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Factors Determining Sustainable Consumption Behaviour: A Guiding Framework from Literature

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Abstract

One of the most pressing issues facing the world today is that of rapid degradation of the environment caused by the incessant use of natural resources for satisfying human material needs. A solution to this lies in transitioning from consuming conventional to eco-friendly products which have the least adverse impact on the environment. This study has attempted to identify the factors that determine or impact this sustainable consumption. Drawing conclusions from the extant literature, this study has listed all the determinants of sustainable consumption studied by researchers in different parts of the world in the last decade. Thirty-two factors, segregated into five broad categories viz. Endogenous, Exogenous, Situational, Product Attributes, and Demographic have been identified. It is clear that the factors work individually or in combination with each other to impact sustainable consumption behaviour, directly or indirectly, and sometimes act as moderating and mediating variables. This study shall provide pointers for future research to understand consumer behaviour concerning green products. The findings of this comprehensive study shall guide marketers and policymakers in formulating strategies to promote green consumption, in any part of the world. This paper is divided into four sections. The first section gives an introduction and lists out the research questions which the authors have attempted to answer in this study. The second section outlines the research methodology used. All the factors or determinants have been discussed in the third section. The paper concludes by giving future research prospects the current study opens up and its contribution in the form of policy recommendations.

Keywords: Eco-friendly Products, Concern for Environment, Emotional, Green Consumption, Purchase Intention, Awareness, Eco-literacy, Determinants, Sustainable consumption.

Introduction

A report of the United Nations conference on environment and development held in Rio de Janeiro, 1992 had clearly stated "To achieve sustainable development and a higher quality of life for all people, states should reduce and eliminate unsustainable patterns of production and consumption and promote appropriate demographic policies" The human race heading for more and more consumption and incessant use of natural resources are the natural fallouts of development across the globe today. This inevitably leads to environmental degradation that adversely affects the wellbeing of people and productivity of resources. A solution lies in taking the path to sustainability which involves transitioning from the existing consumption to a more environment friendly consumption.

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Additionally, the environmentalists suggest that damage control can be done through increased forestation, following the principal of circularity, checking the use of fossil fuels and many more such actions - (Bherwani et al., 2022) The role of consumers can be best performed if they are mindful of their consumption. Consumers who take up responsible consumption with respect to the environment, ideally examine three steps of consumption process, namely acquisition, usage and disposal of the waste of a commodity. The consumption choices have to be such that there is

minimum damage to the environment. There are several factors which individually or collectively determine the green consumption behaviour of consumers directly or indirectly. Since the green product usage is systematically different from regular product usage (Lin and Chang, 2012), it is vital to understand these factors. An understanding of these factors is critical for policy makers promote sustainable consumption and for marketers or manufacturers selling these products. An understanding of these factors shall help the policy makers and marketers who aim to promote sustainable consumption or green products. On the basis of this knowledge, they can decide what to sell, how to sell, what appeals to use or segment of the population to focus on. Researchers in different parts of the world in the last decade have undertaken quantitative studies and examined the impact of some variables on purchase intention. These studies have given different perspectives and results which range from being in complete agreement with other to being diametrically opposite. Sometimes the same variable has been seen to have different impact on different samples while at times there is seen consensus among researchers. In the current study the authors have assimilated all the possible factors that determine the sustainable consumption among people. The study has listed out these factors and their respective impact on sustainable consumption. The term sustainable consumption includes intention to buy and on actual purchase behaviour. The consumer behaviour towards green product usage is systematically different than that for conventional products product (Lin and Chang, 2012). It is therefore, essential to understand what triggers or restricts the preferences of consumers towards green products and which of these factors can be used to make some behavioural changes in target consumers. The roots of environmental problems lie in human behaviour, thus the solution should also lie in changing the behaviour of people, organisations and groups and so as to bring changes in lifestyle and culture (Diep Le, 2021)

The objectives of this study are as stated below:

- To get a comprehensive understanding of extant literature and summarize, all the possible factors that determine green purchase intention and green purchase behaviour.

- Determine the direction of impact of each of these factors on green purchase intention and green purchase behaviour according to earlier studies in the last decade.

- To identify inconsistencies or research gaps in the existing body of literature so as to provide future research prospects (to know which variables need to be focused more in future research)

- To provide policy implications for marketers and policy makers for promoting sustainable consumption.

Research Methodology

This section outlines the methodology used by the authors to look for studies about factors impacting intention to purchase and actual purchase behaviour of consumers for green or eco-friendly products.

This study presents a review of empirical articles on consumer green purchase behaviour published in reputed academic journals in the last decade. The last decade has seen a noticeable increase in focus on sustainability throughout the world. Also, the purpose of this study is to look at the recent research on green consumption, so as to craft a path for future research.

The authors selected research papers mainly from Scopus database and complemented them with some readings from other like Google scholar and Web of science. The latter were reached on the basis of references cited in the former i.e. backward and forward snowballing methods were applied.

The criteria of database selection used was flexible to include readings which were found to be good quality outside these databases. For the Scopus search, the authors used multiple combinations of keywords namely 'sustainable consumption', 'eco-friendly products', green products' 'determinants', purchase intention' and 'green consumerism' with suitable Boolean operators 'AND' and 'OR'. The research papers selected were empirical cross-sectional studies based on samples drawn from different populations anytime during the decade 2011-2021. The authors found that green consumption is a subject of research in multiple disciplines and sometimes interdisciplinary involving environmental science, sociology, management, economics, psychology etc.

Selection criteria:

Selection criteria summarised below were used to select research articles and studies:

- Published in the period 2011-January 2022
- Quantitative or empirical studies and review studies
- Written in English
- The search was limited to the field of marketing management, environment management and social sciences.
- Full research papers in Scopus indexed journals. However, due to forward and backward snowball technique, some references from other databases were also included.

The authors reviewed sixty-six readings which included three review papers, two reports by UNIDO (2018) and sixty one quantitative studies.

It is important to point out here that the authors of this paper did not find a single study, in which the impact of all the possible factors on GPI and GPB was analysed. The researchers used different factors in their study depending upon the objective of study, the population under investigation and the discipline or expertise of the researcher. While some studies examined the consumption of specific product or category of product, there were many which studied the green products in general.

