

## GREEN PURCHASE: A SYSTEMATIC REVIEW AND FUTURE RESEARCH AGENDA

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**Abstract:** The purpose of this paper is to provide a holistic understanding of the contexts and theories applied in green purchase behavior studies. This research used PRISMA's systematic review method to analyze 76 empirical articles on green purchase intention and behavior from 2014 to 2019 across countries. This research is one of the first studies to cross-examine the context and theories applied in green purchase studies. For each theory applied, we present a brief description and recommendation for the future agenda of research agenda. Despite the breadth of previous studies' results, this review indicates that most studies investigated green products in general. Furthermore, the theory of planned behavior, the theory of perceived value, and the theory of personal value emerged as the three main theoretical frameworks of consumer green purchase behavior study across products and countries. The paper will help policymakers and managers formulate and implement strategies to encourage green purchasing and give insight into the future direction of green purchase study.

**Keywords:** systematic review, green purchase, green products, theoretical framework

**Abstrak:** Tujuan dari penelitian ini adalah untuk memberikan pemahaman yang komprehensif tentang konteks dan landasan teori yang digunakan dalam penelitian-penelitian perilaku pembelian produk ramah lingkungan. Penelitian ini menggunakan metode tinjauan sistematis dan teknik PRISMA untuk menganalisis dan menyarikan kerangka teori serta obyek penelitian yang dikaji dalam berbagai penelitian terdahulu di berbagai negara. Penelitian ini menelaah sebanyak 76 artikel penelitian terdahulu dengan topik niat beli dan perilaku membeli produk ramah lingkungan yang diterbitkan selama periode tahun 2014-2019. Penelitian ini merupakan salah satu dari sedikit penelitian yang melakukan analisis silang antara konteks dan landasan teori pada penelitian tentang perilaku pembelian produk ramah lingkungan. Di dalam artikel ini, disajikan ulasan tiap landasan teori yang digunakan diulas serta rekomendasi untuk agenda penelitian selanjutnya. Dalam hal konteks, sebagian besar artikel penelitian yang dikaji menggunakan produk ramah lingkungan secara umum sebagai obyek penelitian. Dalam hal landasan teori, teori perilaku terencana, teori nilai produk, dan teori orientasi nilai personal, merupakan teori yang paling banyak digunakan sebagai landasan. Penelitian ini diharapkan dapat memberikan kontribusi bagi pengambil keputusan dan manajer dalam memformulasikan dan mengimplementasikan strategi untuk mendorong pembelian produk ramah lingkungan, serta berkontribusi dalam memberikan pandangan tentang arah penelitian perilaku pembelian produk ramah lingkungan di masa depan.

**Kata kunci:** hambatan, norma pribadi, norma sosial, perilaku konsumen, strategi pemasaran

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## INTRODUCTION

Sustainability has become an essential topic of discussion discussed worldwide. Environment quality deterioration has raised consumers' awareness and encouraged them to prefer pro-environmental products in their purchase decision (Fajriati, 2019), including consumers in emerging market. Velnampy (2016) reveals that developing countries are recently in the green awakening phase. From the perspective of sustainable development, the development process is expected to meet the current needs without threatening the needs of future generations (Marota, 2017).

In the last decades, scholars have become interested in green consumption topics (Lu et al. 2015). An abundance of studies has attempted to investigate the underlying reasons for consumers to buy such green products. Theories have been developed and modified to understand better why consumers are willing to purchase green products.

Besides studying the actual green behavior, green purchase intention was also often investigated as the outcome variable. Purchase intention has proven to be an excellent general predictor of future behavior, with greater predictive capacity in the short term and under conditions that tend to be easily met (Ajzen, 1991). In practice, purchase intention is a consumer's declaration of a predisposition to purchase, barring any significant contingencies in the market or the consumer's situation (Sarabia-Andreu et al. 2019). Thus, marketers should monitor relevant information regarding the perception of consumer's purchase intention (Apupianti et al. 2019).

Rashid (2009) referred to green purchase intention as the probability and willingness of a person to prefer products with eco-friendly features over other conventional products in their purchase considerations. Likewise, Chen and Chang (2012) defined green purchase intention as the likelihood that consumers would buy a particular product resulting from their environmental needs.

