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# Factors influencing customers' green purchasing intention: evidence from developing country

Customers' green purchasing intention

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## Abstract

**Purpose** – The purpose of this study is to examine the contribution of environmental knowledge and environmental sensitivity on the green purchasing intention of Bangladeshi consumers by using an extended theory of planned behavior.

**Design/methodology/approach** – Quantitative research method was used to collect 369 data by using a convenient sampling method. Data was analyzed using partial least square while a structural equation model was applied to measure causal relations among the variables.

**Findings** – The findings of this study demonstrate that subjective norms, attitude toward green products and perceived behavioral control have a positive and significant relationship with green purchasing intention. Moreover, environmental knowledge has also a positive and significant relationship with environmental sensitivity. There is a positive and significant association between environmental sensitivity and attitude toward green products, while the relationship between environmental knowledge and attitude toward green products was found insignificant. Quality of green products does not moderate the relationship between attitude toward green products and green purchasing intention. The results further indicate that environmental sensitivity mediates the relationship between environmental knowledge and attitude toward green products. Attitude toward green products also mediates the relationship between environmental sensitivity and green purchasing intention. At the same time, environmental sensitivity and attitude toward green products jointly mediate the relationship between environmental knowledge and green purchasing intention. However, attitude toward green products does not mediate the relationship between environmental knowledge and green purchasing intention.

**Originality/value** – This study may be used to guide managers who are planning to launch green products in the Bangladeshi market for choosing their target markets and a great insight for the government to produce environmentally friendly consumption policy for citizens and environmental conservation.

**Keywords** Green purchasing intention, Environmental knowledge, Environmental sensitivity, Bangladeshi market, Environmental conservations

**Paper type** Research paper



## 1. Introduction

Socioeconomic development and better living standards are the first and foremost priorities for each country on earth nowadays. Therefore, the link among technological advancement,

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mass production, unsustainable consumption behavior and over-usage of unsustainable resources cannot be refused anymore (Chekima *et al.*, 2016; Wang *et al.*, 2019a). Overconsumption and overproduction are commonly attributed as one of the major reasons for environmental degradation. On an average between 30% and 40% of environmental pollution is contributed by the unsustainable consumption behavior of consumers (Grunert, 1993; Chen and Chai, 2010). Various types of waste are generally responsible for the rapid rise of environmental pollution. Solid waste is in the dominant position and increasing faster than other types of waste in line with urbanization and population growth (Hoornweg *et al.*, 2013), which also contributes to the rise of government's spending on waste management each year. The global waste management cost was approximately \$205bn per year before 2011, which is forecasted to increase to \$375bn by 2025 (Chekima *et al.*, 2016). Therefore, engaging people with sustainable consumption is the main obstacle of future environmental challenges (Hojnik *et al.*, 2019). Greendex Survey (2008) has explained that people living in developing countries are more sensitive toward their environment than those in developed countries, as the repercussions are far-more extensive (six out of ten people). Hence, citizens of developing countries are more positive and cautious about environmental pollution, which stimulates their interest toward sustainable consumption behavior (Shukla, 2019). However, maintaining quality and safety standards for the production of environmentally safe products, companies may need higher production cost than conventional products that leads to higher selling cost (Zhang *et al.*, 2018). From the study conducted by Landor Associate (2011) to justify the demand for green products in developing countries (Brazil, China and India) and developed countries (Australia, France, Germany, the UK and the USA), it has been found that a higher percentage of people from developing nations are ready to use and willing to spend 10% more to get green products. As a developing country, Bangladesh is also suffering from extreme environmental pollution. Waste production from various types of materials is one of the main reasons for environmental pollution in Bangladesh. Similar to other developing nations, Bangladeshi people are also concern and empathetic toward the health of the environment. Marketers require more information about factors associated with consumers' sustainable behavioral intention when they intend to purchase the green version of conventional goods in Bangladesh. Hence, there is a surge of research on green products and their consumer demand by scholars and marketing firms nowadays (Wang *et al.*, 2019a). Although there were many studies which were conducted on green purchasing intention across the world (Pop *et al.*, 2020; HO *et al.*, 2020; Costa *et al.*, 2021; Zaremohzzabieh *et al.*, 2021; Kumar *et al.*, 2021), very few studies have justified how environmental knowledge, environmental sensitivity, green products' quality and attitudes toward environmentally friendly products affect consumers' green purchasing intention (Cheng and Wu, 2015), especially, in the Bangladeshi perspective. Therefore, this research will study the gap by exploring the insights of mediating effect of environmental sensitivity and attitude toward green products and moderating effect of green products' quality by using extended theory of planned behavior (ETPB) model.

Knowledge enlightens the mind with clear consciousness, while environmental knowledge helps to understand the reasons for positive and negative effects on the environment (Huang and Shih, 2009). Hence, those who are environmentally knowledgeable, are generally expected to be sensitive (concerned, empathetic and extremely careful) toward the safety of the environment (Cheng and Wu, 2015). This may stimulate a positive attitude for products which are produced by environmentally supported raw materials and green technologies, resulting in rising intention to purchase green products. Therefore, this research intends to answer two questions:

*RQ1.* How does environmental sensitivity increase from environmental knowledge in adapting positive attitudes toward green products and growing green purchasing intention?

*RQ2.* What is the role of quality of green products on rising green purchasing intention?

Exploration of mediating effects of environmental sensitivity and attitude toward green products to justify the association with the green purchasing intention will answer the above questions. Moreover, the moderating effect of product quality will also be analyzed to observe the influence on the green purchasing intention of Bangladeshi customers. Thus, determining whether there is an increase of behavioral intention due to positive attitude toward buying environmentally friendly products by Bangladeshi customers (Bhutto *et al.*, 2019) when product quality is maintained in accordance with conventional products. This study will have three types of implications. First, researchers will be provided with the required information about environmentally educated customers' behavioral intentions regarding environmentally friendly products for future theoretical implications. Second, this research will highlight crucial insights in front of policymakers about customers' sustainable behavioral intention toward green products and their awareness and empathy for the environment, which will help the government to produce environmentally friendly consumption policy for their citizens. Finally, this research will help marketers to identify their target market for the green version of their conventional products in developing countries' market, especially in Bangladesh, finding salient variables to emphasize in advertising or promotion and highlight the awareness and empathy an organization has for the environment when they produce and serve the products to customers.

## 2. Literature review

### 2.1 Green products

Green products are goods which are produced by Clean Technologies or Green Technologies, which are also known as environmentally friendly technologies. They are beneficial for both consumers and the environment by decreasing their contribution on environmental pollution while assisting to conserve the natural resources by fastening recycling processes, ensuring sustainable growth and keeping the environment healthy for human beings (Vazifehdoust *et al.*, 2013). Defining a green product with a unique definition is quite complex as a whole (Zhao and Chen, 2019). However, in line with this study's purpose, the word green indicates products from an environmental perspective. According to Zhao and Chen (2019), a product is recognized as green product when the product has following three attributes:

- (1) completely harmless for environment and remarkably energy saving (Azevedo *et al.*, 2011);
- (2) less or zero environmental damage after discarding (Kivimaa and Mickwitz, 2006); and
- (3) international environmental protection requirement is met in terms of production process and maintaining supply chain management (Sabaghi *et al.*, 2016).

