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Understanding Sustainable Consumption Behavior of Consumers: An Extension to the Theory of Planned Behavior

PhD Dissertation

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Abbreviations

AMA	American Marketing Association
ANOVA	Analysis of Variance
ATT	Attitude
AVE	Average Variance Extracted
CB SEM	Covariance based Structural Equation Modeling
CCA	Confirmatory Composite Analysis
CR	Convergent Reliability
ESA	Environmental Sustainability Awareness
GPB	Green Purchase Behavior
GPI	Green Purchase Intention
IPCC	Intergovernmental Panel on Climate Change
OECD	Organization for Economic Co-operation and Development
PBC	Perceived Behavioural Control
PLS SEM	Partial Least Square Structural Equation Modeling
SEM	Structural Equation Modeling
SN	Subjective Norms
SPSS	Statistical Packages for the Social Sciences
SRMR	Standardized Root Mean Square Residual
SSA	Social Sustainability Awareness
TPB	Theory of Planned Behavior
VIF	Variance Inflation Factor
WTP	Willingness to pay
UN	United Nations
UN SDG	United Nations Sustainable Development Goals
UNEP	United Nation Environment Program

I. INTRODUCTION

According to studies from many organizations on the present and prior state of the environment, the globe is currently experiencing catastrophic environmental degradation (UNEP, 2011; United Nations, 2012; World Bank Report, 2012; Zimmermann, 2016; Robinson, 2022). Human activities are influenced by environmental challenges, which also have an impact on corporate development. The continual development of economies with an increasing number of businesses, firms, and companies has resulted in environmental degradation, which has been the cause of climate change and global warming in recent decades (Panda et al., 2020). Humans have acted in ways that have had a harmful impact on the environment and ecology. The combustion of fossil fuels, deforestation, animal rearing, greater industrialization, and the increase in the number of automobiles have all had an impact on the earth's temperature and climate. As a result of all these activities, the number of greenhouse gases in the atmosphere has grown, causing the greenhouse effect and global warming (Sharma, 2021).

According to the Intergovernmental Panel on Climate Change (IPCC 2018), human activities have caused global warming of roughly 1.0°C, with 1.5°C anticipated by 2030 if current trends continue. Carbon dioxide is the most common greenhouse gas in the environment, accounting for 64 percent of man-made global warming and being mostly produced by human activity (Global Climate Change, 2022). As it was clear that the extensive exploitation of the environment is taking place for decades that resulted in pollution, ozone layer depletion, greenhouse effect, rise in global temperature, widespread climate change, melting of glaciers, rise in sea level, etc.

Since the 1980s, industrial-related environmental issues such as global warming, climate change, increased pollution, and the greenhouse effect have been a prominent concern (Yakup and Sevil, 2011). As a result of these environmental issues, a concern for environmental conservation arose. Businesses and corporations are altering their marketing techniques in order to carve out a new market niche for eco-friendly marketing. To address social integrity and propagate green messaging among consumers, several companies are now implementing green marketing methods in their manufacturing processes (Nagaraju & Thejaswini, 2014).

Furthermore, technical advancement has increased the number of activities associated to industries, and the increase in industrial activity has resulted in environmental consequences. These continuous environmental issues have sparked worries about working for the improvement of the ecological system and environmental protection (Casalegno et al., 2022). Following the COVID-19 limitations, global carbon dioxide emissions have recovered and are expected to return

to pre-pandemic levels this year (Canadell et al. 2021). Figure 1 shows the increase in carbon dioxide emissions-