Despite numerous amounts of prior studies of green purchase and green purchase intention, there is no consensus among scholars about the determinants of green purchase. Apupianti et al. (2019) concluded that shopping lifestyle and reference groups determine

green purchase intention. In their cross countries study, Asif et al. (2018) revealed that attitude, subjective norms, and health consciousness are the significant predictors of green purchase intention in Turkey, Iran, and Pakistan, while perceived behavioural control only proven in Turkey. Chang and Chang (2017) concluded that green purchase intention can be predicted through normative interpersonal influences and informational interpersonal influences. All the findings indicates the need for a comprehensive study of what has been done in the previous research on the green purchase topic. Regarding the various findings of the previous study, we hypothesize that green purchase is a complex decision that involves various determinants, including internal and external factors. Internal factors include consumer's values orientation, consumer's attitude, and external factors involving the perceived value of green products, social factors, and consumer's response to the marketing activities.

This study is a literature review that aims to synthesize the determinants of green purchase intention. The first-time decision to purchase green products is essential to be investigated since it involves many resources (time, energy) to make the decision. It also implies risk as to the consequences of the decision. Previous systematic reviews on the green purchase topic have been conducted (e.g., Groening et al. 2018; Rana and Paul, 2017). However, an updated study is needed since the studies on the green topic have grown rapidly in the last few years.

A systematic review is a review of research questions that perform systematic methods to identify, select, and critically review relevant research, and to collect and analyze data from the studies that are included in the review. Scholars have utilized the literature review approach to explore the literature on green product consumption. The approach has gained more popularity due to its advantages in synthesizing the existing literature systematically, transparent, and reproducible (Tranfield et al. 2003).

The current study aims to present a comprehensive understanding of green purchase behavior studies, by answering three main research questions: **RQ1**. What is the research geographical scope and context in the selected studies? **RQ2**. What are the main theories employed as the theoretical framework? **RQ3**. What are the determinants of green purchase intention?

## METHODS

A systematic literature review was applied for this study to identify and synthesize 76 relevant studies on the determinants of green purchase intention. A systematic review is a review of research questions that perform systematic methods to identify, select, critically review relevant research, and collect and analyze data from the review studies. Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) was employed to avoid the issues of misinterpretation and inadvertent bias,

The search strategy and inclusion and exclusion criteria were defined a priori to guarantee relevancy to retrieve relevant articles. The literature search was carried out on three scientific search engines, including Proquest, Ebsco, and Science direct.

The search was limited to the 2014-2019 period to capture recent trends in green purchase intention. The employed search strings were: “green purchase intention” OR “pro-environmental purchase intention.” Since our focus is the first-time individual buyer, we only include keyword purchase intention and excluded keywords such as green purchase behaviour green purchase, firm’s purchase intention, and repurchase intention. Furthermore, since the type of consumer (individual vs business) rarely mention in the title of the manuscript, the selection process was conducted after reviewing full text article.

An initial set of 303 articles was identified from three database: Proquest (n=107), Ebscohost (n=123), and Sciencedirect (n=73). According to PRISMA (in Moher, Liberati, Tetzlaff, and Altman, 2010) stated that at least one database should be presented in the systematic review, while referring to the AMSTAR’s checklist (AMSTAR, in press), at least two databases should be utilized.

After removing duplicates, there were 102 articles selected for further screening based on the title and the abstract. As a result, 82 articles were identified for the full-text screening. After reviewing the full text, an additional six papers were excluded because those papers’ content did not focus on the individual consumer. This screening process resulted in a total of 76 articles proceed.

A data extraction form was used to capture the following information: (1) author(s), (2) year of publication, (3) country, (4) technique of analysis, (5) type of products, and (6) theoretical framework. A depth analysis was conducted to find the relevant information to answer the research questions in the last step.

## RESULTS

### Geographical Scope

The selected 76 papers were published between 2014-2019. India was the most productive country in terms of article publication (n=9), followed by China and the United States (n=8 for each country) and Taiwan (n=6). Most of the articles were conducted in a single country. Only a few studies (n=5) publication were conducted in cross countries. For example, Chen et al. (2018) conducted their study in Belt and Road Initiative (BandRI) countries.