Chen and Chai (2010) mentioned that green products are those that embrace tactics such as recycling or using recycled contents, lowering packaging or using fewer toxic compounds to help the environment. Fraccascia *et al.* (2018) described that green product are generally produced from materials which are responsible for less negative impact on the environment and are easy to dispose and recycle. Sdrolia and Zarotiadis (2019) mentioned that products,

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which are either tangible or intangible, are kept at a tolerable level of negative influence on the environment during production, and after usage, are supported by environmentally friendly technologies are known as green products. Since green products support the concept of minimum pollution, a healthy environment and human health security, the popularity of green products is constantly increasing over time (Nuttavuthisit and Thøgersen, 2017). For instance, organic food has received overwhelming popularity among those who are health conscious and intend to shift from conventional foods to environmentally safe foods (Sazvar *et al.*, 2018). Correspondingly, electric vehicles that exert less carbon dioxide as well as decrease energy consumption are produced with the same features as traditional vehicles (Zhang *et al.*, 2015). Thereby, green products are progressively establishing their market position in the developing world.

### *2.2 Overview of previous studies*

Previously, many researchers studied on green purchasing intention of consumers from various perspective to develop their understanding (Asif *et al.*, 2018; Shukla, 2019; Lavuri, 2022). They used different various to investigate consumers' green purchasing intention, which have been summarized in this study, and developed structural equation model (SEM) to investigate the behavioral intention of consumers in terms of purchasing green products in developing countries. Zaremohzzabieh *et al.* (2021) found that attitude, subjective norm, attitude and perceived behavioral control (PBC) have an influence on green purchasing intention. While Wang (2022) found an association of environmental knowledge and environmental concern with attitude toward green hotel selection (Appendix 2). Most of them used the theory of planned behavior (TPB) to investigate green purchasing intention. Most of the studies were conducted in different countries such as China, Turkey, India and Malaysia.

### *2.3 Extended theory of planned behavior*

Rivis *et al.* (2009, p. 2985) proposed that "the TPB is probably the most influential theory in the prediction of social and health behaviors." TPB is also one of the most influential and widely used theories in the field of ecology and consumer behavioral intention (Hsu *et al.*, 2017; Shukla, 2019). TPB has a well-structured empirical basis to predict consumer's intention and behavior and has been used frequently to explore green products consumption behavior (Hassan *et al.*, 2018; Shukla, 2019). According to Ajzen (1985), the behavioral intention of an individual is affected by subjective norm, attitude and PBC, which leads to intended behavior, then actual behavior. Attitude indicates an individual's belief about the consequences for any specific behavior (Ajzen and Fishbein, 1973). Manaktola and Jauhari (2007) described that when a person bears a positive attitude or belief about a specific behavior, his intention grows to perform the behavior. While subjective norm indicates the social pressure individuals face to follow or avoid any task (Ajzen and Fishbein, 1973). Finally, PBC justifies how much the behavior is under the individual's control to perform (Ajzen, 1991). In this study, we will add environmental knowledge, environmental sensitivity and green products' quality in TPB to explore green purchasing intention of consumers with existing variables (subjective norm, attitude and PBC) and observe the relationship with green purchasing intention.

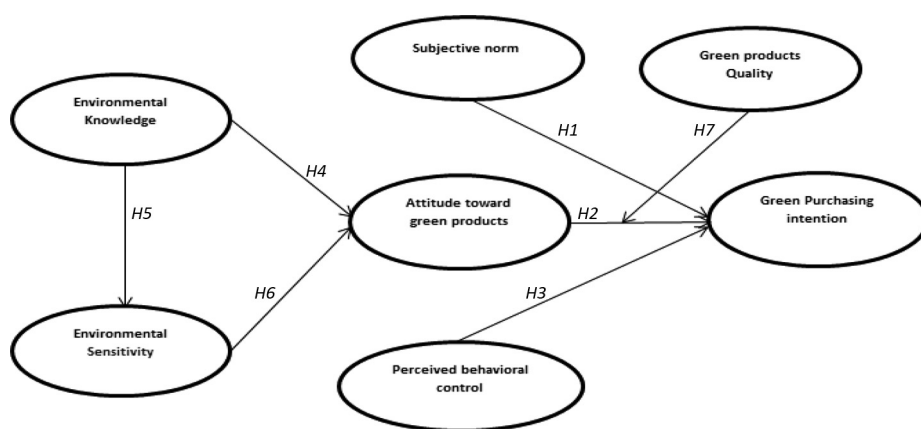
### *2.4 Green purchasing intention*

Green products are increasing in popularity due to their outstanding characteristics, which are friendly toward ecology, environment and human health as compared to traditional products such as green cars or hybrid cars, recycled products, energy-efficient electronics

and organic tea or other foods (Al-Gasawneh and Al-Adamat, 2020). Speer (2011) described green products are products which are less responsible for environmental pollution, more resource efficient and easily recyclable. However, purchasing intention is a mental determination or decision to buy products or services which can fulfill individual needs or wants through the customer's personal experience and data analysis (Tarabieh, 2021; Wong *et al.*, 2020). In turn, green purchasing intention refers to individual desire to choose products that have eco-friendly features which adjust to the environment without harming the ecology (Rahim *et al.*, 2016). Aman *et al.* (2012) has explained that when people show interest in green products by willing to pay a higher price and, inherently, the attitude of spreading positive word of mouth, is regarded as green purchasing intention. Therefore, knowledge on green purchasing intention is imperative to predict future purchasing behavior of consumers in a growing market for green products such as Bangladesh. Figure 1 illustrates the conceptual model for this study.

### 2.5 Attitude toward green products

People are aware of the vulnerable condition of the environment and the gradual degradation of environmental sustainability due to overgrowing demand for products and services on par with rising population, which results in excessive utilization of energy and nonrenewable resources, harming the environment and soliciting catastrophic natural disasters (Vazifehdoust *et al.*, 2013). Attitude is the determinant to predict the future intention of behavior. Therefore, attitude and intention are regarded as two interrelated constructs which need to be included under research (Follows and Jobber, 2000). Attitude can differ among individuals based on time, place, events and situation. Verma and Chandra (2018) identified that a positive environmental attitude toward green hotels had a significant influence on the intention to visit green hotels. Singh and Verma (2017) discovered that the environmentally friendly attitude of Indian consumers had a significant relationship with green purchasing intention of environmentally friendly foods like organic foods. Trivedi *et al.* (2018) and Zaremohzzabieh *et al.* (2021) also found that consumers' attitude toward green packaging is significantly related with the green purchasing intention. Xu (2019) had also found that there was a strong relationship between the positive environmentally friendly attitude of US citizens and the



**Note:** This conceptual model is authors' own creation based on Theory of Planned Behavior (Ajzen and Fishbein, 1973)

**Figure 1.**  
Conceptual model

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purchasing intention of environmentally friendly cars. Many research studies were conducted on various types of products on green marketing, and many of them found similar results (Zsóka *et al.*, 2013; Chekima *et al.*, 2016). All the research and their results support the common view that those with a supportive attitude toward green products may have intention to purchase environmentally safe products. Thereby, we can produce the hypothesis:

- H1.* Attitude toward green products is positively and significantly associated with green purchasing intention.

