publications that have not been accessed. An attempt was made to incorporate all the potential keywords and research topics in sustainable marketing. However, it is possible that a similar term or study topic was overlooked. Consequently, the possibility of sampling errors in retrieved articles cannot be ruled out. In addition, some of the retrieved studies from the database had various authors with the same names discovered while utilizing bibliometric techniques to evaluate data. To avoid such mistakes, all the records in this study were thoroughly examined. However, there is a potential possibility that a few of these research studies were taken into account since Web of Science data were used in this investigation, and different findings might be obtained by analyzing data from another source.

Despite these limitations, the significance of our contribution lies in the systematic procedure used and the thoroughness of the study, which provides new insights and aims to advance knowledge in the subject of sustainable marketing. The study is both useful and relevant given the growing importance of people and companies to be more environmentally and socially responsible, which, unlike a fad, is here to stay.

Funding details

There is no funding for this research project.

CRediT authorship contribution statement

Mahima Yadav: Conceptualization, Data curation, Formal analysis, Software, Writing – original draft, Writing – review & editing. **Ruchi Gupta:** Supervision, Validation, Writing – review & editing. **Kiran Nair:** Validation, Writing – review & editing.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Data availability

Data will be made available on request.

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