

FACTORS INFLUENCING CONSUMERS' GREEN PURCHASING INTENTION: A SYSTEMATIC REVIEW

Shao Hongquan^{1,2} & Faridah Ibrahim¹

¹*Infrastructure University Kuala Lumpur, MALAYSIA*

²*Yiwu Industrial and Commercial College, CHINA*

ABSTRACT

Green procurement is pivotal in achieving the Sustainable Development Goals (SDGs) and has garnered increasing attention from consumers. This study aims to contribute to the understanding of factors influencing green purchasing intention through a systematic literature review (SLR) conducted via PRISMA methodology. Analyzing 39 papers from the Scopus database spanning 2017 to 2022, we structured our investigation around variables such as country of origin, publisher, journal of publication, influencing factors, and theoretical frameworks employed. Our findings underscore the complexity of green purchasing intention, shedding light on multifaceted influences ranging from individual beliefs to societal norms. Importantly, we identify avenues for future research, including the exploration of multilingual database resources to ensure a comprehensive understanding of the determinants of green purchasing intention. This study fills a gap in the literature by providing insights into the nuanced interplay of factors shaping consumer behavior toward sustainable procurement. Moreover, it offers practical implications for policymakers and businesses seeking to promote green purchasing initiatives, emphasizing the need for targeted interventions informed by a thorough understanding of consumer motivations

Keywords:

Purchasing intention, green purchasing, influence factor, environment

INTRODUCTION

The context in which individual consumer behavior unfolds is profoundly shaped by broader societal and economic forces. The relentless march of economic development and industrialization has bestowed upon individuals greater material purchasing power, ushering in an era of unprecedented consumption (Lin et al., 2017). However, this surge in affluence has come at a cost, with studies linking overproduction and over-purchasing to a surge in global environmental and ecological challenges (Fan et al., 2015).

As individuals exercise their newfound purchasing power, the ramifications for the environment cannot be overstated. Non-green purchasing behaviors, characterized by little regard for ecological consequences, contribute significantly to environmental degradation (Lacy & Hayward, 2011). In response, the concept of green purchasing has emerged, reflecting a growing awareness among consumers of their environmental footprint and a desire to mitigate it (Laukov, 2013).

Yet, transitioning from entrenched non-green purchasing habits to more sustainable alternatives poses formidable challenges. Scholars have underscored the complexity of this transition, citing societal norms and entrenched consumption patterns as formidable barriers (Burgess, 2003). Moreover, the imperative of sustainable development adds another layer of complexity, emphasizing the responsibility of affluent societies to address global inequalities and environmental degradation (Ahmed Mohamed and Ibrahim, 2021).

Crucially, individual behavior is not an isolated phenomenon but is influenced by a myriad of factors, including subjective norms and environmental attitudes (Cheung & To, 2017). Predicting

consumer purchase intentions, therefore, proves challenging, particularly given the array of competing influences (Zhuang et al.2021). Against the backdrop of escalating environmental challenges, the imperative for green purchasing has never been clearer, yet studies suggest a gap between intention and action among today's consumers (Tariq et al.2019; Haws et al.2014).

In the context of escalating environmental challenges and the imperative for sustainable consumption, understanding the determinants of green purchasing behavior assumes paramount importance. This research endeavors to illuminate the multifaceted factors shaping consumer choices, with the overarching goal of informing strategies to foster more sustainable consumption patterns and mitigate environmental degradation.

To address this objective, the study aims to systematically review and analyze existing research on the various factors influencing green purchase intention (GPI). This preliminary investigation is guided by several key questions:

Question 1: What factors exert influence on GPI?

Question 2: Which of the factors influencing GPI have received greater attention in existing literature?

Question 3: What avenues exist for future enhancement and refinement of GPI research?

OBJECTIVE OF THE STUDY

Objective 1: To comprehensively explore and analyze the diverse factors that influence GPI.

Objective 2: To identify and assess the prevalence of factors frequently studied in the context of GPI.

Objective 3: To delineate potential pathways for advancing and refining research on GPI.

Utilizing PRISMA methodology, this study delves into a vast array of literature to better understand the factors driving consumers' intentions to purchase green products. Through rigorous analysis and synthesis of existing research, this study aims to provide valuable insights that can inform policy-making, business strategies, and future research directions in the realm of sustainable consumption.