### *2.6 Subjective norm*

Subjective norm is measured by the intensity of social pressure that individuals may face regarding specific behaviors from society. Therefore, subjective norm means perceived social pressure, which indicates whether a person will perform a particular behavior or not (Ajzen, 1991; Han, 2010). Wang *et al.* (2019b) explained when any decision is influenced by any specific opinion from close individuals is considered a subjective norm. Hsu *et al.* (2017) and Pang *et al.* (2021) found that subjective norms had a positive influence on the purchasing intention of green skincare products. Both research by Maichum *et al.* (2017) and Sreen *et al.* (2018) also found that the subjective norm toward green products is significantly associated with green purchasing intention. Correspondingly, many other researchers observed the same result, whereby the subjective norm is an important indicator to predict environmentally friendly purchasing intention of consumers for different kinds of green products (Albayrak *et al.*, 2013; Yadav and Pathak, 2016). From all the research above, it represents that there is a strong relationship between attitude and green purchasing intention. Thereby, we can produce the hypothesis:

- H2.* Subjective norms are positively and significantly associated with green purchasing intention.

### *2.7 Perceived behavioral control*

PBC is regarded as one of the most crucial variables to predict green purchasing intention (Jaiswal and Kant, 2018). PBC means the ability of individuals to perform any task in accordance with their belief as well as perception (Mishal *et al.*, 2017; Sreen *et al.*, 2018). It also indicates how much control an individual (easy or difficult) has over performing a specific work (Ajzen, 1991). The influence of PBC is strong on purchasing intention and can change human behavior tremendously, according to Wiederhold and Martinez (2018). There were many studies which were conducted previously to find out the relationship between PBC and purchasing intention of environmentally friendly products (Molinillo *et al.*, 2020). PBC was used to observe the relationship with purchasing intention in organic products/foods (Moser, 2015), green hotels (Asif *et al.*, 2018; Lavuri and Susandy, 2020). In previous research, PBC was also segregated into two categories, internal PBC, which indicates individual's internal capabilities like skill, planning, confidence and ability to enact any behavior (Armitage and Conner, 1999) and external PBC, which represents the limitations due to external environment such as time and money on executing any planned behavior (Kidwell and Jewell, 2003). However, in terms of green products, consumers face enormous barriers when they intend to buy those products as it is expensive and, in many circumstances, unavailable (Barbarossa and Pastore, 2015). Some other studies have also confirmed that time, high expenditure, unavailable information about green products and product availability in the market are the limitations individuals face when their intention

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risers to purchase green products (Barbarossa and Pelsmacker, 2016; Sreen *et al.*, 2018). However, customers are more adamant to overcome those limitations when their intention to purchase green products is high. Since PBC was found to be significantly related with green purchasing intention in previous studies on various geographic locations (Nam *et al.*, 2017; Bhutto, 2019), this study will test the relationship in terms of Bangladeshi consumers. Therefore, we can produce the hypothesis:

*H3.* Perceived behavioral control is positively and significantly associated with green purchasing intention.

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### *2.8 Environmental knowledge*

Having proper knowledge on the surrounding environment and its ecosystems, along with facts, concepts and their relationship with each other are generally known as environmental knowledge (Fryxell and Lo, 2003). Haron *et al.* (2005) explained that environmental knowledge means the ability of an individual to analyze environmental-related information on understanding the ecosystem and its effects on social lives. However, knowledge on the environment is crucial for shaping individual attitudes and intentions about future consumption behavior (Vermeir and Verbeke, 2006). When customers acquire significant knowledge about the environment and green products by gathering information from their real-life experiences, their positive attitude toward green products grows (Vazifehdoust *et al.*, 2013). Environmental knowledge is usually measured based on two types of knowledge: subjective and objective knowledge (Tan, 2011). Subjective knowledge refers to individual knowledge from self-assessment about the environmental phenomenon and its effects on human and wildlife, which is also called abstract knowledge about the environmental condition, while objective knowledge is knowledge based on actual information from personal observation or from concrete evidence (Tan, 2011). However, subjective knowledge regarding environmental issues is more significant than objective knowledge to measure consumers' attitude toward green products (Tan, 2011; Jaiswal and Kant, 2018). Researchers have found a significant direct relationship between environmental knowledge and attitude toward green products (Yadav and Pathak, 2016; Kumar *et al.*, 2017; Jaiswal and Kant, 2018; Lavuri, 2022). Lavuri and Susandy (2020) also discovered that environmental knowledge and environmental attitude are significantly associated, indicating that the stronger the environmental knowledge, the stronger the tendency for environmentally friendly performance. At the same time, environmentally knowledgeable people are found to be sensitive about environment well-being (Cheng and Wu, 2015). However, environmental sensitivity comes from empathy and concern toward the environment. Thus, when people think of the natural environment from the perspective of empathy, care and concern, they are then regarded to be sensitive toward the environment (Peterson, 1982). Sensitivity toward the environment can also be observed from two perspectives such as favorability for the environment and intention to maintain a committed relationship with nature. In these circumstances, individuals who are more knowledgeable about environment-related information are expected to be more sensitive toward the environment (Lyons and Breakwell, 1994). Huang and Shih (2009) explained that human beings with deep environmental knowledge are empathetic and protective toward the environment. Sivek and Hungerford (1989, 1990) added that environmental knowledge is rigorous enough to enhance the sensitivity of people to the environment. Hence, it is indicated that consumers who are well-educated with environmental knowledge are sensitive toward the environment and have a positive attitude toward environmentally friendly products. Therefore, we can produce the hypotheses:



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- H4. Environmental knowledge is positively and significantly associated with attitude toward green products.
- H5. Environmental knowledge is positively and significantly associated with environmental sensitivity.

### *2.9 Environmental sensitivity*

Environmental sensitivity demonstrates an internal empathetic reaction, concern and care of human beings toward environmental health, as well as an intention to revitalize the damaged ecologically habitat and initiate to protect the existent ecological balance (Sun and Gao, 2015). Candrea and Hertanu (2015) viewed that those who are responsible, protective, kindhearted and emotionally attached with the environment and ecosystem are generally considered as highly environmentally sensitive. However, Carlson *et al.* (2017) explained that environmentally sensitive individuals always remain respectful toward the environment and prefer to investigate environmental health so that they can take appropriate actions to protect the environment from degradation. Thus, environmental sensitivity is the overall mental and emotional association of individuals with the environment (Kunz *et al.*, 2016). When individuals make purchasing decisions of any product, they are aware of the impact toward environmental pollution. This awareness helps to grow a positive attitude toward products that contribute to less pollution on the environment. In these circumstances, green products open a new dimension in reducing environmental damage. Therefore, it is observed that those who are more sensitive to environmental health bear a positive attitude toward green products, as they are always produced from environmentally friendly raw materials and technology. Moreover, these products are easily recyclable, compostable and nonharmful for the soil and human health. An environmentally sensitive individual has a positive attitude toward green products due to their deep gratitude as well as concern regarding environmental health (Hidalgo and Hernandez, 2001; Manzo, 2005; Bala *et al.*, 2022). Cheng and Wu (2015) identified the relationship between a positive attitude toward a place for visit and environmental sensitivity. Liu *et al.* (2019) also confirmed that the association between environmental sensitivity and the attitude toward recycling intention are statistically significant. Thus, consumers who are environmentally sensitive have a more positive attitude toward environmentally supported products. Therefore, we can produce the hypothesis:

- H6. Environmental sensitivity is positively and significantly associated with attitude toward green products.

