# DETERMINANTS OF GREEN PURCHASE BEHAVIOUR-A LITERATURE REVIEW ON SPECIFIC PRODUCT CATEGORIES

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#### **ABSTRACT**

Green Purchase Behaviour (GPB) has gained momentum after consumers realize that their purchasing behaviour affects the environment and their health directly and indirectly. Several researchers employing it in different study domains to empirically test consumer buying behaviour and the factors influencing it. The majority of studies analyzing it has no clear classification of green products. The focus mainly paid to the general green products and not to specific product categories like organic food, green apparel, energy-efficient household appliances, green electric vehicles, green cosmetics or organic personal care, green furniture, etc. Since in contrast to general green products, factors influencing the purchase of separate product categories differ. Therefore, the paper aims to perform a complete holistic review of the fragmented and divergent studies on specific product categories. The review presents the different factors that marketers and future researchers should consider while planning the marketing strategies for each product category. The author distinguishes different drivers and barriers influencing consumers' decision-making to buy. The integration of topics contributes to the development of this research field by providing a multifaceted view for the follow-up researchers.

**Keywords:** Green Purchase Behaviour, Green products, Determinants, Product Category.

## **INTRODUCTION**

The rise in environmental degradation and unsustainable consumption pattern has posed a big threat to human health, the environment, and climate. It impacts the gross domestic product (GDP) of the countries relying on natural resources and still ignoring the importance of sustainability (Jiang & Zheng, 2017). To tackle this, the businesses, consumers, and government have initiated finding ways and implementing strategies that not only generate revenue but protect the environment and human wellness (Haron et al., 2005). The businesses focusing on the triple bottom line of sustainable development i.e. profit, people, planet (Economic, Social, and Environment) are undertaking efforts to develop green product benefits providing high market share (Summary-Global Lifestyle of Health and Sustainability-2008). The consumers also have started showing concern and responsibility for the environment (Huang & Rust, 2011). This has led to a new environmental movement i.e green movement resulting in the green products introduction. The words Green Product, green purchase, green marketing are the most buzzing terms nowadays. Though there is no accepted definition of green product, many researchers define and describe it based on the author's focus, time period, subject area of study, and

dimension used. For instance (Mishra & Sharma,2010) Define it on the basis of its properties involving natural ingredients, grown originally, recyclable, reusable, chemical-free, pollution less, and not tested on animals. (Janssen & Jager, 2002) describes it as "products that are less harmful to the environment and social well-being and having a superiority over traditional products". Whereas General Service administration 2016 (Agency Financial Report, 2016) describes it on its usage type. Some other defines it on basis of 3R- Reuse, Reduce and Recycle. Various terms also used interchangeably for green products include "environmentally friendly product", "recyclable product", "sustainable product", "organic product" etc.

Instead of having increasing consciousness and positive attitude, the consumers' green product demand is yet inadequate leading to attitude- behaviour gap (Durif et al., 2012; Jain & Kaur, 2006; Johnstone & Tan, 2015; Lai & Cheng, 2016; Mostafa, 2007). Moreover, according to the Market Research Report 2021, the green product market share is limited to just 7 to 8 percent of the world market. The factors impacting this gap have been figured out in a vast number of studies (Durif et al., 2012; Jacobs et al., 2018; Moser, 2015; Samarasinghe, 2015; Shim et al., 2018). Most of the existing research follows a recurring theme for exploring these factors of green purchase behavior moving from values (Dembkowski & Hanmer & Lloyd, 1994; Lee, 2011; Varshneya et al., 2017) to attitude (Cheung & To, 2019; Jacobs et al., 2018; Janelle & Bbus, 2016) to intention (Costa et al., 2021; Kaadoor, 2000; Kahraman & Kazançoğlu, 2019; Shukla, 2019). Generally, the evaluation of green purchase behavior is done first on basis of the purchase intentions of consumers i.e. willingness to buy and then this intention turns to green purchase decision making. (Joshi & Rahman, 2015) in his review paper consisting of empirical studies published between 2000-2014 has presented a table of factors influencing green purchase behaviour. He divided them on basis of individual (emotions, habits, perceived behavioural control, trust, values, personal norm, knowledge) and situational factors (availability, product attributes, subjective norm, brand, eco labelling). Later on (Zhuang et al., 2021) also perform a meta-analysis for determining the factors affecting consumers' green purchase intention and categorizing them into 3 groups namely individual, social and cognitive factors. Other have explored them through internal (value, attitude, motivation, norms etc.) and external factors (social influence, price, product features, word of mouth, certification etc.).

However, while investigating these factors the focus of the authors is limited to general green products and not segregating them in specific product categories. The majority of research work on GPB has been studied in a broader way. Various papers show a contradiction related to a particular factor affecting green purchase behavior (Bray et al., 2011; Gupta & Singh, 2018; He et al., 2016). This discrepancy may arises due to the existence of different product categories of green products. The review identifies the same determinant of GPB gave away contradictory results with regard to different category of green product. For instance, (Nguyen et al., 2019) finds a positive impact of subjective norms on organic clothing purchase intention whereas (X. Huang & Ge, 2019) shows no impact of subjective norm on the electric vehicle purchase intention. Moreover, it is observed that demand for a certain type of product category of a green product is more than the other, and consumers' willingness to pay vary accordingly for each specific product category (Barbarossa & Pastore, 2015; Nguyen et al., 2018; Yee & Hassan, 2016). This is also termed as green product paradox(Longoni et al., 2014). The behaviour in one product category context does not necessarily convert into the other comparable one. Therefore, it is required to comprehend factors affecting the purchase behaviour of consumers towards green products in terms of specific product categories. The various product category includes food and beverages, apparel, vehicle, appliances, personal care, furniture, etc. Among these

product categories, the research on organic food occurred first as increasing health consciousness for organic, biodegradable food among consumers and green living culture has inspired significant research on consumer food purchase behaviour (Ali et al., 2021; Bai et al., 2019; Dholakia & Shukul, 2012; Hughner et al., 2007; Rana & Paul, 2017). Along with food, the apparel industry is becoming popular as increasing income, changing lifestyle, entry of international branded clothes, environmental attitude, promotion by companies, and desire for the socially acceptable image has motivated consumers to purchase green apparel (organic clothing) (Khare, 2015; Piamphongsant & Mandhachitara, 2008) Research on Electric vehicle is also prominent nowadays as rising consumer concern about reducing the pollution and protecting the environment facilitates responsible purchase behavior (Cui et al., 2021; Krishnan & Koshy, 2021; Xu et al., 2020). On the other hand, studying the organic personal care industry is particularly important as consumers are now more concerned about what they put on than what they put in their body(G. Joshi & Nulkar, 2016; Kahraman & Kazançoğlu, 2019; Premi et al., 2019).