Compared with the previous literature, this article mainly makes the following contributions. First, we used Scopus as the main database to conduct a detailed review and systematic analysis of the papers from January 2017 to May 2022 (a five-year review is more common as can be seen in studies such as Zhang & Dong, 2020) and updated the previous research results. Second, the research scope is clear and definite, that is, the influencing factors of consumers' green purchasing intentions. The influencing factors with higher frequency were summarized and analyzed, and further divided into internal factors and external factors. Third, the present study statistically analyzed the most frequently used theoretical frameworks applied in green purchasing research, and pointed out the deficiencies of these theories, which can contribute to future research.

The structure of this study is as follows. The first section is literature review. Section 2 introduces the research method, including the following parts: research design, research questions, research procedures, research literature collection requirements, and literature screening process. Section 3 displays the research results, characteristics of paper publications on green purchasing (number of publications, publication year, research country, publications, and database information), influencing factors (internal factors and external factors), and theoretical research foundation. The discussion of this paper is in Section 4. Section 5 contains conclusions, limitations, and recommendations for future research.

LITERATURE REVIEW

Currently, the exploration of the influencing factors of green purchasing behavior is in its nascent stage, with limited relevant research findings available from related fields. Despite its crucial importance, the understanding of green consumer behavior, which falls within the realm of environmental behavior, remains largely confined to the point of purchase.

Early scholars have attempted to define consumers' inclination towards purchasing environmentally friendly products, commonly termed as green purchase intention. However, existing literature lacks comprehensive coverage and suffers from several notable shortcomings. For instance, while some scholars have focused on consumers' positive attitudes towards green products or services, others have emphasized the proactive inclination to purchase such items. This lack of consensus among scholars leads to ambiguity and hinders the development of a unified framework for understanding green purchase intention (Schneider et al., 2001; Huang & Wang, 2020). Moreover, despite attempts to conceptualize green purchase intention as a latent consumer mindset motivating actual purchases, there is a dearth of empirical evidence supporting this assertion (Gao Jian, 2021).

Additionally, the existing body of research on green purchase intention primarily concentrates on consumer psychology and green marketing investigation. However, many studies in these domains suffer from methodological limitations and inconsistencies in results. For instance, while some studies utilize established behavioral theories to explore the cognitive decision-making process behind green purchasing behavior, others lack theoretical grounding and rely on ad-hoc methodologies (Dodds et al., 1991; Sheng et al., 2019). Furthermore, within the realm of green marketing, the focus on identifying obstacles posed by price premiums associated with green products overlooks other critical factors influencing consumers' purchasing decisions, such as product availability and perceived convenience (Olsen et al., 2014; Groening & Zhu, 2018).

In summary, existing literature on green purchase intention exhibits significant deficiencies, including a lack of consensus among scholars, methodological shortcomings, and inconsistencies in research findings. Addressing these deficiencies is essential for advancing our understanding of green consumer behavior and developing effective strategies to promote sustainable consumption practices (Javed et al., 2019; Kumar et al., 2019).

METHODOLOGY

Research Design

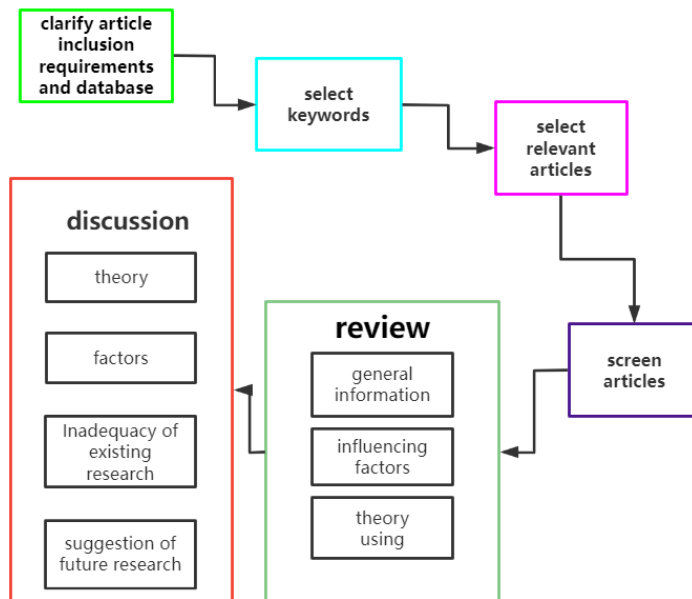
An essential goal of a Systematic Literature Review (SLR) is to identify the key research gaps based on the structure, theories, and methods used in different circumstances as well as the research background (Al Jahwari et al., 2021). SLR allows the implementation of three stages namely planning, conducting research and mapping. It enables researchers to identify specific research gaps and context of the study (Sulaiman et al. 2022). In this study, the SLR method was used to collect, screen, and analyze the relevant literature. The SLR is a commonly used research method to accurately summarize the main points of the literature (Liberati, 2009).