### *2.10 Product quality as a moderator*

Baron and Kenny (1986) explained that a moderator influences the relationship between dependent variable and independent variables through the effect of its direction and strength. Therefore, products quality as a moderator in this research will be used to examine the association between dependent variable and independent variables in terms of strength. Kotler and Armstrong (2006) explained that quality indicates the characteristics of a product which plays a significant role to meet the demands or needs. Kotler and Armstrong (2006) have divided the quality of products into eight dimensions which customers prefer to evaluate when purchasing intentions are made, such as performance, feature, reliability, conformity, aesthetics, serviceability and perceived quality determinations. Meanwhile, Heizer and Render (2001) explained products quality from the company's perspective in three types of influences such as

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cost and market share, company's reputation and product reliability. Quality of the products is also important when customers consider environmentally friendly products to purchase. Hence, product quality is one of the significant and most highlighted variables in green marketing (Pujari, 2006; Yi-Chan and Tsai, 2007). There are many reasons to focus on product quality in green marketing (Tarabieh, 2018). Primarily, quality of green products may be responsible for manipulating the level of pollution on the environment and customers' satisfaction when they enjoy the products (De Bakker *et al.*, 2002). Moreover, green products' quality contributes to ensure maximization of utilization of resources (durable) and minimization of negative effects on environment during production (minimum waste and highly useful for environment like organic food waste), and after the use of those products, it results in low waste generation in the environment (Tarabieh, 2018). Since few studies have been conducted on green products' quality from various perspectives ("green," "eco" and sustainable), clarification of its definition has not been defined yet by researchers (Baumann *et al.*, 2002). Research on moderating the effect of products' quality on green purchasing intention is very rare. Although previous studies proved that quality matters for growing a positive attitude toward products or green products and making green products purchasing decisions with direct (Tarabieh, 2018; Walia *et al.*, 2020) and indirect effect (Li *et al.*, 2011). From these observations, it is noticed that the strength and weakness of green products' quality can influence the relationship between attitude toward green products and green purchasing intention. Therefore, we can produce the hypothesis:

- H7.* Product quality will significantly moderate the influence of attitude toward green products on green purchasing intention.

### *2.11 Mediating effect*

Since environmental pollution is worsening, and there is constant unplanned production and consumption, green products may only mitigate the intensity of this pollution by its environmentally friendly production and recycling nature. However, improvements need to be done to understand the insight of consumer intention regarding green products. Many research have been done on green marketing with different variables, through direct and indirect effects, to examine consumers' behavioral intention toward green products. Previous researchers have highlighted the association between environmental concern and environmental attitude (Yadav and Pathak, 2016), environmental knowledge and environmental attitude (Jaiswal and Kant, 2018), environmental knowledge and environmental sensitivity (Cheng and Wu, 2015), environmental sensitivity and attitude (Cheng and Wu, 2015) and attitude and purchasing intentions (Pop *et al.*, 2020). However, very few researchers have worked on environmental attitude and environmental sensitivity as a mediator in green marketing research. Exploring green purchasing intentions in this perspective is very rare. Therefore, we will examine those mediators to find the indirect relationship between dependent and independent variables. However, no work has been done on the Bangladeshi perspective to investigate the mediating effects of attitude toward green products on environmental sensitivity, environmental knowledge and green purchasing intention. Therefore, following hypotheses can be formulated:

- H8.* Attitude toward green products mediates the relationship between environmental knowledge and green purchasing intention.
- H9.* Attitude toward green products mediates the relationship between environmental sensitivity and green purchasing intention.

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- H10.* Environmental sensitivity mediates the relationship between environmental knowledge and attitude toward green products.
- H11.* Environmental sensitivity and attitude toward green products mediate the relationship between environmental knowledge and purchasing intention.

#### *2.11.1 Conceptual model*

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### **3. Research methodology**

#### *3.1 Participants and sample design*

Devastating environmental consequences due to environmental pollution is a dangerous reality across the world. Since Bangladesh is a developing and densely populated country, Bangladeshis are the targeted audience for data collection. People of Bangladesh are extremely distraught over their unprecedented suffering from pollution. Therefore, Bangladesh is an ideal market to collect data for potentiality of green products. This study was conducted by self-administered questionnaires as it was both time and cost-efficient (Russell, 2010; Isa *et al.*, 2021). This technique simplified not only coding the data but also the analysis process (Kaiser, 2011). The prepared questionnaires were sent to the respondents through various mediums including e-mail, WhatsApp and different social media (Facebook, Instagram, etc.) and responses were received on the same platform (Isa *et al.*, 2021). Etikan *et al.* (2016) found that marketers use convenient sampling more frequently to collect data to investigate the intention of customers toward their products. Scholtz and Korsten (2016) found that in psychology, convenience sampling is the most often used sampling technique. Since this study has invested behavioral intention of consumers about green products, convenient sampling is a better representative of this study. Moreover, convenient sampling is associated with purposive sampling methods, which is another popular nonprobability sampling method since both choose participants with having knowledge about the topic researchers are investigating (Valerio *et al.*, 2016). Although there are many arguments on the reliability of the convenience sampling method, previous research has proved when a sample is chosen from urban educated people, the results of studies remain quite reliable (Kautish *et al.*, 2019). Hence, the convenience sampling method for various cities of Bangladesh was chosen for appropriate representation of the target population in this study (Ahmad and Zhang, 2020). Therefore, in this study, the targeted respondents are both educated and urban residences of Bangladesh who are properly informed of green products. Data are collected from three major cities of Bangladesh such as Dhaka ( $n = 152$ ), Chittagong ( $n = 135$ ) and Sylhet ( $n = 104$ ).

There are two parts of the questionnaire which are demographic and construct variables. Demographic variables include age, gender, education, household income and work status (Table 1). Whereas all constructs were adopted in the second part of the questionnaire (Appendix 1). Respondents were asked on their environmental knowledge, environmental sensitivity, attitudes toward green products and purchasing intention of green products through the questionnaire. The respondents are acquired through graduate students studying in different universities and their relatives working in different organizations for this study in three cities (Dhaka, Chittagong and Sylhet) of Bangladesh to collect data. Respondents' data are collected through voluntary participation. A duration of approximately two months is allocated to gather data for the study from the beginning of July to the end of August. Overall, 381 responses were obtained. After the selection of useable data, only 369 responses were viable to be analyzed. In total, 12 responses were found to be incomplete, disqualified from the analysis.