### Context

Most of the studies used green products in general (n=18) and organic products (n=21). Several studies have been examined specific types of organic products such as organic vegetables, organic clothing, organic dining, and organic coffee. The rest of the studies investigated green appliances (including green refrigerators, energy-saving lamps), vehicles, water bottles, green cosmetics, green furniture, and green building. In the service context, two studies examined green hotel and consultancy firms.

### Theoretical Framework

The most adopted theoretical frameworks were the theory of value consumption and perceived value theory (n=17), and theory of planned behaviour (n=16). Other theories such as the theory of personal values, motives, conformity theory, signaling theory, social identity, and value-belief-norms, perception, and Carrington model have also been employed. Our review suggests that most of these theoretical frameworks were utilized for studying underlying motives toward organic food consumption. In comparison, fewer theoretical frameworks were utilized for understanding barriers toward organic food consumption (exception is health-belief model).

Most of the studies employed the theory of perceived value (e.g. Asif et al. 2018; Varshneya et al. 2017) or consumption value (Biswas and Roy, 2015; Lu and Chi, 2018), and theory of planned behavior (Sreen, Purbey, and Sadarangani, 2018; Wee et al. 2014) as their theoretical framework. Both theories were developed based on consumer's rational evaluation.

Perceived value is defined as "perceived value is the consumer's overall assessment of the utility of a product based on perceptions of what is received and what is given." (Zeithaml, 1988). Meanwhile, green perceived value is defined as "a consumer's overall appraisal of the net benefit of a product or service between what is received and what is given based on the consumer's environmental desires, sustainable expectations, and green needs."

The theory of planned behavior is the extension of the theory of reasoned action. The theory argues that the crucial antecedent of an individual's behavior is his/her intention to perform it. Intention represents the strength of an individual's willingness to try to achieve

their goals (Ajzen, 1991). Intentions are predicted by attitudes, subjective norms, and perceived behavioral control.

### Determinants of Green Purchase Intention

#### 1. Intra-Personal Factors

The main determinant that has been investigated is attitude (n=19). Perhaps attitude is the most important construct in consumer's intra-personal factors. From the view of value-attitude-behavior, attitude mediates the relationship between consumer's value orientation and behavior. Attitude also act as an affective construct that mediates the relationship between cognitive aspect (such as belief) and behavior according to the cognitive-affective-behavior model. With this strategic role of attitude, it can be utilized as the linkage of theoretical integration. The attitude has a wide array of objects, among others are attitude toward behavior, attitude towards green products, environmental attitude or environmental concern, and attitude towards advertisement, as seen at the Table 1.

Table 1. Various type of attitude as the predictor of green purchase intention

Form of attitude	Authors	The nature of the relationship
Environmental concern	(Asif et al. 2018; Jaiswal and Kant, 2018; Park and Lin, 2018; Yadav and Pathak, 2016)	direct
	(Basha et al. 2015; Hsu et al. 2019; Jiang and Kim, 2015; Kumar et al. 2017; Maichum et al. 2016)	indirect
Environmental attitude	(Biswas and Roy, 2015)	indirect
	(Chen et al. 2018; Maichum et al. 2017; Onurluba, 2018)	direct
Attitude towards product	(Basha et al. 2015; Chu, 2018; Hsu et al. 2019; Jaiswal and Kant, 2018; Sarabia-Andreu et al. 2019; Singh and Verma, 2017; Sreen et al. 2018; Varshneya et al. 2017)	direct
Attitude towards purchase	(Hsu and Chen, 2014; Lee et al. 2015; Maichum et al. 2016; Yadav and Pathak, 2017)	direct
Attitude towards advertisement	(Irاندust and Bamdad, 2014; Wang et al. 2017)	direct
	(Nagar and Rana, 2015)	indirect
Attitude towards environmental packaging	(Prakash and Pathak, 2017; Seo et al. 2016)	direct
Attitude towards green brand	(Baiquni and Ishak, 2019)	direct
	(Punyatoya, 2015)	indirect

Other intra personal factors that also affect green purchase intention are: involvement (Teng and Lu, 2016), trust (Liang, 2016; Wang et al. 2019), environmental responsibility (Nasir and Karakaya, 2014), stigma (Tan et al. 2016), certification (Cai et al. 2017), and perceived effectiveness (Kirezli and Kuşcu, 2012).