This research conducted an SLR according to the following steps: (1) figuring out accurate and suitable keywords, (2) identifying related papers in the database, and (3) reading and refining the core of related papers. These papers are only selected from the Scopus database. The six-step structure as depicted in Figure 1 was used for further elaboration

Research Procedure

1. Clarifying article inclusion requirements and database
2. Choosing keywords related to the research topic, with these keywords divided into two large groups:
 - The first group: social media use, price sensitivity, government policy, cultural environment, media promotion, media persuasion, and environmental concern
 - The second group: young consumers, purchasing behavior, purchasing intention, green purchasing, and planning behavior theory
3. Applying a combination of keywords from the above categories to collect relevant papers
4. Screening papers from different perspectives
5. Reviewing effective general information of the papers, identifying factors that influence green purchasing motivation and the theory to be used
6. Summarizing the research results, analyzing the influencing factors, putting forward the deficiencies of existing research, and making suggestions for future research.

Figure 1: Research steps (Own source)



Requirements for the Collection of Research Papers

The literature for this study was sourced solely from Scopus (Chadegani et al., 2017; Mazur, 2021), one of the most valuable electronic academic databases in the scientific system. Papers selected were all published in English-language academic journals from January 2017 to December 2022. It has been suggested that if the most recent reference is more than 5 years old or so, it may indicate that a full and up-to-date review of the literature has not been conducted (Santini, 2018). The selection requirements for academic journals are as follows: non-theoretical model research; not a conference report or a doctoral dissertation or a seminar paper; a completed paper; not a chapter of a book; not a conference publication (including conference minutes, posters, and abstracts). To address the research questions, the keywords "green purchasing intention", "green purchase", "purchase intention", and

"influencing factors" were used as keywords in the title and abstract, and a comprehensive literature review was obtained.

Document Screening Process

The screening process is based on the PRISMA process proposed by Liberati et al. (2009). It consists of four main steps: identification, screening, eligibility, and inclusion.

Firstly, 1,409 documents were screened in the Scopus search through a reasonable combination of keywords. Second, according to the thematic classification of the literature, literature with little relevance to green purchasing and purchasing intention (734 articles) was excluded, leaving 675 articles. Then, 38 duplicates were excluded, resulting in 637 valid documents. After that, 453 papers outside the scope of the study were excluded, leaving 184 papers. Of these 184 papers, 145 papers that dealt with non-purchasing behavior or lack of willingness to consume green were identified and removed. In the end, 39 valid papers were produced.