Total no. of respondents ( <i>n</i> = 369)	%	Frequency	Customers' green purchasing intention
<i>Age</i>			
17–25	8.4	31	
26–35	46.4	171	
36–45	42.2	156	
Above 45	3	11	
<i>Gender</i>			
Male	82.1	303	
Female	17.9	66	
<i>Education level</i>			
Secondary	0	0.00	
Diploma	0.5	2	
Undergraduate	10.3	38	
Postgraduate	89.2	329	
<i>Household income</i>			
No income	5.9	22	
Less than BDT 30,000	9.9	37	
BDT 30,000–40,000	10.4	38	
BDT 40,000–50,000	12.3	45	
BDT 50,000–60,000	18.7	69	
Above BDT 70,000	42.9	158	
<i>Work status</i>			
Unemployed	14.3	53	
Part-time work	3.2	12	
Full-time work	79.1	291	
Own business	1.6	6	
Other	1.9	7	

**Note:** BDT 84 = US\$1  
**Source:** This table was created by authors based on the analysis of collected data

**Table 1.**  
 Respondents' demographic profile for green products

Demographically, the data was collected from 303 males and 66 females who were mostly between 26 and 45 years old (Table 1), approximately 89% (327 participants). Almost 89.2% of the participants completed a postgraduate degree (329 respondents). The larger percentage of the participants earn above BDT 70,000 (US\$1 = BDT 84), which is almost 43% (158 respondents) while the number of the participants who were engaged in full-time work were the largest in percentage about 79% (291 respondents). In total, 24 items were selected for this study, a five-point likert scale from strongly disagree (1) to strongly agree (5). The questionnaire was prepared based on previous studies. The questionnaire is only available in English, which is sufficient as the participants are at least graduate degree holders (99.5%). Hence, no complexity was reported when answering the questionnaire. Examining the differences of the data collected from three different cities of Bangladesh, a chi-square test was conducted. However, no noticeable difference was reported across the samples. Moreover, a nonresponse bias test was also conducted to find out the difference among early respondents and late respondents (first two weeks and last two weeks) (Armstrong and Overton, 1977). Thus, *t*-test was selected and run, which indicates there is no significant difference observed among early respondents and late respondents. Therefore, it can be clarified that nonresponse bias is no longer a problem for this research. For testing both the measurement model and structural model, SmartPLS was assigned in this study.

### 3.2 Measures

Multi-item scales were adapted in this study, which was taken from previous studies to measure the chosen constructs. Furthermore, a five-point Likert scale was also used to measure all the constructs. Overall, 24 items were selected to measure green purchasing intention through seven variables (Appendix 1), where three items were adapted from Jaiswal and Kant (2018) to measure green purchasing intention variable, four items were also modified to measure environmental sensitivity and four items were adapted for environmental knowledge. Meanwhile three items were adapted from Akturan (2020) for green product quality. Four items for PBC and three items for subjective norms were adapted from Salem and Salem (2018). Three items were modified to measure attitude toward green products from Jaiswal and Kant (2018) and Cheah *et al.* (2020). Furthermore, all the items fulfilled the minimum requirement of a factor loading less than 0.5 according to Kline (2005).

## 4. Results

To test the theoretical model, structural equation modeling (SmartPLS-v3) was used. PLS, as a second-generation technique, provides many advantages for measuring covariance-based SEMs. Nonnormally distributed data can be used to measure constructs through PLS. It can also manage complex relationships among constructs and is also able to predict main contributed constructs from the outcome constructs (Hair *et al.*, 2012). This study has used SEM to demonstrate the relationship between the dependent and independent variables. Hair *et al.* (2021) found that PLS-SEM or partial least squares structural equation modeling is now the accepted method for examining intricate interactions between observable and latent variables. Ringle *et al.* (2015) explained that Smart PLS is an effective tool to analyze and predict SEM and the relationship between variables in the structural model. Moreover, to measure consumer behavior, SEM is more suitable to demonstrate relationship between variables and their effects on the purchasing decision-making process. Hence, SmartPLS is a suitable tool for analyzing the SEM model and the relationships between independent and dependent variables in this study.

### 4.1 Measurement model

For measuring the reliability and validity of this study, all the measurement scales from previous studies are adopted so that the strength and quality of this study can be ensured. Convergent and discriminant validities were measured to examine the measurement model. Convergent validity was observed on four measures (Chin, 1998) whereby factor loading must be 0.7 or above, composite reliability of 0.7 or above, Cronbach's alpha of 0.7 or higher and average variance extracted of 0.5 or above. The model indicated enough convergent validity from all four dimensions (Table 2). Discriminant validity is obtained from the heterotrait–monotrait ratio inference method, an approach which was recommended by Henseler *et al.* (2015) to measure variance-based SEM. The outcomes of this measurement clearly demonstrate that all the relations between constructs fall within  $-1 < HTMT \text{ inference} > 1$  (Table 3). This provides clear evidence that each of the variables is different from all other variables. Hence, the model has a significant discriminant validity and reliability and validity are confirmed.

### 4.2 Structural model

Figure 2 demonstrates the results of the structural model by construct reliability and validity test. This structural model shows the descriptive power as well as significant and insignificant path coefficients. To acquire the path coefficient of the structural model, a bootstrapping facility was run to observe statistical significance of path coefficients (Hair *et al.*, 2012). PLS bootstrapping by using 2,000 bootstraps to test hypothesized relationships

Constructs	Items	Loading	Cronbach alpha	Rho_A	Composite reliability	Average variance extracted	Customers' green purchasing intention
Green purchasing intention	GPI1	0.971	0.956	0.959	0.971	0.919	
	GPI2	0.952					
	GPI3	0.952					
Attitude toward green product	ATGP1	0.980	0.968	0.969	0.979	0.940	
	ATGP2	0.961					
	ATGP3	0.967					
Subjective norms	SN1	0.904	0.904	0.911	0.940	0.839	
	SN2	0.938					
	SN3	0.905					
Perceived behavior control	PBC1	0.919	0.919	0.952	0.942	0.801	
	PBC2	0.911					
	PBC3	0.868					
	PBC4	0.881					
Environmental knowledge	ENK1	0.893	0.917	0.918	0.942	0.802	
	ENK2	0.909					
	ENK3	0.908					
	ENK4	0.870					
Environmental sensitivity	ENS1	0.918	0.940	0.941	0.957	0.847	
	ENS2	0.948					
	ENS3	0.922					
	ENS4	0.893					
Green product quality	GPQ1	0.910	0.807	0.943	0.880	0.710	
	GPQ2	0.819					
	GPQ3	0.794					