Another important observation is that the definitions of the factors used differed from paper to paper. Their detailed meaning and inclusions varied across the studies though the broad meaning was similar. For example, definitions of terms like "concern for environment, social norms etc. varied, though their broader connotation/ meaning was the same across these studies.

The terms green products, 'eco-friendly products', 'green', 'eco-friendly' and 'sustainable' products have been used interchangeably in the current study. 'Green consumption' or sustainable consumer behaviour include green purchase intention (GPI) and/or actual purchase of green products i.e. 'green purchase behaviour' (GPB). It may be noted that in the quantitative studies undertaken by the researchers, impact of some and not all factors (referred to as 'variables' or 'determinants') on GPI or GPB were studied. It was found that most of the researchers studied determinants of green purchase intention of consumers, there were very few who also talked about green purchase behaviour. The factors affecting both these were the same, except that GPI itself is a predictor or determinant of GPB.

Determinants of Sustainable Consumption in Literature:

This section describes the various determinants of GPI and GPB segregated into five broad categories, namely Endogenous, Exogenous, Situational, Demographic and Product attributes. A subsection is dedicated to each broad category and its sub

categories. Table 1 at end of this paper lists out the factors studied by earlier researchers, along with the year and the country from where the sample has been studied.

Endogenous or Internal Factors:

These are factors that are related to the individual consumer and are very personal to him/her. These originate out of the consumers' personality, their thinking or experience. Consumer behaviour towards green products is affected by the attitudinal factors and the cognitive factors such as concern, knowledge, and consumer effectiveness. (Jaiswal and Kant 2018). They are broadly included in the following aspects of an individual:

- Psychological,
- Emotional
- Intellectual.

Psychological factors:

Green consumption decision is seen to be affected by psychological factors like altruistic values, concern for the environment, environmental knowledge, skepticism towards environmental claims of manufacturers, attitudes toward green consumption, and intention to buy green products ((Fan et al., 2019; Mostafa 2006; Peattie & Collins, 2009). These also include some of the psychographic variables used for market segmentation viz. personality, attitudes, interests and opinions.

The classical theory of reasoned action (TRA) by Fishbein and Ajzen (1975) and the theory of planned behaviour (TPB) by Ajzen and Fishbein (1980) have been applied in many studies to explain or the consumer behaviour regarding purchase of eco-friendly or green products. (Hsu et al., 2017; Lee et al., 2014; Yadav & Pathak, 2016; Zhang et al., 2018). However, these theories do not fully explain the attitude-behaviour gap of consumers in case of eco-friendly products. The researchers have found that psychological factors like attitude, habits, and perceived behavioural control drive the green purchase behaviour. (Jaiswal & Kant, 2018; Johnstone & Tan, 2015; Joshi and Rahman, 2015; Kumar et al., 2017; Mostafa, 2006 ; Paul et al.,2016; Wei et al., 2018)

Attitude to environment (ATE):

Environmental attitude of people can be described as their rational evaluation and judgement about protecting the environment. Attitude of consumers towards environmental protection has been studied in the past and has been a distinct driver for green purchase in many developed countries like Germany, Australia and Denmark. (Kabadayı et al., 2015; Moser, 2015). In order to solve environmental problems, it is necessary to examine human attitude towards the environment (Young ,2018).

There are three components of attitude- cognitive, affective and behavioural. The knowledge and experience acquired over time form the cognitive component which leads to the affective component i.e. concern for environment. This concern drives the consumers to take action for protecting the environment, which forms the behavioural component of attitude. Individuals with pro-environment attitude are known as 'green consumers' who purchase and consume products with environmental preservation in mind. It is found that the effectiveness of green marketing largely depends on the consumers' ATE and attitudes towards green products (Claudy et al., 2013 ; Dagher et al., 2015; Vieira et al., 2019).

Environmental Concern (EC):

In literature, environmental concern (EC) is a significant determinant of consumers' intention to purchase green products (Awan & Raza 2012;

Haws et al. 2014, Sharma and Sharma 2016; Shamsi & Siddiqui, 2017a; Suki 2013). It is the affective component or a direct result of pro environmental attitude. EC has been seen to positively impact purchase intention for green products, which in turn is a significant predictor of purchase behaviour (Zhang et al., 2019). Among other factors affecting GPI, consumer consciousness was found to be a significant factor (Hojnik et al., 2019; Liao et al., 2021; Paul et al.2016; Prasher, 2020; Zaremohzzabieh et al., 2021) Findings of all these studies showed that responsible behaviour of consumers emanates from EC. Irrespective of the place and time of research, a consensus was found in all the studies reviewed by the authors that EC has a significant positive impact on sustainable consumption, A review study by Joshi & Rahman (2015) revealed that CE was the most studied determinant of GPI and GPB. Combined with other individual emotions like altruism, it is a strong motivator of GPI. (Prakash & Pathak, 2017). Findings of study by Junior et al.(2015) revealed that while EC has a very significant positive impact on GPI, it is not equally effective for converting the consumers' intention to action of buying.

Thus, there is consensus that consumers' concern for environment significantly positively impacts the consumers' GPI but not necessarily with the same strength for GPB.

Perceived behavioural control (PBC):

According to theory of planned behaviour (TPB), for a particular behaviour to occur, the individual must have a positive attitude to it, a feeling that there shall be social approval of that behaviour and a belief in one's capability to perform it. The belief in one's ability to perform a behaviour is referred to Perceived behavioural control (PBC). In some studies, PBC is seen as an important determinant of green purchase behaviour (Al Mamun et al ,2018; Chen and Hung, 2016, Gupta ,2021; Junior et al. , 2015; Liao et al., 2021; Paul et al., 2015; Zaremohzzabieh, 2021). Authors have also studied the factor 'perceived behavioural efficiency' (Piligrimiene et al., 2020) which has a similar connotation.