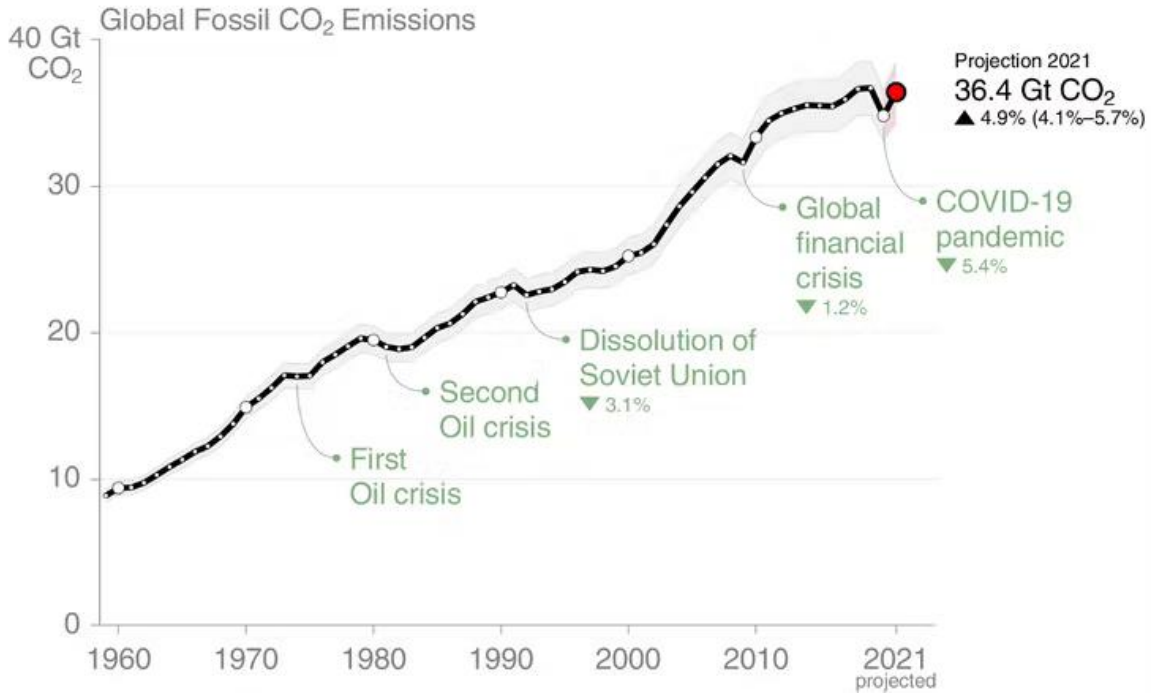

Figure 1. Global Carbon dioxide emission
Source: Global Carbon Project, https://www.globalcarbonproject.org/carbonbudget

As a result of these concerns, the government and businesses have adopted green policies. The implementation of environmentally friendly policies spawned a new market that promotes environmentally friendly items that are biodegradable, recyclable, and reusable (Chang et al., 2021). Green products, environment-friendly products, or eco-friendly products are all terms used to describe such items. Green products are the consequence of environmentally friendly marketing strategies, which were coined in the late 1980s and are known as green marketing.

Green marketing encompasses all operations that involve changing a product for the purpose of the environment, making necessary changes to the manufacturing process, switching to eco-friendly packaging, and changing advertising practices to reflect greater environmental considerations. The responsiveness of green products has risen in tandem with the increased awareness of green marketing. Consumer purchasing behavior is influenced by a variety of issues such as environmental concern, environmental protection, the credibility of green products, and so on.

Furthermore, many businesses are now focused on long-term profit through the application of green marketing methods as well as addressing customers' demands and wishes. Consumers are increasingly adopting environmentally friendly activities and are willing to pay more for environmentally friendly goods (Kirmani and Khan, 2018). The purchasing process is exposed to

the growing number of consumers who are interested in and will acquire these things. Customers have a variety of purchase habits, and these habits are always changing as a result of the easy access to the finest options.

Additionally, firms that try to safeguard the environment and design their goods properly have a better chance of remaining profitable in the long run than those that focus solely on their old methods. Businesses with a value proposition that emphasizes environmental protection and eco-friendliness have greater effectiveness with customers and can carve out their own market niche (Karasmanaki, 2021). The green marketing mix aids companies in gaining a competitive advantage over their competitors. Furthermore, in terms of consumer behavior, the green marketing mix assists businesses in changing their customers' purchasing habits, and as a result, their changing tastes and preferences assist businesses in adapting their products and services to meet their needs (Sreen et al., 2018).

Green marketing assists firms in achieving both top-line and bottom-line objectives. The capital expenditure is more in green technology, such as solar panels, but it will show to be a cost-effective investment in the long run (Naz and Magda, 2020). Previously, it was thought that environmental sustainability was a liability for businesses because it entailed more costs (Kemp and Andersen, 2004). However, in the recent decade, environmentally friendly technology has emerged as the primary driver of economic growth (Bilan et al., 2020).