The limitations of the previous research motivate the author to fill the attitude-behaviour gap and reveal the reasons for this inconsistency. Moreover, the determinants of green purchase behavior that were less explored in past are being identified for each category of green products. Hence, on the basis of the review of literature, the current paper made the following contributions. First, it presents a comprehensive holistic review of the fragmented and divergent studies on specific product categories. Second, it examines the factors influencing the consumer's green purchase behavior according to product specifications. The paper is divided into 4 parts-: Section 1 consists of an Introduction. Section 2 defines the methodology used in this research. The analysis and findings are presented in Section 3 and the last section involves discussion, limitations, and future research.

#### RESEARCH METHODOLOGY

This review begins by defining the selection process that includes the keywords search, Inclusion-exclusion criterion and the filtration of articles on the basis of their relevance to the study. In this way, the chances of selection of high-quality and relevant articles increases.

The first step involves searching for relevant keywords. The advanced keyword string used (""green includes "TITLE-ABS-KEY products"" OR ""organic that for care"" OR ""green cosmetic"" OR ""organic clothing"" OR ""green apparel"" OR ""energy appliances"" OR ""organic appliances"" OR ""green food"" OR ""electric efficient vehicle"" OR ""environment-friendly vehicle"") AND TITLE-ABS-KEY (""purchase behaviour"" OR ""consumption behaviour"" OR ""purchase intention"" OR ""adoption behaviour"") .The author has tried to include all ideal keywords to minimize the risk of error and to achieve the research objective.

The second step encompasses inclusion-exclusion criteria. It defines what will and will not be included in your review (Morgan & Lilienfeld, 2000). These are the characteristics that must have to be present in prospective subject to be qualified for selection in the study. This study chooses the paper published between 2011 to 2020 using Scopus as the major database. Only final articles published in a peer-reviewed journal are included as they provide new knowledge disseminated by researchers. The books, conference proceedings, trade journals, dissertations, etc are therefore excluded. The study is restricted to articles published in the English language only. The three subject areas i.e. environmental science, social science, business, management, and accounting shown in figure 1 selected for the review contain the maximum number of papers

along with representing the 3 pillars of sustainability(profit, people, and planet). The inclusion-exclusion is presented in Table 1 & Figure 1.

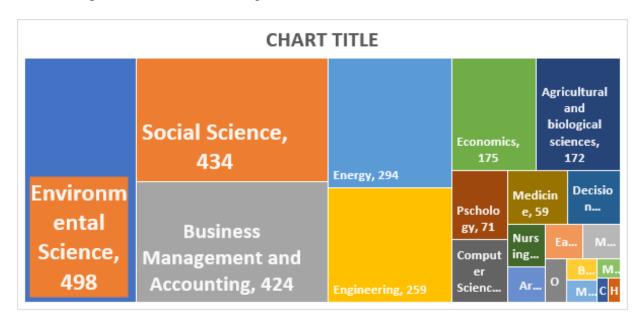


FIGURE 1 SUBJECT AREA TREE MAP

Table 1 INCLUSION EXCLUSION CRITERIA OF PAPERS							
Characteristics	Inclusion Criteria	Exclusion Criteria					
Time period	2011-2020	All papers published before January 2011.					
Language	English	All languages other than English					
Database	Scopus	All others excluding Scopus					
Type of document	Article	Review, book chapter, and Conference paper.					
Stage of publication	Published paper	Paper in press					
Source of study	Journal	Conference proceeding, book and trade journal					
Subject area	3 i.e. Environmental science, Social science, and Business, management and accounting	Remaining 24 subject areas					

The third step includes filtering papers according to the focus of the paper. The filtration is done based on the title of the papers, keywords, paper abstract, and conclusion containing and discussing factors influencing green purchase intention or behaviour. Secondly, it takes into account the papers explaining the determinants of general green products and specific product categories. The articles are manually selected by the author at this stage for the final review. Finally, a duplication check is done to eliminate the multiple occurrences of paper. After considering all the delimitations, a total of 498 papers are further taken for analysis. The flow chart defining and describing the selection process is exhibited in Figure 2.



 A total of 1241 papers retrieved from scopus database.

• 791 papers are included

 Finally after a manual examination, a total of 498 papers are selected.

FIGURE 2
RESEARCH METHODOLOGY CHART

#### **Descriptive Analysis**

## a) Distribution across the Time Period

While looking at the distribution of the number of papers across time period, there has been a significant increase in green studies. Figure 3 presents the selected 497 papers published from 2011 to 2021. The main theme analyzed in these papers is purchase intention or behaviour of general and specific green products. Previous literature review employing meta-analysis given by (Zhuang et al., 2021) centered around factors affecting green intention includes only 54 studies. Moreover, (Wijekoon & Sabri, 2021) in their review on general green purchase behaviour considers only 108 papers. The current review has a broader scope and therefore includes the maximum number of papers related to green purchase intention and behaviour. The growth in papers has been substantial from 2017 onwards. The year 2019 saw the maximum number of papers i.e. 94.From the last 4 years (2018-2021), this topic is gaining the attention of researchers and academicians indicating that the topic is interesting and relevant for research. Moreover, the count is still on though 2021 has not ended yet signifying that the COVID-19 pandemic and excessive climate change encourage consumers to purchase the green product. It signals the marketers and policymakers to produce and implement green strategies in order to persuade and retain the customers in the coming years.

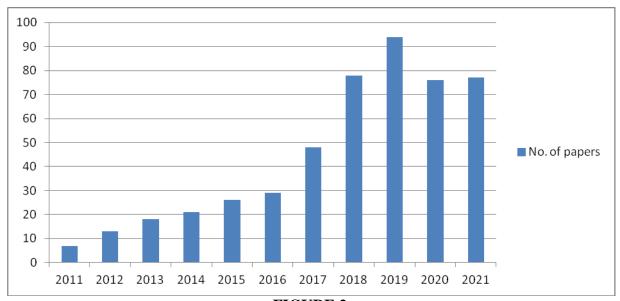


FIGURE 2
PUBLICATION TREND OF PAPERS

b) Top 21 highest cited papers and their title, author, and country.