Perceived consumer effectiveness (PCE):

GPI is seen to be high in ecologically conscious consumers who evaluate the 'ecological quality' of a product in terms of environmental consequences of consumption of a product. Such consumers believe that every action of theirs will effectively contribute to control environmental degradation. This belief termed as 'perceived consumer effectiveness' has been found to be an important factor impacting green purchase intention.(Kabadayi et al., 2015 It is the consumers' evaluation of the extent to which their consumption affects or makes a difference in the environment. PCE affects consumer attitude and perceived behaviour control which further affects GPI. (Daugbjerg et al., 2014; Gleim et al., 2013; Jaiswal and Kant, 2018; Mostafa, 2006; 'Tong & Kang, 2019). These green consumers adopt eco-friendly products easily and refuse to use products that are harmful to the environment. The relationship between perceived consumer effectiveness and purchase intention is not moderated by perceived price (Wang et al, 2019), implying that PCE is a strong predictor of GPI. Psychographic variables, especially EC and PCE were found to be more relevant than socio-demographics factors in explaining sustainable consumption decision. (Akehurst et al., 2012).

Attitude to green products (AGP):

A positive attitude towards green products is a significant determinant of GPI, especially in case of products that replace the existing technology. For example, the LED lights, green energy fuels, electric cars etc. are some of the examples of products that have emerged out of new technology. For the consumers to adopt these, it is important that

not only are they are aware of these products but have a positive attitude towards these and are willing to change their consumption. Many researchers have studied the AGP as a determinant of GPI (Al Mamun at al., 2018; Hsu et al., 2017; Jaiswal and Kant, 2018; Prakash and Pathak, 2016; Siyal et al., 2021). It is noteworthy that ATE is a strong factor only in combination with lower price differential to conventional products, social acceptability, and ease of access of these products.

Habits:

Habits have been significant barriers or obstacles to green purchase behaviour. Consumers are seen to have sticky behaviour of consumption because of their habits. They get a feeling of comfort in status quo and find it difficult to change their preference to green products from the conventional products they are already consuming. (Gleim et al., 2013; Guan et al., 2015). However, impact of habits on sustainable consumption has not been studied widely in literature.

Trust:

Consumer trust is a key prerequisite for establishing a market for eco-friendly products, especially if they are premium priced. Trust reduces the perceived risk and therefore positively impacts the GPI of consumers (Daugbjerg et al., 2014) Lack of trust in green products or in claims of manufacturers in advertisements, affects the perceived value and therefore affects the GPI. It is one of the most important barriers in adoption of green products by consumers. (Padilla, 2018). Related to trust are variables like egoistic values, green advertising skepticism which have been seen as key barriers of performing both GPI and GPB. For building the trust among consumers, manufacturers and policy makers in developed countries have adopted the practice of eco labels on products. In many countries, there are laws and legislations in place which check the spread of false claims in advertisements by firms. (UNIDO ,2018).Studies in Thailand, China, Taiwan, Germany and many other countries have shown how trust influences consumer decisions to buy new green products. The findings revealed that perceived risk and customer trust had a direct effect on customer loyalty while perceived quality had an indirect effect on customer loyalty via customer trust. Green washing has been a great contributor to lack of trust. (Chen et al., 2020; Chen and Chang 2013, Tabi et al., 2014; Khare, 2015; Nuttavuthisit & Thøgersen, 2017; Ricci et al., 2018 ; Tandon et al. 2020; Y.S. Chen et al., 2020; Padilla, 2018)

The relationship between green trust and purchase intention is moderated by perceived price. If consumers buy green product in spite of high price differential, it is the trust that is playing a strong role of motivation to purchase. Thus, trust as a variable has been studied in combination with other variables and its relation with GPI and GPB is not always direct and simple.

Health consciousness:

A product's nutritional value, good taste, health-related benefits, green certification, product appearance, and superior quality are the precise characteristics that influence the demand and consumption of eco-friendly food (Aertesens 2011). Health consciousness of individuals has been seen to positively impact the GPI and GPB mainly for food products and self-care and hygiene products, cosmetics etc.

Emotional Factors:

Variables included in this category are pride, guilt, pleasure, generativity, religious values, ethical values, social values. The emotional connect of the individual consumer with the surroundings and with the environment largely affect their consumption choices.(Chen & Hung, 2016; Ritter et al., 2015) Many researchers have emphasised that emotions play an important role in influencing

GPI or GPB for green products. As mentioned above, consumers who have an emotional connect with the environment have high concern for it. Apart from this, other emotions of individual consumers like self-identity, and the emotional benefits that the consumer expects to obtain from green consumption like pride, warm glow etc. act as significant influencing factors on GPI. (Cho & Krasser, 2011; Young et al., 2010). Emotions can work as a feed back system that guides the consumers to learn from past experience and adopt ethical products (Antonetti & Maklan, 2014; Guilt and Pride: Antonetti & Maklan, 2014) in their study evaluated the emotions like guilt and pride experienced by consumers post the consumption of commodities. They examined how these positively impact sustainable consumption in their future purchases. The inclusion of this study in the review by authors as it could add a new dimension to motivators of green consumption. Future researchers can study the guilt experienced by the consumer post consumption of conventional products that add to environmental degradation.

Generativity is another emotion shown to positively influence GPI. Generativity is a personal feeling, an emotional connect of consumers to the well- being of future generations drives them to engage in responsible consumption. They feel responsible to leave the planet in a healthy state for future generations (Paço et al., 2014). It has been seen that campaigns which address this emotion of consumers are very effective in generating concern for environment and promoting responsible consumption.

Religious values:

Studies in China, India, Malaysia etc., have used religious values as explanatory variables in their studies. Mostly Asian originated religions such as Buddhism, Hinduism, Islamic, etc. have been studied commonly and have shown to positively influence the concern for environment and also the GPI. (Ghazali et al. 2018). Although it has been clearly shown that this GPI or concern is outweighed by economic factor like price, or perceived value of the product thus adding to the gap between intention and purchase.

Ethical values:

These values include moral and social norms like responsibility towards society, towards people in your circle of influence. Some studies, however, found that individualistic values had a stronger influence than altruistic values in purchasing green food products. On the other hand, if consumers perceive eco-friendly products as virtuous are expected to be convinced by appeals of brand that present the product as a good cause for the environment or society (Spielmann, 2020)

Hedonistic values :

Personal values like pleasure, enjoyment, satisfaction were found to have a significant influence on purchase intentions and actual purchase (Arvella et al., 2008; Gleim et al., 2013). Individualistic values also include consumer attitude towards one self for example concern for own health and of one's family or persons in first circle influence has a strong significant positive impact on products like organic food and products which are less detrimental to health (Chen and Chang, 2012; Suki et al. 2013). Zhang et al. (2019) categorized green products as Utilitarian and Hedonic green products on the basis of motive of purchase. The former included products like energy saving electrical products, reusable shopping bags. Organic clothing has been cited as an example of hedonic green products in this study, where the consumer buys these more for pleasure than for utility.