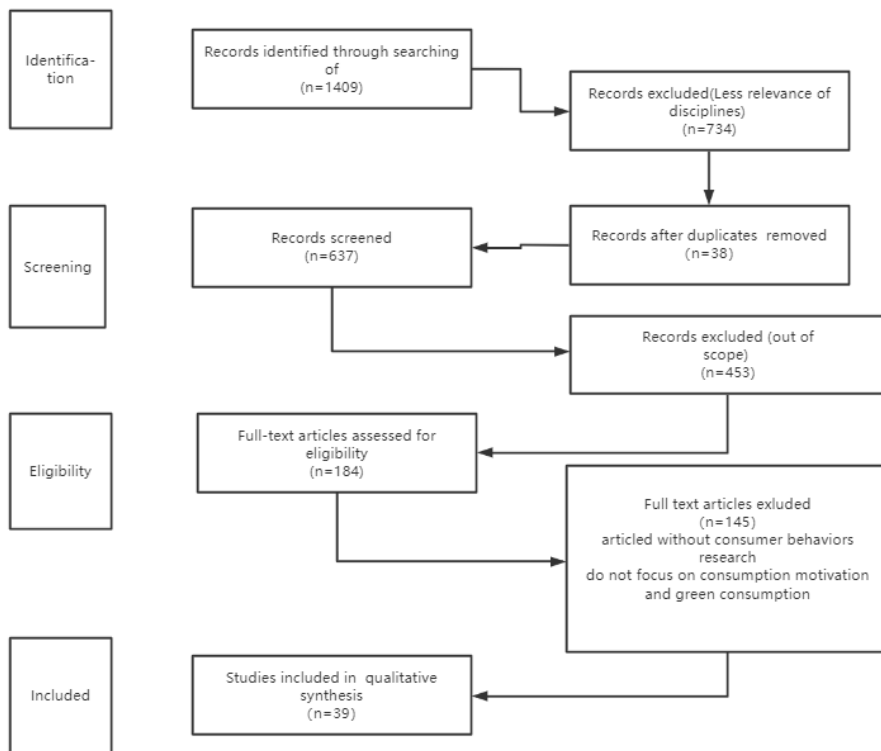


Table 1: PRISMA Flow Chat. n=number of documents

FINDINGS

Characteristics of GPI Papers Publication

A total of 39 papers related to green purchasing published in several Scopus academic journals from 2017 to 2022 was chosen for this SLR. They were distributed in various fields, including energy, real estate, new energy vehicles, religion, psychology, clothing, and media. With so many disciplines covered, it is not an easy task to explore the intention of green buying behavior, as it requires knowledge of a variety of fields.

Publication Year

We examined the papers published between 2017 and 2022 to figure out the publication trend of the papers. As can be seen from Figure 3, the number of papers published on consuming intention and green purchasing increased year by year from 2017 to 2022. Among them, 2021 had the most publications, with a total number of 17.

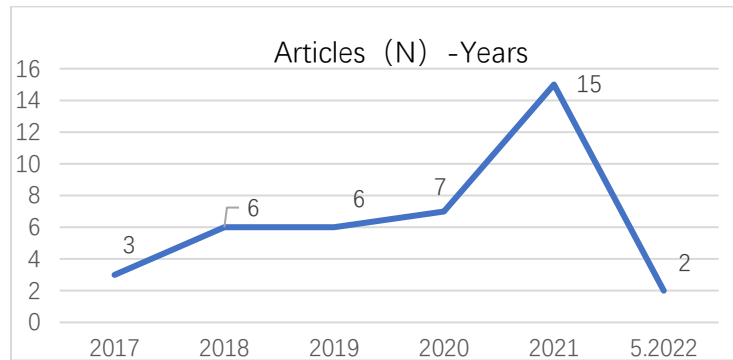


Figure 2: Literature publication trend graph. n=number of documents

Type of Publisher

The contributions of various publishers were summed up. According to the figures, Elsevier ranked first, with the most papers of eight, followed by MDPI with seven papers. Figure 3 shows the specific sources for each paper.

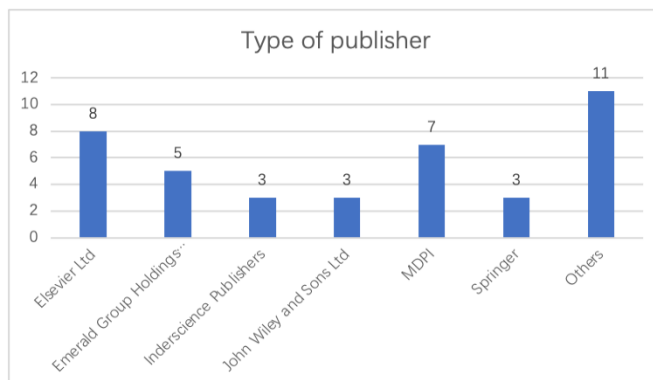


Figure 3: Type of publisher.

Types of Journal Publication

The source journals of the literature were summarized and counted. Journals with a single publication are classified as other journals (n=25). It can be observed that Sustainability is the journal that publishes the most papers (n=6). The topics of this review cover a wide range of academic fields, such as marketing, environment, and business. The types of journal publications are shown in Figure 4.



Figure 4: Type of journal publication

Type of Country

This study collected the mailing address of the first author of each paper and figured out the nationalities of the authors. According to the results, it can be seen that China and India are the largest sources of articles, followed by Malaysia.

The countries as the origins of the literature are shown in Figure 5.