Table 1 depicts the information of 21 most productive papers based on their citation. It contains the author, title, citation number, and the country's information. The paper by (Egbue & Long, 2012) ranks first explaining the barriers to electric vehicle adoption. Most of the papers in this list belong to Electric vehicle product category symbolizing the potential growth of this sector and marketers need to investigate the determinants of Electric vehicle adoption behaviour. Based on this analysis of the top 21 papers, United States tops the list of being the most productive countries providing maximum number of papers in the green purchase behaviour research. It is followed by the United Kingdom, India, Germany, and so on.

	TABLE 2 TOP 21 MOST CITED PAPERS						
No.	Title	Author	Cited by	Country			
1	"Barriers to widespread adoption of electric vehicles: An analysis of consumer attitudes and perceptions"	Egbue O., Long S.	737	United States			
2	"Advances in consumer electric vehicle adoption research: A review and research agenda"	Rezvani Z., Jansson J., Bodin J.	469	Sweden			
3	"Mainstream consumers driving plug-in battery-electric and plug-in hybrid electric cars: A qualitative analysis of responses and evaluations"	Graham-Rowe E., Gardner B., Abraham C., Skippon S., Dittmar H., Hutchins R., Stannard J.	342	United Kingdom			
4	"Determinants of residential electricity consumption: Using smart meter data to examine the effect of climate, building characteristics, appliance stock, and occupants' behavior"	Kavousian A., Rajagopal R., Fischer M.	319	United States			

5	"Consumer purchase intention for organic personal care products"	Kim H.Y., Chung JE.	309	United States
6	"Against the Green: A Multi-method Examination of the Barriers to Green Consumption"	Gleim M.R., Smith J.S., Andrews D., Cronin J.J.	305	United States
7	"Intent to purchase a plug-in electric vehicle: A survey of early impressions in large US cites"	Carley S., Krause R.M., Lane B.W., Graham J.D.	290	United States
8	"Determinants of Consumers' Green Purchase Behavior in a Developing Nation: Applying and Extending the Theory of Planned Behavior"	Yadav R., Pathak G.S.	282	India
9	"Consumer behavior and purchase intention for organic food: A review and research agenda"	Rana J., Paul J.	279	India
10	"Who will buy electric vehicles? Identifying early adopters in Germany"	Plötz P., Schneider U., Globisch J., Dütschke E.	242	Germany
11	"Thinking green, buying green? Drivers of pro - Environmental purchasing behavior"	Moser A.K.	230	, Germany
12	"Consumer behavior and purchase intention for organic food"	Paul J., Rana J.	222	United States
13	"Will subsidies drive electric vehicle adoption? Measuring consumer preferences in the U.S. and China"	Helveston J.P., Liu Y., Feit E.M., Fuchs E., Klampfl E., Michalek J.J.	219	United States
14	"Electric vehicles' energy consumption measurement and estimation"	Wu X., Freese D., Cabrera A., Kitch W.A.	201	United States
15	"Consumer preferences for electric vehicles: a literature review"	Liao F., Molin E., van Wee B.	192	Netherla nds
16	"Responses to battery electric vehicles: UK consumer attitudes and attributions of symbolic meaning following direct experience to reduce psychological distance"	Skippon S., Garwood M.	187	United Kingdom
17	"Total cost of ownership and market share for hybrid and electric vehicles in the UK, US and Japan"	Palmer K., Tate J.E., Wadud Z., Nellthorp J.	175	United Kingdom
18	"Examining green consumerism motivational drivers: Does premium price and demographics matter to green purchasing?"	Chekima B.C., Syed Khalid Wafa S.A.W., Igau O.A., Chekima S., Sondoh S.L., Jr.	163	Malaysia
19	"Green purchasing behaviour: A conceptual framework and empirical investigation of Indian consumers"	Jaiswal D., Kant R.	162	India
20	"Total cost of ownership of electric vehicles compared to conventional vehicles: A probabilistic analysis and projection across market segments"	Wu G., Inderbitzin A., Bening C.	147	Switzerla nd

21	"Decisional factors driving organic food consumption: Generation of consumer purchase intentions"	Teng CC., Wang YM.	141	Taiwan	
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## c) Distribution of papers across product category.

The above-selected papers analyzed the purchase behavior of appliances, food, clothing, organic personal care, and vehicles. These papers have a clear typology and specification of green products. Figure 4 presents the distribution of papers according to product category. The studies on an electric vehicle are ample (211) followed by organic food (108) while energy-efficient appliances (21), green apparel (18), and organic personal care/green cosmetics (12) draw less attention from researchers. It is important to study the purchase behaviour of these product categories to determine the predictors motivating the consumers to buy energy-saving appliances, green apparel, and organic personal care products.

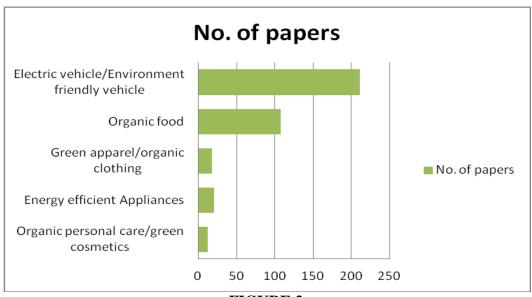


FIGURE 3
DISTRIBUTION OF PAPERS ACROSS PRODUCT CATEGORY

#### **Content Analysis**

## **Determinants of product categories**

**Organic food:** The demand for organic food has increased over time across the globe as when, where, and what people eat are changing. Organic food is considered beneficial to both environment and human beings as it increases soil fertility, contains no pesticides and chemicals, no preservatives, and is prepared using ecological methods(Vermeir & Verbeke, 2006; Yazdanpanah & Forouzani, 2015). With the growing organic food consumption, it become necessary to study different motivators to organic food buying(Pham et al., 2019; Ryan & Casidy, 2018). The review by (Hughner et al., 2007) presents the various drivers and barriers to organic food consumption. To analyze the motivation for organic food buying,(Scalco et al., 2017) also performed a meta-analysis. The main motives identified are health consciousness, ecological motives, and food safety concern (Azizan & Suki, 2014; Teng & Lu, 2016). Other

motives that consumers look at while buying organic food. includes taste, nutritional value (Tandon et al., 2021; Wojciechowska-Solis & Soroka, 2017). The major literature on organic food uses the Theory of Planned Behaviour as a theoretical framework for predicting purchase intention. It pointed that 3 main constructs attitude, subjective norm, and perceived behavioral control lead to organic food buying willingness. (Chowdhury et al., 2021; Jeyakumar Nathan et al., 2021). The author has also found organic label, word of mouth, and certification as the significant information factors determining organic food purchase behavior (Iqbal et al., 2021; Yuan & Xiao, 2021). Besides, high price is insignificant to the customers who look for a product providing both health and food value. In contrast to it, some studies figure out that higher price, limited availability, skepticism act as a barrier to purchase (Katt & Meixner, 2020).