**Source:** This table was created by authors based on the analysis of collected data

**Table 2.**  
Convergent validity

Construct	ATGP	ENK	ENS	GPI	GPQ	PBC
ATGP						
ENK	0.697					
ENS	0.892	0.845				
GPI	0.810	0.420	0.608			
GPQ	0.089	0.144	0.153	0.077		
PBC	0.210	0.123	0.177	0.258	0.061	
SN	0.751	0.443	0.638	0.680	0.069	0.084

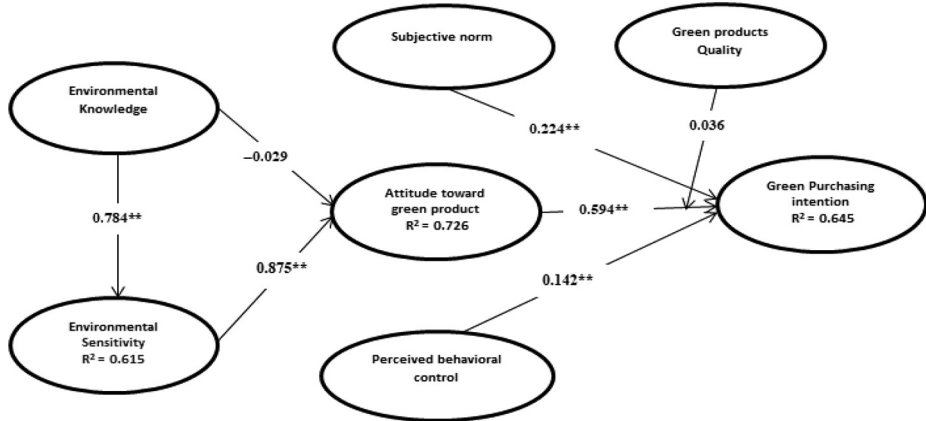
**Notes:** ATGP = attitude toward green products; ENK = environmental knowledge; ENS = environmental sensitivity; GPI = green purchasing intention; GPQ = Green product quality; PBC = perceived behavioral control; SN = Subjective norm; HTMT = heterotrait-monotrait ratio

**Source:** This table was created by authors based on the analysis of collected data

**Table 3.**  
Discriminant validity (HTMT)

revealed that environmental sensitivity, attitude toward green products and green purchasing intention can be explained by 61.5%, 72.6% and 64.5%, respectively, with their respective exogenous variables.

4.2.1 *Direct effects.* Table 4 demonstrates the results of hypothesized relationships between constructs, where subjective norms are found to have a significant and positive direct relation with green purchasing intention ( $\beta = 0.224$ ,  $p < 0.05$ ) meaning *H1* is



**Figure 2.**  
Conceptual model  
results ( $p^{**} < 0.05$ )

**Source:** This conceptual model results are Authors' own creation based on PSL-SEM analysis

supported. Attitude toward green products also has a direct positive significant relationship with green purchasing intention ( $\beta = 0.594, p < 0.05$ ), indicating  $H2$  is also supported. PBC is found to have a direct significant and positive influence on green purchasing intention ( $\beta = 0.142, p < 0.05$ ) indicating  $H3$  is accepted. However, environmental knowledge does not show any direct significant relationship with attitude toward green products ( $\beta = -0.029, p > 0.05$ ); hence,  $H4$  is not supported. While environmental knowledge has direct as well as positive significant association with environmental sensitivity ( $\beta = 0.784, p < 0.05$ ), indicating  $H5$  is accepted. Table 4 also shows that environmental sensitivity has a significantly positive but direct impact on the attitude toward green products ( $\beta = 0.875, p < 0.05$ ), signifying  $H6$  is supported.

**4.2.2 Moderating effects.** According to Table 4, it is observed that green products' quality does not moderate the relationship between attitude toward green products and green purchasing intention ( $\beta = 0.036, p > 0.05$ ), signifying  $H7$  is not accepted statistically.

**4.2.3 Indirect effects.** Table 4 also reveals indirect effects or mediating effects between variables. Attitude toward green products does not mediate the relationship between environmental knowledge and green purchasing intention ( $\beta = -0.017, p > 0.05$ ). Thereby,  $H8$  is not accepted. However, attitude toward green products mediates the relationship between environmental sensitivity and green purchasing intention ( $\beta = 0.520, p < 0.05$ ) indicating  $H9$  is supported. On the other hand, environmental sensitivity positively and significantly mediates the relationship between environmental knowledge and attitude toward green products ( $\beta = 0.686, p < 0.05$ ). Thus,  $H10$  is statistically supported. Environmental sensitivity and attitude toward green products jointly mediate the relationship between environmental knowledge and green purchasing intention ( $\beta = 0.408, p < 0.05$ ), supporting  $H11$ .

## 5. Discussion

The main purpose of this study is to discover pro-environmental behavioral intentions of consumers regarding environmentally friendly products. Though previous researchers worked on pro-environmental behavioral intention with various types of products and other affiliated factors (Pop *et al.*, 2020; Ho *et al.*, 2020; Costa *et al.*, 2021; Kumar *et al.*, 2021), no

Relationship between constructs	$\beta$	Sample mean (M)	Standard deviation (STDEV)	T-statistics (O/STDEV)	p-values	Confidence interval		Results
						5%	95%	
SN->GPI	0.224	0.224	0.081	2.768	0.003**	0.090	0.360	Supported
ATGP->GPI	0.594	0.593	0.081	7.327	0.000**	0.453	0.725	Supported
PBC->GPI	0.142	0.140	0.043	3.322	0.000**	0.069	0.210	Supported
ENK->ATGP	-0.029	-0.029	0.042	0.698	0.243	-0.099	0.039	Not supported
ENK->ENS	0.784	0.785	0.025	31.383	0.000**	0.742	0.822	Supported
ENS->ATGP	0.875	0.875	0.044	20.020	0.000**	0.801	0.947	Supported
ATGP*GPQ->GPI	0.036	0.031	0.047	0.767	0.221	-0.049	0.103	Not supported
ENK->ATGP->GPI	-0.017	-0.017	0.025	0.702	0.241	-0.058	0.024	Not supported
ENS->ATGP->GPI	0.520	0.519	0.073	7.129	0.000**	0.399	0.638	Supported
ENK->ENS->ATGP	0.686	0.687	0.043	15.957	0.000**	0.616	0.757	Supported
ENK->ENS->ATGP->GPI	0.408	0.407	0.058	7.006	0.000**	0.312	0.503	Supported

Notes: ATGP\*GPQ > GPI Here, GPQ is used as moderator; \*  $p < 0.05$ ; \*\*  $p < 0.01$

Source: This table has been created by authors based on the analysis of collected data

**Table 4.**  
Path coefficients and confidence interval



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research was found to examine the effect of ENK, ENS, GPQ and ATGP on green purchasing intention.

This study successfully demonstrates the contribution of ENS and ATGP as mediators between ENK and GPI by using ETPB. Moreover, GPQ is used as a moderator in this study. People all around the world are highly aware about environmental pollution as well as its devastating consequences, and they are interested in using environmentally friendly products. Therefore, intensive research on green marketing is becoming more significant for governments and marketers globally. Bangladesh, as a developing and overpopulated country, is vulnerable to environmental pollution. Thus, the demand for green products is increasingly being noticed recently due to their overwhelming benefits to the natural environment.