Environmental ethics and beliefs:

Attfield (2014) pointed out that traditional ethics

emphasizes interpersonal ethics while environmental ethics emphasizes the obligations and duties of people towards the environment. The beliefs that caring for environment is a moral obligation either as an individual or as a community. These ethics have positive impact on sustainable consumption (Ferkany & Whyte, 2012). A study by Rahnama & Rajabpour (2017) on consumers in Iran made it clear that the consumers choice of green product is influenced by functional value, social value, emotional value, value, epistemic value, and environmental value. In a study on Korean consumers, (van Tonder et al., 2020) has shown that green attitudes, positively impact the adoption of green products.

Intellectual Factors:

This category includes two variables namely eco-literacy (EL) and green product awareness (GPA).

Eco-literacy (EL):

Consumer's concern and attitude of protection towards the environment comes from 'Eco-literacy' or awareness about environmental issues. Studies have shown that consumers' knowledge about the environment is a prerequisite for forming an attitude towards the environment which in turn, positively influences the GPI. (Maniatis, 2015; Alamsyah et al., 2018; Amoako, 2020; Hartmann & Apaolaza-Ibáñez, 2012). Consumer awareness about environmental degradation, climate change, waste dumps etc. benefits of recycling etc. plays an important role in inducing responsible consumption behaviour. (Jaiswal et al 2018; Sheik Isaacs, 2015). The consumers gather information and knowledge about the environmental issues mainly from newspapers, television and internet. Eco-literacy coupled with environment concern forms a strong enabler for consumer choosing eco-friendly products. Akehurst et al., (2012) demonstrated in their study that knowledge about low-carbon effect of products along with environmental values can shape customers' cognitive image which then boosts their preference for eco-hotels. Thus, it is clear that while eco literacy is an enabler for sustainable consumption, it is effective only if the consumers have positive attitude towards the environment. On the other hand, perceived environmental knowledge (PEK), known as Eco-literacy in current study, was found to have insignificant effect on GPI. (Jaiswal and Kant, 2018)

Green product awareness (GPA):

Another type of variable studied is the knowledge about existence of green products and their availability to the consumers. This knowledge has been termed as green product awareness (GPA) in many studies (Hojnik et al., 2019; Vieira et al., 2019). The knowledge gap on the uses and values of green products prevents consumers from committing themselves to any purchase decisions. Some researchers argue that consumers' lack of knowledge concerning organic food is an important factor slowing down growth (Aertesens, 2011). The findings point out that policy makers must design campaigns to raise awareness about natural resources and their efficient usage so as to promote environmental conservation, which will drive sustainable purchases among consumers (Zhang et al., 2019; Li et al., 2016). In some studies, it was found that the Indian consumers were aware about the environmental issues but at the same time they were not aware about various green products available and about green initiatives taken by government and non-government agencies (Bhatia & Jain, 2013; Kumar et al., 2013). Increased awareness of consumers about the goods like 'green fuel' or 'green energy' would put pressure on manufacturers to take appropriate action and develop processes to catalyze sustainability in the societies(Klimecka-Tatar et al., 2021).

A recent study on Indian young consumers by Gupta (2021) revealed that the consumers will have

firmer belief and trust on green products if they are well informed about the environmental issues and are aware about green products. These beliefs lead to an intention to purchase which influences the green purchase action.

Exogenous or Non-Individualistic Factors:

These are external factors that impact a consumers' intention or decision to buy green products. These refer to the factors from surroundings or from society in which the consumer lives. This category mainly includes variables like social norms, advertisements and campaigns, government policies, culture and ethnicity.

Social Norms (SN):

This is broad term that covers in its ambit several variables like, peer influence, self -identity, prestige, peer behaviour, family influence, society interaction and social impression.

Social influence (SI):

It is a kind of pressure from behaviour of others that influences a consumer's decision to 'perform or not to perform' a purchase action. The impact of buying behaviour of others, especially peers has been called the 'the first route' to influencing sustainable consumer behaviours (Jaiswal & Singh, 2018; Moser, 2015; White et al., 2019; Zhang et al., 2019). It is a kind of pressure from behaviour of others that influences a consumer's decision to 'perform or not to perform' a purchase action (Moser, 2015; Prasher, 2020; White et al. 2019). One would expect that the green buying behaviour of consumers of China, Malaysia, India, Indonesia are impacted by physical interaction with family and friends. The majority of these and other Asian countries have collectivistic societies, and therefore, social norms play a more vital role in GPI and GPB than in individualistic Western countries. While some studies have demonstrated the impact of social norms on sustainable consumption to be significantly positive (Othman & Rahman, 2014 ; Zhang et al, 2019), there are some empirical evidences where norms and the social impression of consumers are positively but not significantly correlated to their intentions towards using green products (Al Mamun et al., 2018; Chen and Hung, 2016; Paul et al., 2016). In a study on Brazilian consumers, it was found that culture and socio-economic status play a significant role in environmental impacts and influences the consumption of green products (Ritter at al., 2015; van Tonder et al., 2020)

Online interaction:

Studies have suggested that the consumer demand of green energy or other similar products was positively impacted by subjective norm along with campaigns that emphasize its benefits for the environment (Hartmann & Apaolaza-Ibáñez, 2012; Xia et al., 2019). Along with physical interaction, they found that online interaction positively impacts the consumers' willingness to consume green products.

Social Impression (SIm):

According to the Maslow hierarchy of needs, all human behaviour, irrespective of their cultural background, arises from five different types of needs. These follow a hierarchy, starting with the basic physiological needs. The other higher levels are safety needs, love and belonging needs, esteem needs in that order leading to the highest need called the 'self-actualization' need. Each level of need must be satisfied before the individual moves to the next level. Among these, esteem refers to the individual's desire to be recognized or valued by others. The individual's feeling of achievement comes from what the society thinks about them or the social impression that they create through their actions, their positions, earnings and sometimes even through their physical appearance. They strive

to get respect and approval from their friend, family or peers. The consumption behaviour of people is sometimes guided by this need of creating a social impression. A study by Khare, (2014) also studied similar factor named 'self-identity' affecting consumption decision positively towards eco - friendly products. Yadav & Pathak (2017) however, found that Indian consumers do not associate self-identity with green product consumption.