#### **Electric Vehicle**

With the rise in industrialization and development, the environment is getting deteriorated day by day resulting in climate change and excessive pollution. People are becoming conscious about their activities impact on the environment and therefore taking their purchase decision considerably keeping in mind its awful impact. One of the initiatives to avoid environmental degradation is to replace traditional vehicles causing excessive pollution with environmentally friendly vehicles or electric vehicles (Global EV Outlook 2017, 2017). Consumers analyze various factor before buying a vehicle as it being a durable good requires significant thinking The important factors determining electric vehicle adoption includes green attributes of vehicles, vehicle price, perceived benefits, Environment performance, Pollution identity, mass media opinion, expert suggestions (Knez et al., 2021; Lin & Wu, 2018). The internal factors environmental concern, openness to experience and external factors include marketing, distribution, subsidy and after-sales positively leads to purchase intention of the electric vehicle. On the other hand, factors like charging inconvenience, high expenses, less distance drive reduce the intention to purchase an electric vehicle. Manufacturers should consider these factors carefully while taking their products to consumers. The countries that provide maximum research on electric vehicle purchase behaviour include Brazil, America, Germany, China and Japan. The developing countries also promote the use of electric vehicles for the sustainable growth of the automobile industry.

## Green apparel

The apparel industry is getting significant attention nowadays as issues regarding excessive use of chemicals, over usage of water to make fabric and transportation of textiles manufactured not domestically makes consumers concerned about the environment(Dickenbrok & Martinez, 2018; N. Kumar & Mohan, 2021; Sahni et al., 2016). As a result, green apparel industry has attracted consumer's interest. The various terms used in literature for green apparel include organic clothing, sustainable clothing, and ethical clothing. To address the sustainability issues, the researchers examined the various determinants that lead to green apparel purchase (Bong Ko & Jin, 2017; Mair et al., 2016). As clothing symbolizes the personality, social status, and lifestyle of a person, the consumers perform considerable decision-making before buying it. In clothing, quality matters the most. Quality in clothing usually refers to durability i.e consumers perceive green apparel as long-lasting. The higher the product longevity, the higher the purchase intention (Aakko & Niinimäki, 2021). Fashion consciousness, brand, Price sensitivity, Beliefs, Social media, Peer influence, Self-expressiveness, customer engagement, social influence,

environmental concern, knowledge are important factors impacting purchase intention. (Khare et al., 2019) highlights that organic clothes that are available conveniently promote green apparel purchase behaviour whereas limited availability act as an obstacle to the purchase of organic clothing (Khare et al., 2019; Kumar & Yadav, 2021). Moreover, the income of the target customers' needs to be evaluated by marketers before offering organic clothes to them. Environmental guilt and Corporate social responsibility (CSR) reputation of a company are newly reported significant factors positively influencing buying intention of consumers (Neumann et al. 2020).

## **Appliances**

The three goals of Sustainable energy include less use of nonrenewable resources, high energy generation and efficient consumption (Lund, 2007). High consumption of energy especially household consumption has been identified as a major threat to the environment. Household energy holds a big share in contributing to pollution and CO2 emissions globally. Therefore, the production and consumption of environmentally friendly appliances are highly required. Energy-efficient products include appliances, equipment, light bulbs, etc. In order to fulfill the increasing demand for energy along with energy conservation, the government and marketers coming up with energy-efficient household electric appliances. The current review detailed the determinants that motivate or impede the purchase of energy-efficient appliances. The eco-labels knowledge and trust for energy-efficient appliances are the most important predictor of energy-efficient purchase intention (Wang et al., 2019; Waris & Ahmed, 2020). It is followed by attitude, functional values, environmental concern, and perceived consumer effectiveness. (Fatoki, 2020)pointed out the significance of perceived benefits and informational publicity for increasing consumers' interest in the energy-efficient product purchase. Some factors negatively influence consumer purchase intention involves skepticism towards label claims, perceived product risk, price sensitivity, and perceived personal inconvenience. While selecting energy-efficient appliances, socio-demographic factors like age, number of family members, type of house, and end-use behaviour are taken into consideration by consumers (Baldini et al., 2018).

#### **Organic Personal Care**

There is an increasing go green consciousness and consumption of personal care products over time. People are concerned about their external appearance along with the external physical environment (Hsu et al., 2017). The increasing awareness about the risk of artificial chemicals like triphenyl phosphate and petroleum in cosmetics and the popularity of having a green living in people have fostered the desire for organic personal care products (PCP) globally (Zollo et al., 2021). The latest report ("Global Organic Personal Care Market, Forecast To 2028,".) mentions that the retailers in response to the growing demand for organic personal care products have either corrected their existing products positioning as organic in the minds of customers or specifically creating new product line to target this market. Organic PCP contains skincare, haircare, oral care, color cosmetics, deodorants and female hygiene products. However, after the outbreak of COVID-19 pandemic, the want for healthy, safe and clean products have been rising among consumers globally. The important influencing factors of purchase attitude and intention in organic personal care product category includes consumers values (health consciousness, appearance consciousness, environmental consciousness) (Ghazali et al. 2017). The most

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important product attribute while buying organic food and cosmetics is its organic and natural ingredients that are related to human health directly. (Yeon Kim & Chung, 2011) highlights that people who are conscious about their body and skin and wish to have a young, beautiful appearance with minimum chemical substances prefer organic personal care products. Most of the studies explain it through internal factors like Product knowledge, perceived behavioral control, information adoption, perceived safety, attitude, past experience, hedonic and safety values green lifestyle, self-identity, environmental concern (Chin et al., 2018; Yeon Kim & Chung, 2011) and social factors like social media, peer influence, family, friend, colleague influence, sale representative, experts, electronic word-of-mouth, celebrity endorsement (Jaini et al., 2019). While others explain it through external factors like availability, organic label, brand, convenience & quality, price, brand (Al Mamun et al., 2020; Zollo et al., 2021). For personal care products heath consciousness, environment consciousness, safety concern are main determinants. However, for color cosmetics quality, brand, social factors are influential determinants. Demographic and socioeconomic factors as moderators play a vital role in influencing organic personal care purchase decision making. With regard to research, western countries provide a wide range of studies on green apparel purchase intention and behaviour.