Moreover, the marketing or promotion of a product that has environmental benefits is known as green marketing. Consumers are becoming more environmentally conscious these days, and their purchase habits are shifting as a result. Therefore, firms and companies should be accountable for producing and distributing such products to customers (Ahmed et al., 2021). Though, by implementing green practices, businesses and organizations can contribute to environmental conservation while also benefiting consumers' health (Rajeshkumar, 2012). The influence of human activities on the environment, on the other side, has raised awareness about the importance of sustainability. Traditionally, the company's market strategy was to maximize profits, but from the early 1990s, the company's strategy has changed to include consideration of the impact of its actions on all stakeholders, including animals and nature. In order to protect the environment, the concepts of green marketing and environmental marketing were developed. Green marketing operations have become such a source of concern for many governments throughout the world that they have attempted to regulate them (Polonsky, 1994a).

Green marketing, also alternatively known as environmental marketing and sustainable marketing, refers to an organization's efforts at designing, promoting, pricing, and distributing products that will not harm the environment. We can define green products as the products that are originally

grown, can be recyclable, reusable, and biodegradable, with natural ingredients, products that do not harm or pollute the environment, are not tested on animals, and have eco-friendly packaging i.e., reusable, refillable containers, etc. The promotion of green technology and green products is necessary for the conservation of natural resources and sustainable development. In terms of consumers, they are becoming more aware of the benefits of green products. However, for the general public, it is still a novel concept. Environmental threats must be taught and made known to the customer. The new green movements will need to reach out to the majority, which will require time and effort.

Environmental marketing is now seen as a way for businesses to gain a competitive edge, and companies have discovered that consumers prefer products that do not hurt the environment or human health. As a result, businesses are increasingly choosing green products over others in order to gain a competitive advantage while still satisfying their business objectives. Green marketing, on the other hand, demands the application of sound marketing ideas in order to make green products appealing to consumers. As a result, it is the ideal time to choose "Green Marketing" as a global strategy and create awareness regarding the benefits offered by green products. If all nations make rigorous restrictions, there will be a major change in the world of business over time, because green marketing is critical to saving the earth from pollution. As time passes, the planet is becoming more and more affected by global warming. As a result, rather than discussing problems, it is necessary to concentrate on solutions. The time has come for environmental protection to be a top priority for all businesses, and it is our obligation to raise customer knowledge of green or environmentally friendly products.

1.1 Problem Statement

Many modern nations have gradually evolved into "consumer societies" in which consumption plays a major role in stimulating economic growth over the last fifty years. Scientists, social scientists, journalists, and politicians worried about the environment's future contend that the current amount and patterns of consumption are unsustainable. Economy should be stable rather than focused on maximum growth, according to this viewpoint. Consumption should no longer be a primary source of economic growth. The waste and depletion of many sorts of resources are all exacerbated by indiscriminate consumer goods manufacturing, which adds to climate change, shortages of essential commodities, and waste and exhaustion of many types of resources (Sovacool et al., 2021).

The major focus of this research is to analyze the issues surrounding environmental degradation and how economies and countries are making progress in terms of achieving sustainable development goals. In a broader sense, sustainability refers to the most efficient use of resources

to achieve maximum production while having little or no negative impact on the environment or on all stakeholders. The basic goal of sustainable development is to meet the needs and wants of the current generation without causing harm to the resources that future generations will require to meet their requirements. The environmental problems and the causes of environmental degradation are not unfamiliar to the world. For decades many studies have been done in regard to creating awareness related to environmental protection and proposing solutions for changing consumer behavior so as to work towards the protection of the ecosystem. In the present era of globalization, the primary task is to protect the natural environment while still satisfying and retaining customers. With the world's ever-increasing environmental concerns, it's more important than ever to save the planet's natural environment.

This graph (Figure 2) depicts the change in global surface temperature from 1951 to 2020, as compared to average temperatures. With the exception of 1998, all but one of the twenty warmest years have happened since 2001. The year 2016 will go down in history as the warmest on record.