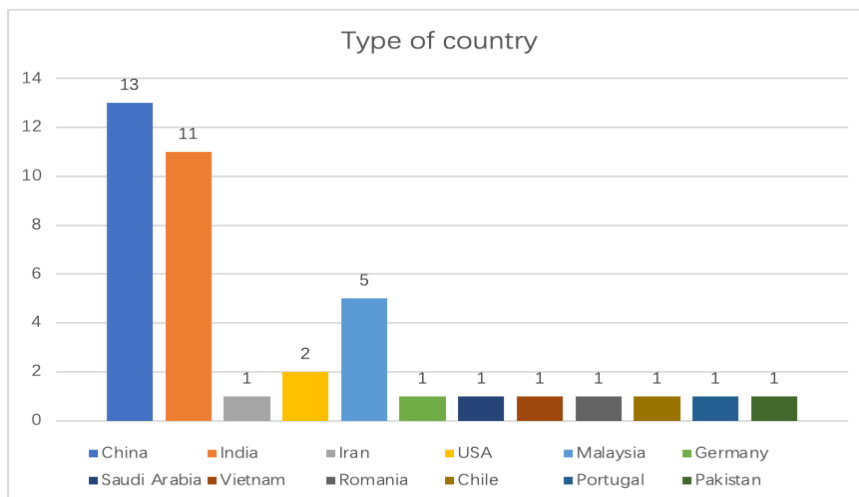


Figure 5: Type of country

Influencing Factors

The influencing factors of consumers purchase intention studied in the literature were summarized. Factors such as price sensitivity, environmental concerns, social media, and government support have been more emphasized in the research on consumers' purchasing behavior in recent years. Among all the influencing factors involved, price sensitivity was studied most frequently, and the influence of non-governmental organizations was emphasized least frequently. The research frequencies of influencing factors are shown in Figure 6.

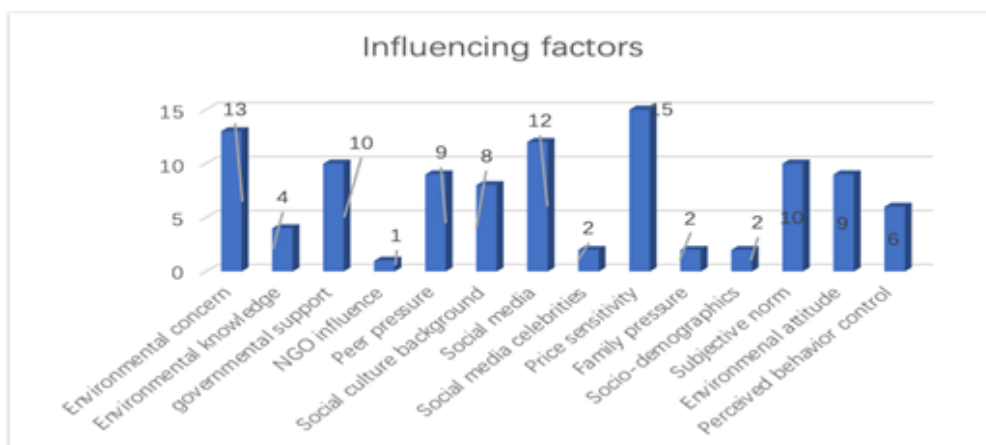


Figure 6: Influencing factors

These influencing factors can be divided into two major categories: the internal factors related to the individuals themselves (psychology, attitude, consciousness, values, morals) and the external factors that exert impacts on the individuals (social norms, social forces, media power).

Internal factors include environmental concerns, environmental knowledge, price sensitivity, environmental attitudes, subjective norms, perceptual behavior control, and social demographics. External factors include governmental support, peer pressure, social media, social media celebrities, non-governmental organizations, family pressure, and cultural background.

In this study, among the factors influencing green purchasing, internal factors are studied more frequently than external factors. However, it should be noted that even for the same influencing factors, there are different research results. There are studies that concluded that environmental attitudes have a greater impact on consumers' green purchasing intention; there are also studies that put forward the opposite opinion in that environmental attitudes do not present a correlation with consumers' green purchasing intention (Trivedi et al., 2018; Visser, Dlamini, 2021).

According to the SLR summary, there is no uniformity in the definition of environmental concerns. However, environmental concerns are categorized into two types in most studies: environmental concerns about specific environmental issues and general environmental concerns (Yue, et al., 2020). As one of the influencing factors of green purchasing intention, some studies use it as a direct influencing factor, while some studies use it as a mediating factor between other influencing factors and green purchasing intention (Young et al., 2010).

Price sensitivity is also one of the influencing factors that appear more frequently in this SLR, and the studies on price sensitivity for residents of developed countries are lower than those of developing countries. The differences in green behavior of consumers depend on their price sensitivity to the purchasing of green products; it is argued that price sensitivity and the price itself are the key determinants of the consumers' willingness to make green purchases (Marwat & Ahmad, 2020).

Simultaneously price sensitivity is also considered as a mediator between green purchasing intention and other influencing factors (Marwet et al., 2022; Chen &Kian,2021).