#### **Discussion**

The current study provided a comprehensive literature review by showing up various green purchase behaviour determinants and suggested the policies to promote GPB. This review is an attempt to accumulate the fragmented studies of the different product categories of green products. The vast review done between 2011 and 2021 explained the vital drivers and barriers of specific product category purchase behaviour. The author has tried to include all possible product categories in this review. Moreover, it provides a complete knowledge of the publishing timeline, highly cited papers, their characteristics and product category distribution. A study to be called relevant and reliable depends upon the research methodology it uses. This review selected the papers published in reputed journals available on the Scopus database. It details significant factors impacting green purchase intention and behaviour, especially for each product category. Once these factors are investigated thoroughly, marketers and policymakers can take steps to entice new consumers and motivate the existing consumers to actually buy green products.

#### **Implications**

The implications of the current study are –

- 1. The findings allow retailers to better understand the determinants that are the same or different to various product categories.
- 2 It enables marketers to develop effective marketing strategies for different consumer segments to attract their potential customers and to gain economic benefits.
- 3. This study can provide more understanding to marketers and policymakers focusing on increasing green purchase behaviour of consumers for implementing sustainable production, purchase, and consumption.
- 4. The knowledge of drivers and barriers impacting green purchase behaviour in different product categories can help marketers to develop their green strategies accordingly.
- 5. The current study considers the existing studies and provides a base for future researchers to plan empirical studies on this relevant topic.

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## **Limitations and Scope for Future Research**

The current research has some limitations which future researchers can overcome. First, selects papers available on the Scopus database only. The future study can be conducted using multiple databases. Second, the study uses limited keywords in the review. Scholars can add more keywords to enhance the relevance of the paper. Third, the paper includes 5 widely known product categories for analysis i.e. organic food, green apparel, energy-efficient appliances, electric vehicle and organic personal care. The researchers can take it to green services like green tourism, green banking, green supply chain management and the determinants influencing them. Moreover, the research suggest a shift from explaining behavioural intention to actual behavior as maximum studies in the past have focused only on purchase intention of specific product categories. (Al-Haddad et al., 2020; Costa et al., 2021; Habich-Sobiegalla et al., 2018; A. Kumar et al., 2021; Leyva-Hernández et al., 2021; Nam et al., 2017).

## **Findings and Conclusion**

Turning to the findings, the review noticed the publication trend of papers for the last 11 years and on that basis forecasted the future research growth of this topic. Furthermore, this study recommends marketers plan and implement green marketing strategies in their businesses to gain and retain their customers in the coming years. Secondly, the extensive literature stated the most cited papers and their characteristics (author, title, and the research country). The purpose of it is to reveal the relevant and popular papers in this field. For instance, a study by (Egbue & Long, 2012) explores the various barriers to electric vehicles adoption by consumers who get 737 citations. Moreover, the study presents the classification of green products into specific product categories to explore the category which is scarcely analyzed. As a result, the review suggests that future researchers target more on organic clothing and organic personal care as they are less explored product categories. Next, most papers investigated the general green purchase behaviour determinants that involve all green products. (Chekima et al., 2016; Kumar & Ghodeswar, 2015; Wei et al., 2017). The existing reviews show that there exists a difference in results between general green products purchase behaviour that includes all green products and purchase behavior of specific product categories. The current study proposed a reason for this difference stating that it may be due to the favorableness or unfavorableness of specific factors in different product categories. Therefore, certain categories of products and services exhibit more growth than the other ones. For instance, consumers look for factors like food safety, taste, health, nutritional value, organic label, and certifications when buying food. For electric vehicles, they pay attention to green attributes, environmental performance, cost of vehicle, subsidy. As for clothing, the quality, Fashion consciousness, brand, Price sensitivity, Social media, peer influence and availability matter. The eco-labels knowledge, trust, environmental concern, and informational publicity are examined by consumers while purchasing energy-efficient appliances. Appearance consciousness, health consciousness, hedonic and safety values, past experience, e-WOM, celebrity endorsement, environmental consciousness are some important factors impacting organic personal care purchasing.

#### REFERENCES

Agency Financial Report. (2016). Retrieved October 22, 2021, from https://www.gsa.gov/reference/reports/budget-performance/annual-reports/2016-agency-financial-report