Culture and ethnicity:

External factors such as culture and ethnicity tend to influence consumers' decision-making for eco-friendly products (de Medeiros & Ribeiro, 2017). Scant literature found where culture and ethnicity impacts green consumption.

While the literature has many studies on the impact of social influence on green consumption, there are very few studies on self-esteem or self-identity. Researchers in fields of sociology and psychology could take it further in different societies and might get some interesting findings with respect to green consumption. Word of mouth an important byproduct of social influence is seen to be positively affecting GPI.

Advertisements and Campaigns:

It is also referred to as 'influence of media' (Trivedi et al (2017). Studies have investigated the correlation among green advertising, green brand image and customer green awareness on environment friendly products and their impacts to purchase intention, e.g., Alamyssah (2017) found this correlation to be positive for Indonesian consumers. Bailey et al. (2016) have studied the influence of market communications on consumer behaviour for green products. Attitude and perceived value have significant mediating effect on the relationship between emotional green appeals and purchase intention. (Guan et al., 2015; Akenji, 2014).

There can be different types of appeals to influence the consumers towards green products. injunctive appeals are those which target the social factors and highlight what others think a consumer should do. Benefit appeals on the other hand highlight the benefits of consuming a product and descriptive appeals influence the consumers by showing what the others are consuming. It is important to craft a communication or appeal according to behaviour of target audience and the level at which the product is to be consumed – individual or at social level. (White and Simpson, 2013).

Brand Image and Brand Positioning:

Brand image in marketing parlance is defined as " a whole range of impressions , conceptions, and apprehensions towards a brand in customer's memory" which is correlated to sustainability and eco-friendly concerns. ""(Chen 2010; Shieh et al., 2018) According to Chen (2010), a positive relationship between green brand image and green brand equity s mediated by green satisfaction and green trust. The study recommended investing on resources to increase green trust to enhance green brand image. Green brand image is closely related to green awareness among consumers. Studies in different countries like Cambodia, Pakistan, Taiwan and other countries have emphasized that consumer purchasing intention, especially for the environmentally friendly products, depends on green awareness which is influenced by brand image to some extent (Okan & Yalman, 2014; Cheng et al., 2014; Liao at al 2020; Siyal et al., 2021; Sahmsi and Siddiqui, 2017; Zhang et al., 2019). Green marketing that focusses on psychological benefits of green products position themselves as 'green brands' and attract responsible consumers. Some studies discussed effectiveness of advertisements which highlight psychological benefits of green products like the feeling of satisfaction, fulfillment , warm glow and happiness

(Hartmann & Apaolaza-Ibáñez, 2011.)

Government policies :

This factor is seen to influence the green purchse behaviour among consumers (Shamsi & Siddiqui, 2017; Zhang et al., 2019). Impositon and Compliance of policy is expected to have a positive impact on actual consumption or purchase of green products subject to various conditions. "If the institutional framework is weak, which is the case in many low-income countries, the adoption of adequate policies is hampered. In addition, low trust in institutions also impedes behavioural changes that are necessary to achieve a shift towards sustainable consumption patterns" (UNIDO report 2018 p34). Not much literature discussing this factor was found by the authors.

Thus, any advertisement and brand image that evoke concern for environment along with utility and psychological benefits are most effective in positively impacting purchase intention (Hartmann & Apaolaza-Ibáñez, 2011).Though the effect on actual purchase behaviour varies from product to product and on other factors like trust, perceived price etc.

Situational Factors:

These availability or accessibility of green products, store related features, online presence of the brand etc.

Product availability:

Low availability is a major barrier to GPB. Increase in gap in GPI and GPB is higher if the availability is low or is not easy. (Padel and Foster, 2005; Young et al, 2010). Since consumers rarely actively search for green products, the marketers need to strategize distribution network of green products sold by them. The consumption decisions are highly influenced by how easily green products are available. Availability of green options in limited places and in niche stores has a negative influence on actual purchase even if the intention to purchase it very high. (Dangelico & Vocalelli, 2017; Gleim et al., 2013; Mishra and Sharma, 2012) . Shelf space or placement of an object on shelf in a store plays a vital role purchase decision of eco-labelled products.

Store related attributes:

Thee include a host of variables like ambience of the stores, customer care and attitude of the staff, ease of access and display of products. All these , if favourable, have positive impact on the GPI and GPB. However, price or price differential price with price respect to conventional goods weakens this positive relation (Chang et al, 2012). In some quantitative sample based studies, the respondents had a pro-environment attitude but were often unaware of green products either through their own ignorance of the topic, or due to poor placement of eco -friendly products within a store (Bhatti & Negi, 2018; Gleim et al., 2013)

Situational factors have not shown a significant positive impact on GPI and GPB, in all studies. No common conclusion found in literature with respect to different situational factors.

Product Attributes:

This category includes functional attribute like taste (in case of food), ability to satisfy personal needs, ethical characteristics, perceived quality in comparison to conventional products, price, quality, eco labelling and packaging.

Quality and Price:

Quality is an important decision criterion for any product to which, price is closely related. In case of green product, consumer's willingness to pay is an important consideration when the manufacturer

sets its price. The consumer is willing to pay a "premium price" of a green product if the environmental performance of the product is perceived to be higher than the additional cost of the product in comparison to conventional products. The green pricing refers to setting prices for green products that offset consumers' sensitivity to price against their willingness to pay more for products' environmental performance (Dangelico & Vocalelli, 2017). Poor attributes and inferior quality lead to conflict in personal responsibility and personal needs. This then adds to gap in GPI and GPB. Perceived quality is an important and significant driver of green consumption (Marakanon & Panjakajornsak, 2017). Studies have shown that high price differential between green product and conventional product can nullify the positive impact of consumer concern for environment on GPI, thereby adding to gap between GPI and GPB (Hong et al., 2018). Although consumers may be motivated to consume sustainably, they are reluctant to pay an excessive premium. Due to high price differential, they are ready to forgo environment performance or drastically change their habits (Padila,2018) This is a challenge being faced by many green manufacturers across the globe. Furthermore, perceived quality had direct effects on perceived risk and customer trust. The "perceived quality' and 'perceived price' are the most deciding factors in case of products which are not a necessity and have high price sensitivity (Chen and Wang,2015; Marakanon & Panjakajornsak, 2017; Medeiros & Ribeiro, 2017). The importance of product prices negatively influenced the decision to purchase a green product (Liobikienė et al., 2017). In a study, Tseng & Hung (2013) found that there exists a large gap between consumers' expectations and their perception from information about environmental performance of green products. These gaps are seen for attributes like product quality and certification on products and experience of past in this respect could hamper future green purchases. So, the marketers have to be especially careful in giving true information and for setting up consumers' expectations with respect to quality.