This research also found that the influence of social media is one of the important research objects in the field of green purchasing research in recent years. Existing research suggests that advertisers are shifting from traditional media to social media platforms because social media is more cost-effective and easier to reach target audiences than traditional media (Nekmahmud & Fekete, 2022). Most studies suggest that the influence of social media on consumers' green purchases is not direct, but rather indirect through other influences. Some studies suggest that social media can play an important role in changing consumers' attitudes toward green products, and social media advertisements have also been shown to help increase consumers' knowledge about environmentally friendly products (Zhao & Lee, 2019; Sun& Wang, 2020). Social media users are highly interactive with each other, and frequent information exchanges and word-of-mouth transmission can influence users' offline behavioral intentions (Tan,2023).

In the field of green purchasing, this SLR found that subjective norms have a greater impact on consumers' green purchasing intentions. Subjective norms are the group's evaluation of the appropriateness of an individual's behavior, which can exert some social pressure on the individual to perform a certain behavior (Sun & Xing, 2022). Especially in some East Asian countries and regions where collectivist values are dominant such as China and South Korea, the green purchasing intentions of consumers in these countries and regions are easily influenced by the behaviors of the community, family and friends (Lee, 2017). Also, subjective norms are often analyzed together with other influencing factors, for example, social media and mass communication reinforce users' subjective norms. Celebrities' retweeting of green product information on social media can be effective in raising fans' environmental awareness in the form of social demonstration (Chwialkowska, 2019).

Theoretical Foundation

The research on green purchasing intention involves disciplines such as consumer psychology, marketing, social psychology, cultural science, and economics, among others. Some theoretical frameworks are highly applicable to the research of green buying behavior. After collating the literature, most of them applied the planned behavior theory (TPB) (n=12), followed by the stimulus-organic-response theory (SOR) (n=2). At the same time, many documents expand and innovate the original theories, and even use a mixed theory (Sang et al., 2020).

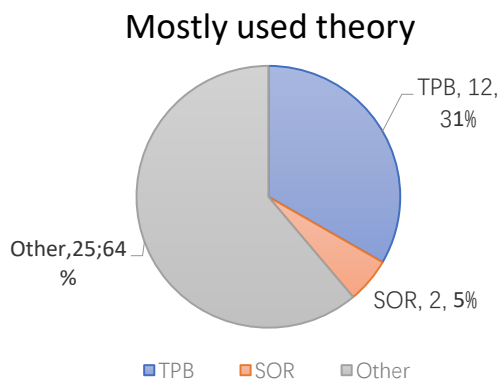


Figure 7: Mostly used theory

DISCUSSION

Whether in developing or developed countries, the research on consumers' green purchase intention has attracted much attention, yielding rich research results (Gonzalez et al., 2015). Some researchers try to identify the impact of individual values, social norms, and other factors on consumers (Naderi & Steenburg, 2018). Some researchers intend to explore consumers' attitudes and environmental concerns (Esmaeilpour & Bahmiary, 2017). In addition, some researchers investigate GPI from consumers' own socio-demographic data and price sensitivity (Kundi & Mughal, 2021; Diamantopoulos et al., 2003). Compared with the papers on internal factors, there are fewer studies investigating the impact of external factors on GPI (Kumar et al., 2019), such as peer pressure, social impact, and government measures (Lee, 2010).

According to the SLR result, scholars in various countries mainly adopt intervention research, field investigation, and quantitative analysis to research factors affecting green purchasing intention. The internal factors mainly include environmental concerns, environmental knowledge, price sensitivity, environmental attitudes, subjective norms, perceptual behavior control, and social demographics. The external factors primarily cover government support, peer pressure, social media, social media celebrities, non-governmental organizations, family pressure, and social-cultural background.

Based on the SLR results, the internal factors influencing individual GPI mainly include environmental attitudes, environmental concerns, environmental knowledge, price sensitivity, and social demographic data. Social demographics, involved in internal factors, have a significant impact on consumers' green purchasing intentions and behaviors, according to the literature. It was found that gender, age, education level, income level, and other factors will influence consumers' attitudes toward green products (Diamantopoulos et al., 2003). Specifically, according to the existing studies, men have more positive attitudes toward sustainable product purchasing than women while younger consumers have more positive attitudes toward purchasing green products compared to older people. In other words, when studying the influence of factors on GPI, it is necessary to distinguish groups and conduct research on group characteristics.

Other internal factors also have a considerable impact on consumers' purchasing intentions, for example, consumers' attitudes towards the environment. Previous research has found that attitudes towards green products will influence consumer purchase intention to a large extent (Göçer & Sevil, 2017). Many studies incorporate subjective norms into important variables in the research on consumers' green purchasing (Javed et al., 2019; Chen & Tung, 2014).