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- Aakko, M., & Niinimäki, K. (2021). Quality matters: Reviewing the connections between perceived quality and clothing use time. Journal of Fashion Marketing and Management: An International Journal, ahead-of-print(ahead-of-print).
- Al Mamun, A., Nawi, N.C., Hayat, N., & Zainol, N.R.B. (2020). Predicting the Purchase Intention and Behaviour towards Green Skincare Products among Malaysian Consumers. Sustainability, 12(24), 10663. https://doi.org/10.3390/su122410663
- AL-Haddad, S, Awad, A, Albate, D, Almashhadani, I, Dirani, &, & W. (2020). FACTORS AFFECTING GREEN COSMETICS PURCHASE INTENTION. *Journal of Management Information and Decision Sciences*, 23(4). https://www.abacademies.org/abstract/factors-affecting-green-cosmetics-purchase-intention-9537.html
- Azizan, S.A.M., & Suki, N.M. (2014). The Potential for Greener Consumption: Some Insights from Malaysia. *Mediterranean Journal of Social Sciences*, 5(16), 11.
- Bai, L., Wang, M., & Gong, S. (2019). Understanding the Antecedents of Organic Food Purchases: The Important Roles of Beliefs, Subjective Norms, and Identity Expressiveness. Sustainability, 11(11), 3045.
- Baldini, M., Trivella, A., & Wente, J.W. (2018). The impact of socioeconomic and behavioural factors for purchasing energy efficient household appliances: A case study for Denmark. Energy Policy, 120, 503–513.
- Barbarossa, C., & Pastore, A. (2015). Why environmentally conscious consumers do not purchase green products: A cognitive mapping approach. Qualitative Market Research, 18(2), 188–209.
- Bong Ko, S., & Jin, B. (2017). Predictors of purchase intention toward green apparel products: A cross-cultural investigation in the USA and China. Journal of Fashion Marketing and Management: An International Journal, 21(1), 70–87.
- Bray, J., Johns, N., & Kilburn, D. (2011). An Exploratory Study into the Factors Impeding Ethical Consumption. Journal of Business Ethics, 98(4), 597–608. https://doi.org/10.1007/s10551-010-0640-9
- Chekima, B., Syed Khalid Wafa, S. A. W., Igau, O. A., Chekima, S., & Sondoh, S. L. (2016). Examining green consumerism motivational drivers: Does premium price and demographics matter to green purchasing? Journal of Cleaner Production, 112, 3436–3450. https://doi.org/10.1016/j.jclepro.2015.09.102
- Cheung, M.F.Y., & To, W.M. (2019). An extended model of value-attitude-behavior to explain Chinese consumers' green purchase behavior. *Journal of Retailing and Consumer Services*, 50, 145–153.
- Chin, J., Jiang, B.C., Mufidah, I., Persada, S.F., & Noer, B.A. (2018). The Investigation of Consumers' Behavior Intention in Using Green Skincare Products: A Pro-Environmental Behavior Model Approach. Sustainability, 10(11), 3922.
- Chowdhury, S., Meero, A., Abdul Rahman, A.A., Islam, K.M., Zayed, N., & Hasan, K B.M. (2021). An Empirical Study on the Factors Affecting Organic Food Purchasing Behavior in Bangladesh: Analyzing a Few Factors. Academy of Strategic Management Journal, 20, 1–12.
- Costa, C.S.R., Costa, M.F. da, Maciel, R.G., Aguiar, E.C., & Wanderley, L.O. (2021). Consumer antecedents towards green product purchase intentions. *Journal of Cleaner Production*, 313, 127964.
- Cui, L., Wang, Y., Chen, W., Wen, W., & Han, M.S. (2021). Predicting determinants of consumers' purchase motivation for electric vehicles: An application of Maslow's hierarchy of needs model. Energy Policy, 151, 112167.
- Dembkowski, S., & Hanmer-Lloyd, S. (1994). The environmental value-attitude-system model: A framework to guide the understanding of environmentally-conscious consumer behaviour. Journal of Marketing Management, 10(7), 593–603.
- Dholakia, J., & Shukul, M. (2012). Organic Food: An Assessment of Knowledge of Homemakers and Influencing Reasons to Buy / Not to Buy. *Journal of Human Ecology*, 37(3), 221–227.
- Dickenbrok, C., & Martinez, L.F. (2018). Communicating green fashion across different cultures and geographical regions. *International Review on Public and Nonprofit Marketing*, 15(2), 127–141.
- Durif, F., Roy, J., & Boivin, C. (2012). Could perceived risks explain the "green gap" in green product consumption? Electronic Green Journal, 1(33). Scopus. https://www.scopus.com/inward/record.uri?eid=2-s2.0-84873818110&partnerID=40&md5=ad04d9deabeeff8be8b08173776735a4
- Egbue, O., & Long, S. (2012). Barriers to widespread adoption of electric vehicles: An analysis of consumer attitudes and perceptions. Energy Policy, 48, 717–729.
- Fatoki, O. (2020). Factors Influencing the Purchase of Energy-Efficient Appliances by Young Consumers in South Africa. *Foundations of Management*, 12(1), 151–166.
- Ghazali, E., Soon, P.C., Mutum, D.S., & Nguyen, B. (2017). Health and cosmetics: Investigating consumers' values for buying organic personal care products. *Journal of Retailing and Consumer Services*, 39, 154–163.
- Global Organic Personal Care Market by Type (Skin Care, Hair Care, Oral Care, Cosmetics), By Application (Supermarkets and Hypermarkets, Specialist Retailers, Online Retailers) And By Region (North America,

- Latin America, Europe, Asia Pacific and Middle East & Africa), Forecast To 2028. (n.d.). Dataintelo. Retrieved October 26, 2021, from https://dataintelo.com/report/organic-personal-care-market/
- Gupta, A., & Singh, U. (2018). Factors influencing environmentally responsive consumption behavior in India. SCMS Journal of Indian Management, 15(2), 87–104. Scopus.
- Habich-Sobiegalla, S., Kostka, G., & Anzinger, N. (2018). Electric vehicle purchase intentions of Chinese, Russian and Brazilian citizens: An international comparative study. *Journal of Cleaner Production*, 205, 188–200.
- He, A.Z., Cai, T., Deng, T. Xiang., & Li, X. (2016). Factors affecting non-green consumer behaviour: An exploratory study among Chinese consumers. International Journal of Consumer Studies, 40(3), 345–356. Scopus.
- Hsu, C.-L., Chang, C.-Y., & Yansritakul, C. (2017). Exploring purchase intention of green skincare products using the theory of planned behavior: Testing the moderating effects of country of origin and price sensitivity. Journal of Retailing and Consumer Services, 34, 145–152. Scopus.
- Huang, M.-H., & Rust, R. T. (2011). Sustainability and consumption. Journal of the Academy of Marketing Science, 39(1), 40–54. https://doi.org/10.1007/s11747-010-0193-6
- Huang, X., & Ge, J. (2019). Electric vehicle development in Beijing: An analysis of consumer purchase intention. Journal of Cleaner Production, 216, 361–372.
- Hughner, R. S., McDonagh, P., Prothero, A., Shultz, C. J., & Stanton, J. (2007). Who are organic food consumers? A compilation and review of why people purchase organic food. Journal of Consumer Behaviour, 6(2–3), 94–110.
- Iqbal, J., Yu, D., Zubair, M., Rasheed, M. I., Khizar, H. M. U., & Imran, M. (2021). Health Consciousness, Food Safety Concern, and Consumer Purchase Intentions Toward Organic Food: The Role of Consumer Involvement and Ecological Motives. SAGE Open, 11(2), 21582440211015730.
- Jacobs, K., Petersen, L., Hörisch, J., & Battenfeld, D. (2018). Green thinking but thoughtless buying? An empirical extension of the value-attitude-behaviour hierarchy in sustainable clothing. Journal of Cleaner Production, 203, 1155–1169.
- Jain, S. K., & Kaur, G. (2006). Role of Socio-Demographics in Segmenting and Profiling Green Consumers. Journal of International Consumer Marketing, 18(3), 107–146.
- Jaini, A., Quoquab, F., Mohammad, J., & Hussin, N. (2019). "I buy green products, do you...?": The moderating effect of eWOM on green purchase behavior in Malaysian cosmetics industry. International Journal of Pharmaceutical and Healthcare Marketing, 14(1), 89–112. Scopus. https://doi.org/10.1108/IJPHM-02-2019-0017
- Janelle, K., & Bbus, P. (2016). CONSUMERS' PERCEPTIONS AND ATTITUDES TOWARDS FIRMS' GREEN MARKETING INITIATIVES: HOW DO THEY INFLUENCE GREEN CONSUMPTION?
- Janssen, M. A., & Jager, W. (2002). Stimulating diffusion of green products. Journal of Evolutionary Economics, 12(3), 283–306. https://doi.org/10.1007/s00191-002-0120-1
- Jeyakumar Nathan, R., Soekmawati, Victor, V., Popp, J., Fekete-Farkas, M., & Oláh, J. (2021). Food Innovation Adoption and Organic Food Consumerism—A Cross National Study between Malaysia and Hungary. Foods, 10(2), 363. https://doi.org/10.3390/foods10020363
- Jiang, Y., & Zheng, J. (2017). Economic Growth or Environmental Sustainability? Drivers of Pollution in the Yangtze River Delta Urban Agglomeration in China. Emerging Markets Finance and Trade, 53(11), 2625– 2643. https://doi.org/10.1080/1540496X.2017.1370580
- Johnstone, M.-L., & Tan, L.P. (2015). An exploration of environmentally-conscious consumers and the reasons why they do not buy green products. Marketing Intelligence and Planning, 33(5), 804–825. Scopus.
- Joshi, G., & Nulkar, G. (2016). Looking Good and Thinking Green-Can Green Personal Care Products Be Promoted? International Journal of Asian Business and Information Management, 7(4), 49–62. https://doi.org/10.4018/ijabim.2016100104
- Joshi, Y., & Rahman, Z. (2015). Factors Affecting Green Purchase Behaviour and Future Research Directions.
- Kaadoor, A. (2000). Determinants of Green Purchase Intentions of Saudi Consumers. Portland State University.
- Kahraman, A., & Kazançoğlu, İ. (2019). Understanding consumers' purchase intentions toward natural-claimed products: A qualitative research in personal care products. Business Strategy and the Environment, 28(6), 1218–1233.
- Katt, F., & Meixner, O. (2020). Is It All about the Price? An Analysis of the Purchase Intention for Organic Food in a Discount Setting by Means of Structural Equation Modeling. Foods, 9(4), 458.
- Khare, A. (2015). Antecedents to green buying behaviour: A study on consumers in an emerging economy. Marketing Intelligence & Planning, 33(3), 309–329.