## 2. Social factors

### *Social influence*

Chen et al. (2018) define social influence as: “consumers change their faith and cognitive values towards purchasing green products based on the opinions of others.” Social influence affects individuals’ thoughts, feelings, or behaviors in response to their social environment. People tend to modify their beliefs, attitude, and behavior to conform to other groups or society (Varshneya et al. 2017). Chen et al. (2018) has proven the significant effect of social influence on green purchase intention. However, Varshneya (Varshneya et al. 2017) found no significant effect of social influence on green purchase intention.

### *Social norms*

Social norms are shared rules within a social environment and an expression of an individual’s belief of what their social environment expects them to do (Moser, 2015). Social norms act as moral guidelines for appropriate behavior (Moser, 2015). Social norms portray the role of social influence on a consumer’s decision to buy green products (Goldsmith and Goldsmith, 2011). Golob et al. (2018) found that social norms positively affect environmentally conscious purchase behavior (ECPB).

Subjective norms, a predictor of behavioral intention in the TPB, relate to the social force of confirming a specific behavior; it helps the individuals decide regarding approval or disapproval of a particular behavior (Ajzen, 1991). Similarly, Kumar et al. (2017) describe that the subjective norm referred to the perceived social demand to conduct a particular behavior.

### *Social trust*

Siegrist et al. (2000) defined social trust as “the willingness to rely on those who have the responsibility for making decisions and taking actions related to the management of technology, the environment, medicine, or other realms of public health and safety” (p. 354). Social trust plays a vital role in consumers’ decision-making and behavior, particularly when they have no sufficient or enough resources (e.g., time, abilities) to make decisions and take actions. Liu et al. (2018) reveals the positive effect of social trust on purchase intention of green residential.

### *Social value*

Social value for green products can be defined as “the perceived net utility derived from green product consumption based on the perception about social pressure or prestige gain through engagement in environmental saving” (Biswas and Roy, 2015). Previous studies have noticed a substantial shift of motivation to purchase organic products, from egoistic motive such as consumer’s health concerns towards a non-egoistic motive, as “consumers often choose organic food primarily because it is a prosocial and pro-environmental behavior” (Kareklas et al. 2014). Thus, besides fulfilling consumer’s functional needs, the purchase of green products also represents their core values and identity (Du et al. 2017). However, Biswas and Roy (2015) found that social value does not affect green purchase intention in their study. Various type of social factors as the predictor of green purchase intention in Table 2.

## 3. Value and values

The perception of a product’s value represents the consumer’s evaluation of the product’s offering benefit and the consumer’s sacrifice that must be made to acquire the product. The root of the theory is the utilitarian approach that emphasizes product quality and price as the main determinants of the product’s value. Since the theory was first introduced, various models have been developed to capture other evaluation’s consideration of the product’s value. Various type of value and values as the predictor of green purchase intention in Table 3.



Table 2. Various type of social factors as the predictor of green purchase intention

Form of social factors	Authors	The nature of the relationship
Subjective norms	(Asif et al. 2018; Chu, 2018; Kumar et al. 2017; Liobikiene et al. 2016; Maichum et al. 2016; Sreen et al. 2018; Yadav and Pathak, 2017)	direct
	(Basha et al. 2015)	indirect
Social value	(Biswas and Roy, 2015; Krystallis et al. 2015)	direct
Normative interpersonal influences	(Chang and Chang, 2017)	direct
Social influence	(Chen et al. 2018; Lasuin and Ng, 2014; Varshneya et al. 2017)	direct
Social norms	(Golob et al. 2018)	direct
Social trust	(Liu et al. 2018)	direct
Social visibility	(Brick et al. 2017)	direct
Social pressure	(Kim et al. 2018)	direct
Social responsibility	(Nasir and Karakaya, 2014)	

Table 3. Various type of value and values as the predictor of green purchase intention