This study has discovered that ENK has a positively significant influence on ENS with path coefficient of  $\beta = 0.784$  (*H5*) which indicates that ENK is essential to stimulate care and empathy for the environment in the mind of consumers which is supported by previous research (Cheng and Wu, 2015). Meanwhile, ENS has also a positively significant influence on ATGP with the highest value of path coefficient of  $\beta = 0.875$  (*H6*), supported by the study of Cheng and Wu (2015). Therefore, people who are environmentally sensitive will have a strong positive attitude toward environmentally friendly products. The relationship between ATGP and GPI was found to be statistically significant, which further assures that behavioral intention of customers for green products is strong when they have a positive attitude for environmentally friendly products. This result relates to a previous study (Yee *et al.*, 2020). SN and PBC were also significantly associated with GPI with the value of coefficient of  $\beta = 0.224$  (*H1*) and  $\beta = 0.142$  (*H3*), respectively, which are supported by Shukla (2019). Therefore, social pressure and ability of consumers to purchase green products are also observed to be crucial factors to grow green purchasing intention of the consumers in the Bangladeshi market.

However, the relationship between ENK and ATGP is not significant (*H4*,  $\beta = -0.029$ ), which is not supported by the study of Zaremohzzabieh *et al.* (2021). Simultaneously, GPQ does not moderate the relation between ATGP and GPI (*H7*,  $\beta = 0.036$ ). This finding indicates that customers in developing countries are not much concern about the quality of green products since customers are more interested toward the products supporting environmental well-being. This demonstrates that attitude of customers toward green products is more significant matter for customers than quality before purchasing decision-making. On the other hand, ATGP does not mediate the relationship between ENK and GPI (*H8*,  $\beta = -0.017$ ), which does not support the results of previous research (Liu *et al.*, 2020). This represents that having knowledge about environmental degradation does not contribute much for rising positive attitude toward green products if customers do not have any concern for environmental degradation, which is supported by Cheng and Wu (2015). However, ATGP strongly mediates the relationship between ENS and GPI (*H9*,  $\beta = 0.520$ ), which is supported by the result of the previous study (Cheng and Wu, 2015). ENS mediates the relation between ENK and ATGP (*H10*,  $\beta = 0.686$ ). From the above hypotheses, the results clearly prove that having environmental knowledge is not enough to grow GPI; instead, environmental knowledge should increase sensitivity toward environmental health among the customer groups; this subsequently contributes to growing positive attitude for green products among consumers, resulting in increased intention to purchase green products. Moreover, it is also confirmed from the above results that ENS and ATGP mediates the relationship between ENK and GPI (*H11*,  $\beta = 0.408$ ), which was found in research by Cheng and Wu (2015). Therefore, it is observed that the highest potential group of customers for green products in Bangladesh are environmentally sensitive customers

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who may probably show pro-environmentally behavioral intentions if green marketing campaigns are able to appeal to the minds of the customer by providing enough information regarding environmental problems and remedies. Thus, organizations must ensure that their campaigns provide required information to their customers to stimulate and increase sensitivity and care for the environment. The government can also take initiative to educate their citizens with environmental knowledge to enhance environmental sensitivity.

## 6. Research implication

### 6.1 Theoretical implication

Theoretically, the findings of this research highlights the identified key antecedents to understand customers' characteristics regarding usage of green products in Bangladeshi market. This study has successfully established a framework which represents the relation of environmental knowledge and environmental sensitivity to TPB. As a result, this relationship can be used for future research on sustainable consumer behavior. The mediating effects of environmental sensitivity and attitude toward green products will extend the existing literature on sustainable behavioral intention. Insightful information gained can be contributed to marketers with green products in the marketplace of developing countries, especially in Bangladeshi market. Moreover, this study is another evidence of successful utilization of TPB with extended form in consumer behavior research in terms of adoption behavior of green products and the findings from this research have demonstrated more insightful information about consumers' behavioral intention toward green products. This will contribute in future research on consumers' behavior on green products. Hence, this study has contribution in green marketing literature. This study has been conducted on developing country's perspective. Therefore, findings of this study will be significantly insightful information to the researchers for future research about consumer behavior toward green products from other developing countries perspective. Marketers will also be able to identify and provide required information to target customers while strengthening business-customer relationship. This is due to the findings that customers who are both environmentally knowledgeable and sensitive toward the environment have a strong desire to purchase green products. Therefore, the proposed conceptual model can be used as a framework on green marketing literature for future theoretical implications.

### 6.2 Managerial implication

Since Bangladesh is comparatively a new market for green products, managers lack deep knowledge of the antecedents which should be prioritized to identify the market demand for green products. Based on this study, it is apparent that customers with environmental knowledge do not always have a positive attitude toward green products and green purchasing intentions until the knowledge influences customers' environmental sensitivity. Therefore, this is significant information for managers for future marketing policy regarding their green marketing. This study has confirmed that manager should highlight the constant environmental degradation and its harmful consequences on human civilization in their green marketing campaign to show the consequences if corrective measures are not taken and how green products can contribute in this regard. This will give a solid foundation for managers to introduce their green products in the market of developing countries. This study has also found a significant association of consumers' attitude and subjective norms with customers green purchasing intention. Marketing managers need to work on raising positive attitude of customers toward green products and strengthen social or group belief on the effectiveness of green products for the welfare of earth. Managers will also be able to learn about their target market and find a way to spread

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information about negative environmental consequences on human life and emphasize the need for greener choices through the findings of this study. Managers can also highlight their contributions in taking care of nature during the production and distribution process as an organization. They can also assure customers how their environmentally friendly production mitigates pollution and contributes to evergreen nature. This will educate people on environmental knowledge and increase affiliation with the company and its products. Thus, when consumers are aware about the effects of their consumption on nature, their sensitivity will gradually rise, subsequently strengthen attitude and their behavioral intention for environmentally safe products, resulting in increased demand for green products.

### *6.3 Limitation and future research*

This study analyses the contribution of environmental knowledge, environmental sensitivity and attitude toward green products to discover green purchasing intention of Bangladeshi consumer segment. However, this study has been generalized for all types of green products. Therefore, future research may focus on specific products to identify green purchasing intention. Moreover, this study examined Bangladeshi consumer's green purchasing intentions. Future study may compare consumers' behavioral intentions of Bangladesh with other developing or developed countries. This study worked with selective factors and their influence on green purchasing intention. Future studies are encouraged to add demographic variables in the structural model to examine how demographic variables influence green purchasing intention. Limited samples (369 only) were used and are confined within big cities of Bangladesh, which may not perfectly reflect appropriate consumers' behavioral intention. Future study should increase sample size and add both rural and urban areas for collecting samples to find more in-depth results. This study has used close-ended questions to investigate consumers' behavioral intention toward green products. However, close-ended questions have limitation. These questions cannot manage to gather information in-depth; respondents need to choose within given options. As a result, researchers cannot conclude a complete picture of consumers' behavior regarding green purchasing intention of consumers. Therefore, future research may use open-ended questions and qualitative method of research to know in detail about the behavioral intention of consumers toward green products.