- Khare, A., Sadachar, A., & Manchiraju, S. (2019). Investigating the Role of Knowledge, Materialism, Product Availability, and Involvement in Predicting the Organic Clothing Purchase Behavior of Consumers in the Indian Market. Journal of International Consumer Marketing, 32.
- Knez, M., Jereb, B., Jadraque Gago, E., Rosak-Szyrocka, J., & Obrecht, M. (2021). Features influencing policy recommendations for the promotion of zero-emission vehicles in Slovenia, Spain, and Poland. *Clean Technologies and Environmental Policy*, 23(3), 749–764.
- Krishnan, V. V., & Koshy, B. I. (2021). Evaluating the factors influencing purchase intention of electric vehicles in households owning conventional vehicles. Case Studies on Transport Policy, 9(3), 1122–1129.
- Kumar, A., Prakash, G., & Kumar, G. (2021). Does environmentally responsible purchase intention matter for consumers? A predictive sustainable model developed through an empirical study. Journal of Retailing and Consumer Services, 58. https://doi.org/10.1016/j.jretconser.2020.102270
- Kumar, N., & Mohan, D. (2021). Sustainable apparel purchase intention: Collectivist cultural orientation and price sensitivity in extended TPB model. Journal of Revenue and Pricing Management, 20(2), 149–161.
- Kumar, P., & Ghodeswar, B. M. (2015). Factors affecting consumers' green product purchase decisions. Marketing Intelligence and Planning, 33(3), 330–347. Scopus. https://doi.org/10.1108/MIP-03-2014-0068
- Kumar, S., & Yadav, R. (2021). The impact of shopping motivation on sustainable consumption: A study in the context of green apparel. Journal of Cleaner Production, 295, 126239.
- Lai, C. K.M., & Cheng, E.W.L. (2016). Green purchase behavior of undergraduate students in Hong Kong. Social Science Journal, 53(1), 67–76. Scopus.
- Lee, K. (2011). The role of media exposure, social exposure and biospheric value orientation in the environmental attitude-intention-behavior model in adolescents. *Journal of Environmental Psychology*, 31(4), 301–308.
- Leyva-Hernández, S.N., Toledo-López, A., & Hernández-Lara, A. B. (2021). Purchase Intention for Organic Food Products in Mexico: The Mediation of Consumer Desire. Foods, 10(2), 245. https://doi.org/10.3390/foods10020245
- Lin, B., & Wu, W. (2018). Why people want to buy electric vehicle: An empirical study in first-tier cities of China. Energy Policy, 112, 233–241. https://doi.org/10.1016/j.enpol.2017.10.026
- Longoni, C., Gollwitzer, P. M., & Oettingen, G. (2014). A green paradox: Validating green choices has ironic effects on behavior, cognition, and perception. Journal of Experimental Social Psychology, 50, 158–165. https://doi.org/10.1016/j.jesp.2013.09.010
- Lund, H. (2007). Renewable energy strategies for sustainable development. Energy, 32(6), 912–919. https://doi.org/10.1016/j.energy.2006.10.017
- Mair, S., Druckman, A., & Jackson, T. (2016). Global inequities and emissions in Western European textiles and clothing consumption. Journal of Cleaner Production, 132, 57–69.
- Mishra, P., & Sharma, P. (n.d.). GREEN MARKETING IN INDIA: EMERGING OPPORTUNITIES AND CHALLENGES. Journal of Engineering, 6.
- Morgan, A. B., & Lilienfeld, S. O. (2000). A meta-analytic review of the relation between antisocial behavior and neuropsychological measures of executive function. *Clinical Psychology Review*, 20(1), 113–136.
- Moser, A. K. (2015). Thinking green, buying green? Drivers of pro-environmental purchasing behavior. Journal of Consumer Marketing, 32(3), 167–175. https://doi.org/10.1108/JCM-10-2014-1179
- Mostafa, M. M. (2007). A hierarchical analysis of the green consciousness of the Egyptian consumer. Psychology and Marketing, 24(5), 445–473. Scopus. https://doi.org/10.1002/mar.20168
- Nam, C., Dong, H., & Lee, Y.-A. (2017). Factors influencing consumers' purchase intention of green sportswear. Fashion and Textiles, 4(1), 2.
- Neumann, H.L., Martinez, L.M., & Martinez, L.F. (2020). Sustainability efforts in the fast fashion industry: Consumer perception, trust and purchase intention. Sustainability Accounting, Management and Policy Journal, 12(3), 571–590.
- Nguyen, M.T.T., Nguyen, L.H., & Nguyen, H. V. (2019). Materialistic values and green apparel purchase intention among young Vietnamese consumers. Young Consumers, 20(4), 246–263.
- Nguyen, T.N., Lobo, A., & Nguyen, B.K. (2018). Young consumers' green purchase behaviour in an emerging market. *Journal of Strategic Marketing*, 26(7), 583–600.
- Pham, T.H., Nguyen, T.N., Phan, T.T.H., & Nguyen, N.T. (2019). Evaluating the purchase behaviour of organic food by young consumers in an emerging market economy. *Journal of Strategic Marketing*, 27(6), 540–556.
- Piamphongsant, T., & Mandhachitara, R. (2008). Psychological antecedents of career women's fashion clothing conformity. Journal of Fashion Marketing and Management: An International Journal, 12(4), 438–455.
- Premi, H., Sharma, M., & Dangayach, G.S. (2019). An Empirical Investigation of Factors Affecting Consumer Buying Behaviour for Green Personal Care Products in India (No. 1). 1, 18.