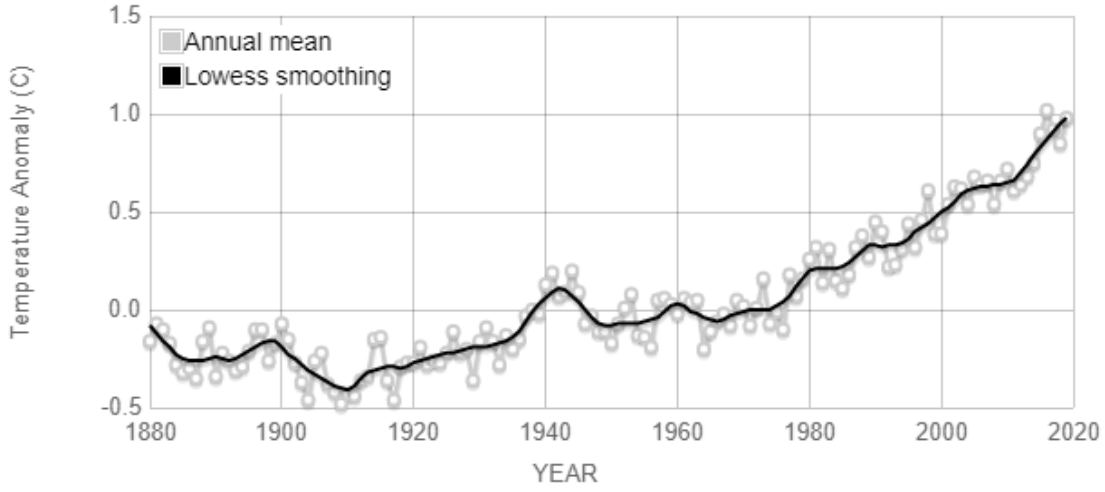

Figure 2. Global surface temperature
Source: NASA's Goddard Institute for Space Studies (GISS), 2019.

Household consumers, according to researchers, are by far the biggest drain on the globe, which paints a totally different image than simply national-focused evaluations of environmental effect. To put it another way, before we start blaming entire countries for the situation of the world, we should definitely examine our own behaviors and demands. Consumers are responsible for more than 60% of worldwide greenhouse gas emissions and up to 80% of global water usage, according to the researchers, who looked at the influence of consumers in 43 nations and five rest-of-the-world regions. Household consumption is responsible for 60–80 percent of global impacts. Changes in our consumption habits will have a significant impact on our environmental footprint (Peter Dockrill, 2016). We can cut GHG emissions and establish a sustainable lifestyle and

economy by modifying how humans consume natural resource-based products and services around the world. Therefore, the current research was conducted to identify the sustainability awareness of the consumers and the impact of various factors on their green purchase behavior. Through this study the researcher attempted to create awareness concerning the personal responsibility towards saving the environment by following sustainable habits and transforming attitude towards green products.

1.2 Significance of the study

In the Indian context, there is a scarcity of literature on green consumption behavior. According to Kamalanon et al. (2022), there is a shortage of understanding and awareness about green products in India. According to the Dupont green living survey (2014), India's awareness of green products (63 percent) is significantly lower than that of industrialized countries such as Canada (78 percent) and the United States (73 percent). Organizations that do not develop green products for the Indian market are to blame for the low level of awareness (Green Purchasing Network of India, 2014). Customers can be educated, and better goods can be built to raise awareness levels (Wei et al., 2018). More information about green products, according to Rahman and Reynolds (2019) will assist generate improved attitudes about green products.

Due to increased customer knowledge, green and environmental issues have become more important in businesses around the world (Debrah et al., 2021; Arshad et al., 2021). Consumers and businesses alike are increasingly favoring green products as environmental protection becomes a major priority around the world. Eco-friendly items, on the other hand, had an impact on the consumer's buying decision.

It has been reported that Indian consumers are concerned about environmental degradation and feel guilty about their impact on the environment (Dupont green living survey, 2014; Greendex Survey, 2012). According to Kasztelan (2017), people's considerable concern about environmental issues and readiness to buy green products should push businesses to manufacture more green products. However, environmental concern does not always convert into purchasing habits (Alsaad, 2021). Green consumption has not taken off in India, despite widespread public concern about the environment. As a result, it is critical to examine elements that may influence Indian customers' buying intentions for green products.

The major goal of this research is to evaluate customers' green purchasing habits in India's urban areas. The research focuses on customers who have previously purchased green items. There is a paucity of literature that examines Indian customers' green purchasing habits. As a result, the purpose of this study is to address a research gap by reviewing the literature on green consumption

and examining the factors that influence consumers' green purchasing decisions in India. This study is unique in that it is the first empirical study to examine Indian consumers' green purchase behavior by incorporating constructs such as social sustainability awareness, environmental sustainability awareness, and willingness to pay into the previously accepted theory of planned behavior. Another goal of this research is to extend the notion of the theory of planned behavior. The lack of literature on the topic from an Indian viewpoint has necessitated this study in order to recognize the direct impact of such structures on consumer purchase behavior.