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Eco Labels:

Environmental labels are increasingly being recognized as an important market tool for identification of green products (Correa et al., 2018)) argued that green labeling has done wonders in increasing product sales in the US and Europe and hence, marketers consider it a major differentiator while de fining product specifications. Ecolabeling aims at developing environmentally-conscious design and manufacturing processes that will not jeopardize the ability of future generations to benefit from the full range of available natural resources. Responsibly-managed eo-labels are important for promoting sustainability (Atkinson & Rosenthal, 2014; Daugbjerg et al., 2014; Fan et al, 2019). An obligation on the part of the certifying parties to minimize or eliminate the environmental footprint of a particular product and apply ethical sourcing policies (Brach et al., 2018; Nekmahmud & Fekete-Farkas, 2020) Lack of trust of consumers on eco labels is sometimes seen as countering the positive influence of eco-labels on GPI and GPB. Educating the consumers to interpret and understand eco labels could positively influence GPB (Taufique et al., 2014). From the company's perspective, the labels are expected to legitimatize its business practices, protect it from public regulation and/or help it gain competitive advantages. From the consumer's point of view, the labeling will reduce uncertainty about the environmental performance of products and enable consumers to choose products that cause less damage to the environment Although the eco-labels are increasingly being used by consumers marketers and policy makers, developing countries lack far behind in this respect. Eco labels and certifications are also catching attention of researchers in there and there is consensus among them regarding eco labels

(Dekhili & Achabou, 2014; Dropulić & Krupka, 2020; de Medeiros & Ribeiro, 2017; Dekhili & Nguyen, 2021; Nekmahmud & Fekete-Farkas, 2020). Contrary to popular belief, an empirical study by Dekhili (2014) on French consumers found that consumers trusted self-declared eco labels more than third party certifications There is scant literature in India on eco labels and certifications affecting consumer purchase behaviour for green products. (Nittala, 2014; Yoganandan, 2017). Consumers with higher knowledge of attributes of labels have more trust in label and are more likely to buy green products like organic food (Daugbjerg et al., 2014) .

Thus, the impact of eco-labels is seen to be positive on GPI and GPB but is mediated by factors like trust, perceived price and perceived risk.

Packaging:

Green products are typically believed to be non-toxic, made of recycled materials, and are minimally packaged. "Of course, there are no completely green products, for they all use up energy and resources and create by-products and emissions during their manufacture, transport to warehouses and stores, usage, and eventual disposal. So green is relative, describing products with less impact on the environment than their alternatives" (Chen & Chai, 2010). In 2001, The Commission of the European Communities defined green products as "products that use less resources, have lower impacts and risks to the environment and prevent waste generation already at the conception stage". As people's awareness of green consumption increasing, manufacturers and marketers innovate the packaging techniques and apply green practices to attract customers. In some countries, packaging of product is tested before awarding certificate and labeling of eco-friendly product (Duan et al.,2021; Buelow et al, 2010; Durif et al., 2012; Pant et al., 2020; Shabbir et al., 2020; Widjojo & Yudianto, 2015) . Studies revealed that consumers' demand for less packaging waste and/or sustainable packaging alternatives are steadily increasing (Dekhili & Nguyen, 2021; Rausch et al., 2021). It was seen that the purchase intention towards ecofriendly packaging is significantly influenced by personal norms, attitude, environmental concern and willingness to pay (Magnier and Schoormans, 2015; Prakash & Pathak, 2017). The study by Rausch (2021) also found that female consumers are more inclined to demand eco-friendly packaging for products. Not many studies on relationship of packaging to GPI were found.

Demographic Factors:

Variables included age, gender, education, income.