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- Rana, J., & Paul, J. (2017). Consumer behavior and purchase intention for organic food: A review and research agenda. Journal of Retailing and Consumer Services, 38, 157–165.
- Ryan, J., & Casidy, R. (2018). The role of brand reputation in organic food consumption: A behavioral reasoning perspective. Journal of Retailing and Consumer Services, 41, 239–247.
- Sahni, H., Khan, B.M., & Barad, K. (2016). Reinventing customer experience for fashion consumers: A conceptual framework. *Abhigyan*, 34(2), 1–14.
- Samarasinghe, R. (2015). Green attitudes and behavior gap: Obstruction to be green. 13, 1461–1476.
- Scalco, A., Noventa, S., Sartori, R., & Ceschi, A. (2017). Predicting organic food consumption: A meta-analytic structural equation model based on the theory of planned behavior. Appetite, 112, 235–248. https://doi.org/10.1016/j.appet.2017.02.007
- Shim, D., Shin, J., & Kwak, S.Y. (2018). Modelling the consumer decision-making process to identify key drivers and bottlenecks in the adoption of environmentally friendly products. Business Strategy and the Environment, 27(8), 1409–1421.
- Shukla, S. (2019). A Study on Millennial Purchase Intention of Green Products in India: Applying Extended Theory of Planned Behavior Model. *Journal of Asia-Pacific Business*, 20(4), 322–350.
- Summary-Global lifestyle of health and sustainability-2008. (n.d.).
- Tandon, A., Jabeen, F., Talwar, S., Sakashita, M., & Dhir, A. (2021). Facilitators and inhibitors of organic food buying behavior. Food Quality and Preference, 88, 104077.
- Teng, C.C., & Lu, C.H. (2016). Organic food consumption in Taiwan: Motives, involvement, and purchase intention under the moderating role of uncertainty. Appetite, 105.
- Varshneya, G., Pandey, S.K., & Das, G. (2017). Impact of Social Influence and Green Consumption Values on Purchase Intention of Organic Clothing: A Study on Collectivist Developing Economy. Global Business Review, 18(2), 478–492.
- Vermeir, I., & Verbeke, W. (2006). Sustainable Food Consumption: Exploring the Consumer "Attitude Behavioral Intention" Gap. *Journal of Agricultural and Environmental Ethics*, 19(2), 169–194.
- Wang, Z., Sun, Q., Wang, B., & Zhang, B. (2019). Purchasing intentions of Chinese consumers on energy-efficient appliances: Is the energy efficiency label effective? Journal of Cleaner Production, 238, 117896.
- Waris, I., & Ahmed, W. (2020). Empirical evaluation of the antecedents of energy-efficient home appliances: Application of extended theory of planned behavior. Management of Environmental Quality: An International Journal, 31(4), 915–930.
- Wei, C.F., Chiang, C.T., Kou, T.C., & Lee, B.C.Y. (2017). Toward Sustainable Livelihoods: Investigating the Drivers of Purchase Behavior for Green Products. Business Strategy and the Environment, 26(5), 626–639. Scopus.
- Wijekoon, R., & Sabri, M.F. (2021). Determinants That Influence Green Product Purchase Intention and Behavior: A Literature Review and Guiding Framework. *Sustainability*, 13(11), 6219.
- Wojciechowska-Solis, J., & Soroka, A. (2017). Motives and barriers of organic food demand among Polish consumers: A profile of the purchasers. British Food Journal, 119(9), 2040–2048.
- Xu, G., Wang, S., Li, J., & Zhao, D. (2020). Moving towards sustainable purchase behavior: Examining the determinants of consumers' intentions to adopt electric vehicles. *Environmental Science and Pollution Research*, 27(18), 22535–22546.
- Yazdanpanah, M., & Forouzani, M. (2015). Application of the Theory of Planned Behaviour to predict Iranian students' intention to purchase organic food. Journal of Cleaner Production, 107, 342–352.
- Yee, L., & Hassan, S. (2016). ATTITUDE-BEHAVIOUR GAP IN SUSTAINABLE FASHION CONSUMPTION: THE ROLE OF FACILITATING CONDITIONS. International Journal of Management and Applied Science, 2.
- Yeon Kim, H., & Chung, J. (2011). Consumer purchase intention for organic personal care products. Journal of Consumer Marketing, 28(1), 40–47.
- Yuan, X., & Xiao, Y. (2021). Cognition, Value Perception and Purchase Intention of Organic Food—Evidence from China's Organic Milk Market. Sustainability, 13(2), 910.
- Zhuang, W., Luo, X., & Riaz, M. U. (2021). On the Factors Influencing Green Purchase Intention: A Meta-Analysis Approach. Frontiers in Psychology, 0.
- Zollo, L., Carranza, R., Faraoni, M., Díaz, E., & Martín-Consuegra, D. (2021). What influences consumers' intention to purchase organic personal care products? The role of social reassurance. Journal of Retailing and Consumer Services, 60, 102432.

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