The findings of this study will assist marketers and policymakers in making changes to their marketing strategies by taking into account consumers' attitudes and intentions toward green products. Consumers' purchasing behavior is influenced by their awareness of the environment and their intention to buy. As a result, enterprises and firms involved in environmental protection can develop a strategic advertising strategy to raise environmental consciousness. This research will also contribute to closing the research gap in this area. This study's academic contribution will help to inform future research and the creation of the new model by including constructs like social sustainability awareness and environmental sustainability awareness, which were not tested before to identify the attitude and behavior of consumers towards green products. The constructs used in this study to understand the GPB, such as willingness to pay (WTP), attitude toward green products (ATGP), perceived behavioral control (PBC), subjective norms (SN), and green purchase intention (GPI), have been shown to be effective in various studies conducted in various countries.

1.3 Objectives of the study

The two main objectives have been taken into consideration in this study. (1) To recognize the factors that are affecting consumers' behavior toward environment-friendly products as well as to review the literature highlighting the preferences of green and sustainable consumption (2) To suggest a viable model by extending the theory of planned behavior that will represent the behavior of consumers toward green products. For a better understanding of the research the subsequent sub-objectives have been made:

1. To analyze and review the literature regarding the consumer's purchase behavior for green products.
2. To extend the theory of planned behavior by incorporating additional variables and validating the model.
3. To analyze the comprehensive models and theories related to consumers' behavior towards green products.
4. To examine and study the reasons that affect the green buying behavior of the consumers.

5. To examine the nature and degree of relationship between the consumer's attitude towards eco-friendly products, their willingness to pay for such products, their level of sustainability awareness and green purchase behavior.
6. To examine the effect of demographic variables on the perception of consumers related to environmental sustainability awareness, social sustainability awareness, willingness to pay, their attitude towards eco-friendly products, green purchase intention and behavior.
7. To suggest and validate a viable model for analyzing consumers' behavior towards green products.
8. To study the influence of socio-demographic factors on consumers' adoption of sustainable habits.

1.4 Research Questions

This study will attempt to answer the following research questions-

1. What are the most critical factors that will influence customers' green purchasing behavior (GPB) in India?
2. What is the degree of sustainable habits adopted by consumers in India?
3. Do demographic factors like gender, age, income, and educational attainment have any effect on the adoption of sustainable habits?
4. What is the level of environmental and social sustainability awareness among consumers in India?
5. Does environmental and social sustainability awareness among consumers in India affect their attitude towards green products?
6. Do demographic factors such as gender, age, income, and educational attainment have any effect on GPB?
7. Are people price-sensitive when it comes to green products?
8. Is there any evidence that GPI has a mediating influence in the link between dependent and independent variables?

1.5 Hypotheses

The study comprises the following hypotheses to examine the direct and mediating effects of the variables.

1.5.1 Direct effects

Hypothesis 1 – Social sustainability awareness (H1a) and environmental sustainability awareness (H1b) have a significant positive relationship with Attitude.

Hypothesis 2 – Attitude (H2a), Subjective norms (H2b), Perceived behavioral control (H2c), and Willingness to Pay (H2d) have a significant positive relationship with green purchase intention.

Hypothesis 3 – Attitude (H3a), Subjective norms (H3b), Perceived behavioral control (H3c), and Willingness to Pay (H3d) have a significant positive relationship with green purchase behavior.

Hypothesis 4 – Green purchase intention has a significant positive relationship with green purchase behavior.

1.5.2 Mediating effects

Hypothesis 5- The relationship between attitude and green purchase behavior is mediated by green purchase intention.

Hypothesis 6- The relationship between subjective norms and green purchase behavior is mediated by green purchase intention.

Hypothesis 7- The relationship between perceived behavioral control and green purchase behavior is mediated by green purchase intention.

Hypothesis 8- The relationship between willingness to pay and green purchase behavior is mediated by green purchase intention.

Figure 3 depicts the proposed conceptual research framework based on the proposed hypotheses.