Moreover, the SLR results indicate that external factors that influence people's GPI mainly involve government support, social-cultural background, peer pressure, and social media platforms. Among them, social media is one of the most influential factors of green purchasing. Nowadays, social media has become an essential tool for the dissemination of consumer information, and it has been deeply integrated into consumers' daily lives (Ismail, 2017), especially in green purchasing. Studies have found that social media has a particularly strong influence on young people, and it can exert a significant impact on young consumers' purchasing attitudes and intentions towards green products (Huang, 2016; Zhang et al., 2018; Zhao et al., 2019). Plenty of existing documents have shown that social media platforms affect consumer behavior as well (Cao et al., 2021).

Compared with text information, audio content offers greater advantages. It can have more influence on audiences' behavior with the increase of audio content in the age of social media (Lim et al., 2019). Currently, social media is an important reference platform for young consumers when shopping, such as Twitter, IG, and YouTube, especially for fashionable green products (Pandey et al., 2018). Celebrity recommendations and hot recommendations on social media will undoubtedly affect the behavior of many followers (Tengku & Manaf, 2019).

Since the outbreak of the COVID-19 pandemic in 2020, global sales models have undergone tremendous changes, with online shopping becoming an inseparable part of people's daily life (Sun

et al., 2021). Therefore, with the further extension of people's online time, social networks are of great importance serving as the connection between people in the current digital age (Jin & Ryu, 2019). It has developed to become a critical channel of communication between users; it has also become a platform for individual consumers to interact with online marketers (Ryan et al., 2017).

Simple internal factors cannot completely determine consumers' purchasing intentions. Some consumers, for example, may have a favorable opinion towards new energy vehicles, believing that they are environmentally friendly without using fossil fuels. However, the technical flaws of electric cars, such as a short cruising range, slow charging speed, limited charging stations, and high battery maintenance cost, have discouraged many consumers from purchasing them (Pan et al., 2019). Therefore, studying only the internal factors that influence purchasing willingness is insufficient. Consumers' green purchasing will be influenced by a variety of external factors as well, as evidenced by the difficulty of popularizing BEVs.

Additionally, the SLR found that the Theory of Planned Behavior (TPB) is mostly used by previous research on GPI. Aiming at the defect that rational behavior theory cannot explain behaviors that are not completely controlled by the will, Ajzen extended TRA in 1985 and developed it into the planned behavior theory (Ajzen, 1985). TPB is composed of five factors: attitude, subjective norms, perceived behavior control, willingness, and behavior. Compared with rational behavior theory, it has one more variable of perceived behavior control. The theory holds that the intention of an individual for a specific behavior can directly determine the behavior controlled by individual will, and the behavior intention is determined by the individual's attitude, subjective norms, and perceived behavior control. That is to say, the more positive an individual's attitude towards a specific behavior is, the greater subjective pressure he may feel from the norms, and the more perceptual behavior control he may perform. When the individual's willingness to perform a specific behavior is strong, the specific behavior will be executed accordingly.

Perceived Behavior Control (PBC) is a brand-new concept that refers to "an individual's perception of whether it is easy or difficult to perform a specific behavior" (Ajzen, 1991). It is the perception of the degree of controllability of related factors that promote or hinder the execution of specific behaviors. It depends on the relative weight of costs and benefits involved in the process of accomplishing a certain purpose, such as money cost, labor cost, time cost, and interpersonal communication cost (Lindenberg & Steg, 2007). PBC consists of two components. One is self-efficacy, which means the degree of confidence and ease that a person perceives when performing certain behaviors. The other is controllability, that is, an individual's view of whether the behavior can be fully grasped.

TPB is a typical representative of behavioral process decision theory (Kwon, & Silva, 2020). It has been widely used in behavioral research on sustainability (Banyte et al., 2020). It can explain human behavior in a wide range of environmental cases and is considered to be the most important research theory of green purchasing (Huijts et al., 2014). Even so, it still has some major flaws.

TPB focuses too much on people's rational thinking in the purchasing process. In fact, people may engage in irrational, reckless, and impulsive purchasing. Hence, TPB is not applicable to the analysis of this type of consumer behavior. That pays too much attention to the influence of individuals' subjective psychological factors on their specific behaviors, without taking into account the objective situational factors or environmental factors (external factors).