Form of value factors	Authors	Results
Perceived value	(Bonsón Ponte et al. 2015; Lam, Lau, and Cheung, 2016; Varshneya et al. 2017; Wang et al. 2017; Wu and Chen, 2014; Yadav and Pathak, 2017)	supported
Perceived value	(Lee and Hwang, 2016)	supported, but not for the moderator
Perceived value	(Lim et al. 2014)	exploratory
Monetary value	(Chen et al. 2018; Galindo et al. 2019)	Supported
Functional value, Emotional value, social value, economic value	(Hsu et al. 2019)	Supported
Functional value, emotional value, social value, epistemic value	(Jiang and Kim, 2015)	Supported
Value for money, social value, conditional value, epistemic value	(Biswas and Roy, 2015)	Value for money and epistemic value supported, but social value and conditional value not supported.
utilitarian value, interpersonal differentiation value, self-expressiveness value, environmental value	(Park and Lin, 2018)	Utilitarian value, self-expressiveness supported, but not for other type of value
Collectivism, man-nature orientation, long term orientation	(Sreen et al. 2018)	Collectivism, LTO, and Man-nature orientation impact green purchase intention indirectly.
Collectivism	(Lee, 2017)	Supported
Environmental values (Stern)	(Wang et al. 2014)	Supported
Biospheric values	(Yadav et al. 2019)	Supported
Altruistic values	(Nguyen et al. 2017)	Supported

There are two approaches regarding the value's measurement, unidimensional and multidimensional approach. The former approach suggests that a single dimension measures perceived value. The most recognized model within this approach is Zeithaml's (1988) perceived value model. In contrast, the latter argue that value is a multidimensional construct. For example, according to Sweeney and Soutar (2001), value has four dimensions: (1) functional value – practical or utilitarian utility; (2) economic value – monetary or financial value; (3) social value – related to social acceptance in a given reference group, due to the choice made; and (4) emotional value – related to positive emotional aspects derived from the choice made. Another popular value's dimensions concept was introduced by Seth (1991): (1) functional value-the perceived utility of functional, utilitarian, or physical performance., (2) conditional value, (3) social value-the perceived utility of the association with one or more specific social groups that help to build consumer's image, (4) emotional value-the perceived utility of arousing feelings or affective states, and (5) epistemic value-the perceived utility acquired of arousing curiosity, provide novelty, and satisfy a desire for knowledge.

#### 4. Consumer's response to marketing activities

##### *Product*

There is an impression that the quality of green products is not as good as the non-green. However, for organic products, consumers perceive it has a higher quality than non-organic products. Previous studies have proven the effect of product quality on green purchase intention (Basha et al., 2015). In addition, de Medeiros and Ribeiro (2016) General attributes for green vehicle: economic use of recycled materials, flexible fuel, an engine that supports biofuel, lower CO<sub>2</sub> emission, and hybrid engine. However, Araque-padilla *et al.* (2015) failed to prove the empirical evidence the influence of perceived quality of green products on purchase intention.

Another aspect of the product that draws scholars' attention is the label. Eco-label and certification are situational factors (Joshi and Rahman, 2015) that influence consumers' intention to purchase green products. Label also found has an indirect effect on purchase intention through attitude (Secapramana and Katargo, 2019). However, Tong and Su (2018)

concluded that there is no evidence of the effect of label on green product's purchase intention.

##### *Price*

Regarding the production cost of green products, which is higher than the non-green products, the price of green products usually more expensive than the non-green ones. Liobikienė and Bernatoniene (2017) called it as an external factor. Lee et al. (2015) found that consumers with a high price sensitivity will not purchase organic products unless they provide additional benefits such as health and safety benefits. However, Chu (Chu, 2018) found that price did not significantly affect the intention to purchase green products. A similar results were found by Sharma and Garg (2016) and Alex and Mathew (2018).

##### *Place*

Rana and Paul (2017) argued that the lack of adequate distribution systems severely affects the availability of green products. Golob (2018) called availability as the contextual factor. Golob (2018) found that perceived availability affects purchase intention directly and indirectly through environmentally conscious purchase behavior.