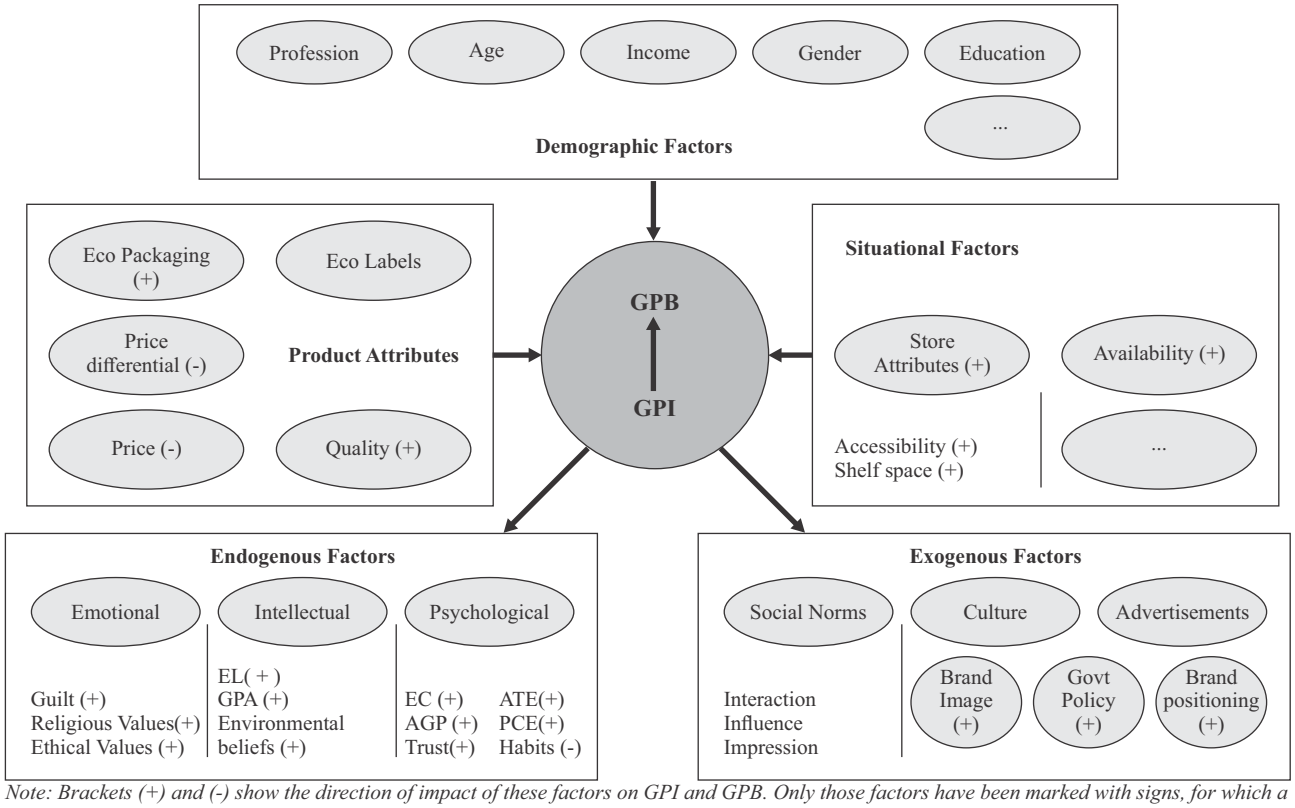
Almost every study on green consumption has tested the differences across demographic features for constructs like GPI, GPB, GPA and environmental consciousness or concern. The most widely and commonly studied demographic features are age, gender, income and education. There has been no consensus on these results and they vary from country to country and even on the kind of population from where the sample has been picked up e.g., urban population, millennials, college students or corporate employees. In some studies, female consumers have been shown to have more concern for environment and environmental, consciousness (Hojnik et al., 2019). The impact of peer interaction on adoption of green products was found to be significantly high in younger consumers. The split or clustering of consumers is however, seen to be more prominent for ecological concern and consciousness than by demographic features (Tripathi & Singh, 2016).Some studies concluded that gender had the weakest influence on sustainable consumption behaviour (Zhao et al., 2020). There have been some studies where socio-demographic factors (age, income and education) are found to impact the actual buying behaviour , some more significantly than others (Singh & Verma, 2017). On the other hand, psychographic

variables like perceived consumer effectiveness and altruism are significant and relevant in explaining sustainable consumption than socio-demographic factors (Nguyen et al., 2018; Shamsi & Siddiqui, 2017; Tripathi & Singh, 2016). While studies have shown that age is not very significant factor, some others have revealed otherwise. For example it was found that millennials are concerned more about the environmental dimension of consumption more than the social and economic dimensions (Francis & Sarangi, 2022; Nguyen et al., 2019). On the other hand, gender was seen to have a significant impact on environmentally friendly behaviour and subsequently on green purchase (Liobikienė et al., 2017)

There is no generalization in literature, on the relationship between green consumption and demographic factors like age, gender and education. The results regarding impact of gender varied across studies and across population even if they were from same country.

All the factors studied are explanatory variables which impact the sustainable consumption (GPI and/or GPB). Some factors are independent variables having a direct impact on sustainable consumption while others act as moderating or mediating variables in these relationships. Most of these factors are inter related to each other or have influence the other factors. Thus it is very commonly observed that the variables have been studied in combination with others and rarely in isolation. These are depicted in figure 1.

Figure1: Framework for impact of various factors on GPI and GPB



Note: Brackets (+) and (-) show the direction of impact of these factors on GPI and GPB. Only those factors have been marked with signs, for which a consensus has been seen among different studies regarding their direction. For others, the results have been varying across studies.
Source: The authors

Future Research Implications and Policy Recommendations

All the studies reviewed in this paper were either quantitative which were based on empirical analysis of samples in different countries, or were review studies.

This literature revealed that the attitude, perceived behavioural control, environmental consciousness of consumers, environmental ethics and beliefs of consumers have a significant positive association with their intention to use green products in different parts of the world. Factors like trust, concern for the environment, attitude to environment, eco-literacy were the most studied determinants of green consumption. Less frequently analyzed were quality, product attributes, particular promotional activities and store attributes.

It is necessary for policy makers and manufacturers to understand various drivers that act as antecedents and drivers of green consumption behaviours. The positive influence of environmental concern on GPI and GPB should be exploited to promote green consumption. The consumers compare their economic benefits (or cost) to the value they add to the environment. This factor called 'perceived value' of product, if positive, is an important decider for the consumers. The studies in future can take up this factor in detailed focus. Product attributes (quality and price differential) have always been important for customer retention and are more important for eco-friendly products especially keeping in mind the consumers who are on the fence – they are ready to shift to these products. In India, green consumerism is at nascent stage and there is a little availability of green products in comparison to other Asian markets and developed countries of the west. Consequently, there is a need to encourage green consumerism among the people through 'environmental education' to persuade them to buy environment friendly products (Mostafa, 2007; Lai and Cheng, 2016; Yadav and Pathak, 2016).

The producers and marketers should concentrate on the advertising content to be made available on social media platforms and exploit electronic platforms to highlight the features of their products

Extant literature has made it clear that trust is an important influence on relation between GPI and GPB, and on effectiveness of eco-labels. Trust not only impacts the sustainable consumption directly, it is a strong mediating variable in relationship of factors like EC, ATE, GPA, PCE with GPI and GPB. The focus should therefore, be on building consumers' trust in green products and on the claims of the manufacturers. Efforts need to be made to strengthen this trust.

According to Okan & Yalman (2014), an understanding factors which can transform consumer's attitudes and behaviours, they can be engaged to trigger simple behavioural shifts that enable more sustainable lifestyles and create demand for more sustainable/green products thereby pushing businesses in that direction. This study shall give a direction to future researchers on the important antecedents of sustainable consumption, especially for India where green consumerism it just emerging. It is important to know these determinants before embarking on a policy for promoting green consumption among consumers.