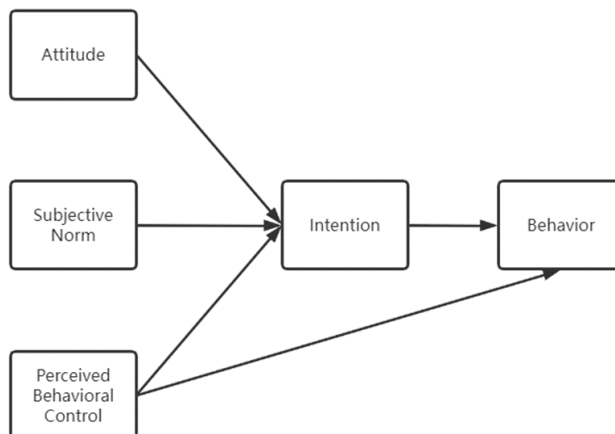


Figure 8: Framework of TPB

CONCLUSION

In conclusion, this research contributes significantly to the understanding of green purchase intention (GPI) from 2017 to 2022 by conducting a systematic literature review (SLR) from multiple perspectives. The study has achieved several key objectives and drawn insightful conclusions.

Firstly, by categorizing influencing factors into internal and external categories, the research highlights the diverse array of factors shaping GPI. Notably, internal factors such as environmental concerns and social influences have received considerable attention, underscoring the complexity of consumer decision-making in sustainable purchasing.

Secondly, the analysis identifies both extensively studied influences, such as environmental issues and social media, as well as underexplored factors like non-governmental organizations and family pressures. This recognition underscores the need for more comprehensive investigations to capture the full spectrum of influences on green purchasing behavior.

Thirdly, the predominance of the Theory of Planned Behavior (TPB) in existing literature raises concerns about neglecting external factors' influence on GPI. The suggestion to employ a mixed theory model in future research endeavors reflects a crucial advancement in understanding the multifaceted nature of consumer behavior toward sustainability.

Moreover, the research identifies gaps in the literature, such as limited studies on the purchasing behavior of rural populations and specific types of green products. By advocating for more inclusive and diverse research approaches, this study paves the way for more comprehensive insights into GPI across various demographic and product categories.

In addition to its empirical contributions, this research holds theoretical significance by advancing our understanding of consumer behavior in the context of sustainability. By synthesizing and analyzing existing knowledge, this study informs future research directions, policy-making, and business strategies aimed at promoting sustainable consumption patterns.

In essence, this research serves as a valuable resource for academics, policymakers, and businesses seeking to navigate the complexities of green purchasing behavior. By shedding light on the diverse influences and dynamics at play, this study contributes to broader efforts to address environmental challenges and promote responsible stewardship of our planet.

LIMITATIONS AND FUTURE RESEARCH DIRECTIONS

There are some limitations in this research. First, the papers we chose are all from the Scopus database and are in English only, so, they don't cover databases from countries where English is not the primary working language (such as the Chinese-based CNKI database) or all related papers (such as papers in Russian, Chinese, and Japanese). So, in future research, more databases and languages can be included. Second, the papers we collected were all published from 2017 to 2022, so the study period can be extended in future research. Third, due to the limited study scope, there may be some omissions of the influencing factors in the summary, which can be added in future research with larger sample sizes.

The chosen literature investigates the purchase intentions for green products in general, rather than focusing on a specific green product. However, it is also important to distinguish the influencing factors of different products, for example, small commodities and bulk commodities. Researchers can try to study various types of green products in the future, such as purchase intentions for environmentally friendly houses, and green detergents.

Due to the differences in cultural backgrounds, the same influencing factor may have different effects on consumers in different countries, regions, and ethnicities. Therefore, it is necessary to conduct studies on influencing factors of consumer behavior at a national scale, a regional scale or an ethnic scale. In addition, future research can also pay more attention to the influence of external factors on GPI, while studying internal factors.

Furthermore, researchers can combine more purchasing theories or expand them, so as to achieve more comprehensive and accurate research conclusions.

AUTHOR BIOGRAPHY

Shao Hongquan is a teaching assistant at the Yiwu Industrial & Commercial College and a PhD (Communication) candidate at Infrastructure Kuala Lumpur University. He is engaged in scientific research in the field of substantial environmental communication and social communication. Email: atomxiaon@163.com

Faridah Ibrahim, PhD, is a professor at the Department of Communication, Faculty of Business, Information and Human Science, Infrastructure University Kuala Lumpur. She has conducted research and published in the past 37 years on areas pertaining to war and peace journalism, language and general semantics, organizational communication, film and broadcasting, sustainability, media ethics and professionalism, and women in the media. Email:faridah@iukl.edu.my

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