##### *Promotion*

Consumers' decision to purchase green products depends on their attitude towards the advertisement; the more they like the advertising, the more likely they will buy the product advertised (Wang et al. 2017). The focus on attitude toward advertising in green product context appears due to consumer's skepticism of the advertising. Consumer skepticism towards companies and advertising has increased as consumers perceive firms are taking opportunistic advantage of the green movement (Zhang et al. 2018). Another focus on promotional aspect of green product was green WOM, that was empirically proven has a significant effect on green purchase intention (Zhang et al. 2018).

##### *Risk*

Perceived risk exists when consumers cannot predict the outcome of the purchase decision that they will make. Perceived risk is often associated with new products. Green products can be considered as new products. Thus, consumers will perceive buying green products

as a risky decision. Kushwah et al. (2019) classified perceived risk as a potential barrier that can discourage consumers from buying organic products. However, Wu and Chen (2014) and also Alex and Mathew (2018) failed to provide empirical evidence of the effect of perceived risk on green purchase intention. Nguyen et al. (2019) revealed that consumer's scepticism resulted of perceived risk significantly affect green purchase intention.

### **Managerial Implication**

Despite the benefits of green products, the consumption shares of it still relatively small. Therefore, all stakeholders have responsibility to boost green product's consumption. The primary effort should focus on consumer education. The more consumers aware of its benefit, the fewer consumers will see the price as a barrier. As the value of green products increases, it will form a positive attitude towards buying green products. Effective consumer education will multiply the number of green consumers and create more substantial social pressure for those who has not purchased green products.

Another effort for marketers is selecting the right target market. Consumers can be grouped into egoistic value dominant, altruistic values dominant, and biospheric values dominant based on their value orientation. Values orientation will affect the need. Thus, the marketer should carefully conduct market research to identify their target market's value orientation. Once the value orientation and the target market's needs are identified, marketers should develop an effective positioning strategy to build a brand image or product image that fits the target market characteristics. Marketers can adopt either an attribute-based positioning strategy or a benefit-based positioning strategy.

## **CONCLUSIONS AND RECOMMENDATIONS**

### **Conclusions**

Green research trend has tended to increase up to now. However, due to the complexity of purchasing green products, scholars have made no conclusion about the determinants of green purchase intention. Our study provides a state of the art of the recent investigations of green purchase intention in terms of identifying factors

that have been studied and the theoretical framework and type of the products. Our findings will contribute to the foundation of future research.

Our analysis concludes that most studies were conducted in India, China, the United State, and Taiwan. The context of the research mainly were green products in general, followed by organic products. For the theoretical framework, the theory of planned behavior, the theory of perceived value, and the theory of personal value emerged as the three main theoretical frameworks of consumer green purchase behavior study across products and countries.

### **Recommendations**

This study only focuses on the purchase intention of first-time buyers. Future research should expand to non-first-time buyers. Another limitation is this study did not put articles' quality as the criteria. Thus, future research should be more selective, for example, adding journal rank as the criteria.

Based on our analysis, we have identified several gaps that can be employed as the direction of future research. Since purchasing green products is complex decision-making, particularly for first-time buyers, a comprehensive buying intention model is needed to explain how the decision is made. Rega. The perceived value represents the consumer's practical cognitive evaluation of green products. The values orientation represents moral consideration of the evaluation process. The attitude represents the affective evaluation, and finally, the social factor represents the external influence of the decision making.

Another important research path is to investigate consumer's responses to the product's attributes of green products. The price and quality of green products are crucial considerations for consumers. Investigating how far consumers are willing to pay a premium price of green products is essential. It is also important to examine the green product's quality attributes that are important for consumers. Besides, exploring how consumers perceive the monetary value of green products also significant. Furthermore, since it is challenging to differentiate green products from non-green products, consumers often rely on their label certification. Trust and scepticism are two essential constructs, among others, which are relevant to investigate.



Lastly, the organic product consumption trend has increased recently due to the unique characteristic compared to other green products. In contrast with other green products that require consumer's sacrifice in terms of product quality, organic food is believed to have personal benefit for consumers, in addition to its environmental benefit. Organic foods are considered to have a better taste and quality compared to non-organic foods. Therefore, investigating organic foods is an influential future research agenda.

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