## **7. Conclusion**

Unprecedented environmental pollution and devastating natural disasters are repercussions of pollution which are reshaping the world toward a new environmentally safe consumption behavior (Ahmad and Zhang, 2020). In line with the behavioral change of consumers, organizations are implementing environmentally supported production and distribution processes to retain their market position locally and internationally. However, marketers require more reliable information about consumer behavioral intentions before introducing a green version of their products. Intensive market research is crucial to understand the sustainable behavioral intention of consumers. Although many research studies were conducted to gain insight into the behavioral intention of consumers on green products, there are plethora of issues which remain undiscovered by minimal examination on specific target markets for different organizations to serve, especially in the developing countries like Bangladesh, where environmental pollution is the major factor of human suffering.

Through this research, we have closely observed the significant role of the variables such as ENK, ENS, ATGP, SN, PBC and GPQ on green purchasing intention of consumers by using ETPB. In this study, it is found that environmental knowledge and environmental sensitivity are the dominating variables to measure consumers' attitude and behavioral

intention regarding green products. It is discovered that consumers who are both knowledgeable about environmental issues and sensitive about the safety of the environment are eager to buy green products, which may be a great insight for marketers about consumers' sustainable behavioral intentions. Therefore, marketers can establish marketing policies for their green products to educate people that enhance environmental knowledge and stimulate environmental sensitivity by providing information on environmental degradation (Jaiswal and Kant, 2018), its harmful effects on human civilization and potential solutions. The findings of this research will also provide insight for future research on green marketing as this is the first study where both direct and indirect effect of environmental sensitivity and attitude toward green products were monitored to learn about green purchasing intention of Bangladeshi consumers. This study will further help Bangladesh's Government to inspire citizens for sustainable consumption behavior through various campaigns.

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Appendix 1

Customers' green purchasing intention

Constructs	Items	Questions	Adopted and adapted
Green purchasing intention	GPI1	I would consider buying products which are responsible for less pollution	(Jaiswal and Kant, 2018)
	GPI2	I would consider switching to other brands because my preferred brands are responsible for environmental pollution	
	GPI3	I intend to switch to a green version if I get similar attributes	
Attitude toward green products	ATGP1	I like the idea of purchasing green products	(Jaiswal and Kant, 2018), (Cheah <i>et al.</i> , 2020)
	ATGP2	I have a favorable attitude toward purchasing a green version of a product	
	ATGP3	I am in favor of the retail stores which offer green products	
Subjective norms	SN1	Most people who are important to me think that I should use environmentally friendly products	(Salem and Salem, 2018)
	SN2	Many people around me generally buy the goods which are environmentally safe	
	SN3	I feel social pressure to buy environmentally friendly goods	
Perceived behavioral control	PBC1	I myself decide to buy products which is environmentally safe	(Salem and Salem, 2018)
	PBC2	I have money to pay for green consumer goods	
	PBC3	For me, purchasing of green products is very easy	
	PBC4	I feel pressure to purchase environmentally safe products	
Environmental sensitive	ENS1	I am worried about the worsening quality of the environment in Bangladesh	(Jaiswal and Kant, 2018)
	ENS2	Bangladesh's environment is my major concern	
	ENS3	I am emotionally empathic and sensitive about environmental protection issues of Bangladesh	
	ENS4	I often think about how the environmental quality in Bangladesh can be improved	
Environmental knowledge	ENK1	I have better knowledge and information about environmental issues	(Jaiswal and Kant, 2018)
	ENK2	I know more about recycling than the average person	
	ENK3	I know how to select products and packages that reduce the amount of landfill waste	
	ENK4	I know that I buy products and packages that are environmentally safe	
Green products' quality	PQ1	The quality of the brand's products is reliable with respect to environmental consideration	(Akturan, 2020)
	PQ2	The quality of the brand's products is durable with respect to environmental performance	
	PQ3	The quality of the brand's products is excellent with respect to environmental image	

**Table A1.**  
Measurement items

Authors	Title	Country	Theory	Findings
Ahmad and Zhang (2020)	Green purchase intention: Effects of electronic service quality and customer green psychology	China	Stimulus organism response theory	e-Service quality, consumer social responsibility, green trust and green perceived value have a significant influence on green purchasing intention
Asif <i>et al.</i> (2018)	Determinant factors influencing organic food purchase intention and the moderating role of awareness: A comparative analysis	Turkey	Theory of planned behavior	Subjective norms, attitude, perceived behavior control and environment concern have a positive influence on purchase intention of organic food
Shukla (2019)	A Study on Millennial Purchase Intention of Green Products in India: Applying Extended Theory of Planned Behavior Model	India	Extended theory of planned behavior	Subjective norms, attitude, perceived behavior control and environment concern has influence on green purchasing intention of Indians
Lavuri (2022)	Extending the theory of planned behavior: factors fostering millennials' intention to purchase eco-sustainable products in an emerging market	India	Extending the theory of planned behavior	Environment knowledge, environmental concern significantly influences green attitude of customers. Subjective norms and perceived behavior factors and attitude also significantly impact green purchasing intention
Zaremohzzabieh <i>et al.</i> (2021)	The effects of consumer attitude on green purchase intention: A meta-analytic path analysis	Various	The theory of planned behavior	Attitude, subjective norm, attitude and perceived behavioral control have an influence on green purchasing intention. Environmental knowledge and environmental concern have an impact on consumer attitude
Pang <i>et al.</i> (2021)	Antecedents of Consumers' Purchase Intention towards Organic Food: Integration of Theory of Planned Behavior and Protection Motivation Theory	Malaysia	Extending the theory of planned behavior	Subjective norm and attitude have a contribution on rising green purchasing intention
Kumar (2021)	Framing a model for green buying behavior of Indian consumers: From the lenses of the theory of planned behavior	India	Theory of planned behavior (TPB)	Subjective norm, subjective and attitude have an influence on Indian consumers' green buying behavior

**Table A2.**  
Selected studies on  
green purchase  
intention

(continued)

Authors	Title	Country	Theory	Findings
Wang (2022)	Determinants of Consumers Purchase Attitude and Intention Toward Green Hotel Selection	China	Theory of planned behavior (TPB)	Environmental knowledge and environmental concern have impact attitude toward green hotel selection, while attitude, subjective norm, attitude and perceived behavioral control have influence on green hotel selection
Bala <i>et al.</i> (2022)	Relationship between environmental knowledge, environmental sensitivity, environmental attitude and environmental behavioral intention – a segmented mediation approach	India	Theory of planned behavior (TPB)	Environmental sensitivity and environmental knowledge have an influence on environmental attitude. Environmental attitude has also influence environmental behavioral intention
Liu <i>et al.</i> (2019)	Why are obsolete mobile phones difficult to recycle in China?	China	Theory of planned behavior (TPB)	Environmental sensitivity and environmental responsibility have an influence on positive attitude toward recycling. Subjective norms and attitude influence behavioral intention toward recycling

Table A2.

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