Table 1. Determinants of GPI / GPB Studied in Literature

S.No.	Year	Country	Author/s	Factors (explanatory variables) *
1	2011	Spain	Hartman and Apaolaza-Ibáñez	EC, Advertising, ATE, psychological factors
2	2011	South Korea, Austria	Cho and Kasser	Materialism, emotional benefits ,CE, self-identity, media content , cultural values
3	2012	18 Countries	UNIDO report	EC, EL, ATE, policies, behavioural change and technological progress, trust.
4	2013	Taiwan	Tse ng at al.	quality, consumer expectation, information/ promotion
5	2012	USA	Noblet and Thogersen	EC, attitude, green behaviour, ATG
6	2013	USA	Gleim et al	Availability, awareness, GPA
7	2013	Ireland	Claudy et al..	CE, ATG, consumer values
8	2013	Malaysia	Suki et al.	EC, EL, GPA
9	2014	Germany	Tabi et al	Socio-demographic factors, PCE, price, cognitive factors
10	2014	Danish	daugherg	Eco label, trust
11	2014	Malaysia	Othman & Rahman	SN, perceived dominance and brand personality
12	2014	Brazil	Ritter et al	EC, quality, price, knowledge, social factors, advertising
13	2014	India	Dupont survey	EC, desirability, awareness, environmental knowledge
14	2014	France	Dekhili & Achabou, 2014	Ecolabels and third party certifications
15	2014	India	Nittalla	Recycling , eco-labeling, EL, GPA
16	2014	Portugal, UK, Germany	Paco et al	Affordability and lack of trust; the management of supply chains is deficient; proper incentives, GPI
17	2015	India	Joshi and Rahman	Review study
18	2015	India	Paul et al	EC, ATE, PBC, SN, demographic factors, consumer attitude and perceived behavioural control, subjective norms, demographic factors
19	2015	Turkey	Kabadayi et al	Consumer's guilt, self-monitoring and perceived consumer effectiveness
20	2015	India	Joshi and Rahman	Review study
21	2015	Pakistan	Yasin et al	ATE, EL, ethical values, perceptions and behaviour

22	2015	Germany	Moser	WTP, attitude, personal norms , habits, EC
23	2015	Brazil	Junior et al.	PBC, EC, environment ethics and beliefs
24	2016	India	Prakash and Pathak	EC, packaging, (eco design), WTP, ATE, AGP, PCE, PEK
25	2016	Thailand	Marakanon et el.	Perceived quality, perceived risk and customer trust and loyalty
26	2016	India	Singh and Tripathi	Review study
27	2016	China	Chen and Hung	PBC, environmental consciousness of consumers, environmental ethics and beliefs
28	2016	France	Spielmann	Perceived green product virtue , emotional factors, ethical values of selling, GPI
29	2016	India	Yadav and Pathak	Self-Image, ATE awareness, CE, EL, demographic factors, government initiative.
30	2017	Thailand	Nuttavuthisit and Thøgersen	Trust, environment consciousness
31	2017	India	Shamsi and Siddiqui	Social recognition
32	2017	India	Singh and Verma	Health consciousness, knowledge, SN
33	2017	China	Cai et al	Eco label credibility
34	2017	Austria & Lithuania	Liobikienė et al.	Price, Quality, environmental preference.
35	2017	Brazil	Medeiros and Riberio	Product attributes(design and material), ecolabel, social norms, cultural and ethnicity, ATE.
36	2017	Iran	Rehanna et al	functional value, social value, emotional value, eco labels, certification, perceived risk
37	2017	Philippines	Hsu et al.,	AGP, SN, PBC, price sensitivity, country of origin
38	2018	Italy	Ricci et al	Trust on green products
39	2018	Indonesia	Rizkalla	EC, PCE, PCK, emotional value, epistemic value, social value, functional value
40	2018	Germany	Brach et al 2017	Eco labels, certification , perceived risk
41	2018	Malaysia	Al Mamun et al	EL, ATE, AGP, PBC, ATE, EL and self-efficacy
42	2018	Brazil	Vieira et al	EL, CE, sociodemographic and psychographic characteristics
43	2018	India	Chaudhary and Bisai	EC, subjective norms, WTP, GPA, GPI
44	2018	India	Jaiswal and kant	PCE, CE, AGP, demographic variables
45	2018	Malaysia	Rajadurai et al.,	EC, ATE, EK, EL

46	2018	Different countries	Antonetti and Maklan*	Guilt, pride
47	2018	18 countries	Padila (UNIDO Report)	EC, EL, ATE, policies, behavioural change, technological progress, trust.
48	2018	India	Bhatttiand Negi	EC, store attributes, promotion of public awareness , retail store attributes, environmental outlook , AGP, eco label , recognition of customer advantage, demographic variables product accessibility.
49	2019	Slovenia	Hojnik et al.	GPA, EL, PCE, EC, GPI, Demographic
50	2019	Vietnam	Nhu et al	GPA, EL, demographic factors (age, income, gender)
51	2019	UAE	Razak et al.	Eco-Labeling, GPI, EC, Trust, AGP, perceived Value
52	2019	USA	White et al.,	GPA, EL, demographic factors (age, income, gender)
53	2019	China	Zhang et al.	EC
54	2020	South Korea, USA	van Tonder et al	Cognitive and emotional factors , green attitudes, culture
55	2020	Cambodia	Liao et al	AGP, green customer value, ATE, GPI
56	2020	Lithuania	Piligrimie et al	ATE, perceived responsibility and perceived behavioural efficiency, advertising, CE, social
57	2020	India	Francis and Sarangi	EC, socio graphic factors, economic dimensions
58	2020	China	Zhang and Dong	Review study
59	2020	China	Zhao et al	AGP, propagation of information, govt subsidies.
60	2020	China	Wang et al.	PCE, social trust, psychological well being
61	2020	Portugal	Akehurst et al	EC, Age, literacy, gender, income and psychographic factors
62	2020	Indonesia	Alamsyah	EC, green advertising, green attitude
63	2021	Pakistan	Siyal et al	EC, AGP, brand positioning, PEK
64	2021	Cambodia	Liao et al.	PBC, ATE, perceived value
65	2021	Malaysia	Zaremohzzabieh	SN, environment belief, EK, EC, environment consciousness, PBC, environment belief, subjective norm.
66	2021	India	Gupta Amit	EC, PBC, EL, ATE, subjective norm, concern for health, eco buying attitude

**The factors studied impact GPI and GPB directly, indirectly as mediators or moderators.*
Source: the authors

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