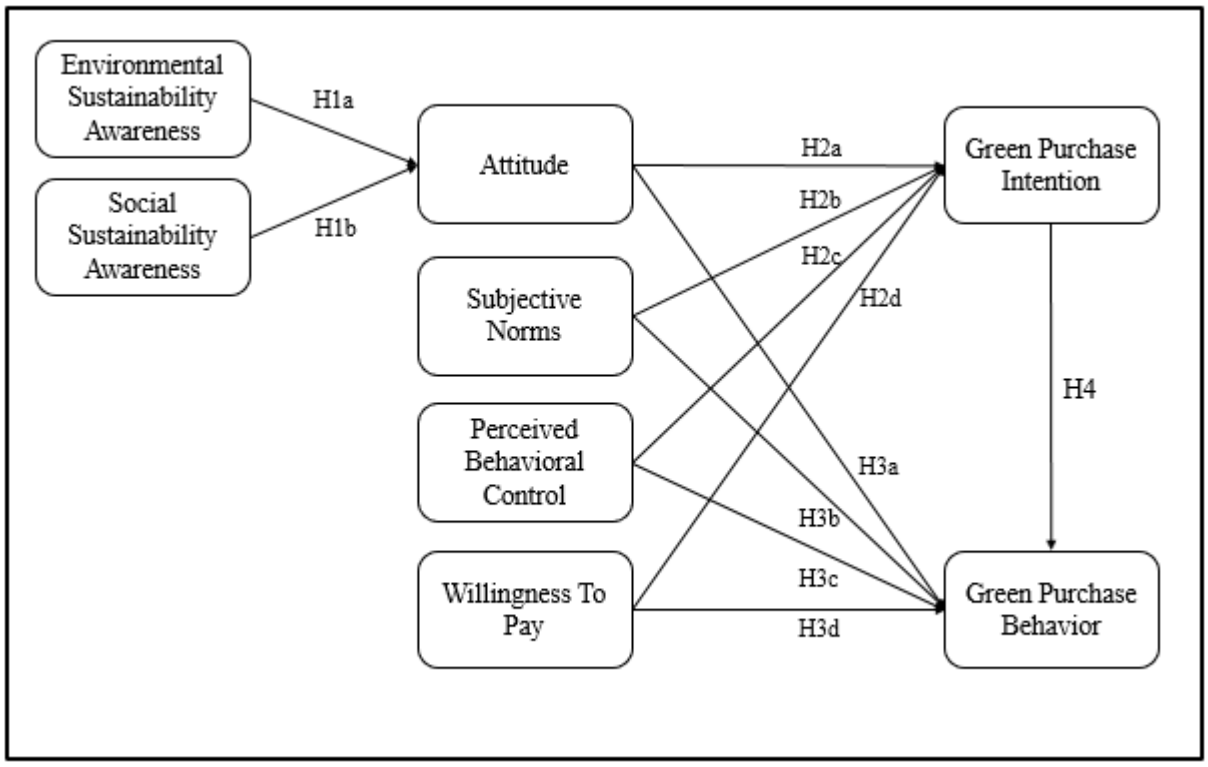

Figure 3. A proposed conceptual framework based on literature and framed hypotheses
Source: Author's own construction

II. Literature review

2.1 Green or sustainable products

Due to the employed traditional technologies, current consumption and production patterns based on traditional policies are not sustainable. The industrial sector and its function in society are the cause of environmental exploitation and pollution. The fast expansion in industry in many nations, as well as land and air pollution, has sparked worry about existing development patterns and their unsustainable nature. As a result, many changes have been made in policies, processes, services, and goods, as well as in the educational system, industrial processes, supply chain management greening, and environmental consciousness.

The obligation of industries and organizations to ensure coordination for environmental, social, and ethical compliance throughout all supply chains is referred to as greening supply chain management (GSCM). This entails participation in the green procurement process, which is particularly crucial for large and multinational companies that rely on numerous supply chain links for their products and services. Furthermore, this not only builds customer–supplier relationships, but it also lowers overall costs, especially when externalities are correctly integrated into the system. Although GSCM still overlooks various facets of decision-making at many critical social levels, this additional method can assist us in moving toward sustainable consumption and production (SCP), resulting in more sustainable value for businesses and society. Many cultures around the world are currently more unequal than they were ten years ago. As a result, SCP is faced with the task of developing strategies that promote the efficient use of natural resources and technological innovation in the pursuit of a better quality of life, as well as the pressure of addressing the core causes of the socio-economic divide.

Green products and production tend to refer to classifications such as green product, environmentally friendly product, and nature-friendly product that highlight necessities such as recyclable materials, production with recycled content that releases the least amount of toxic, hazardous waste possible, yields little if any environmental pollution, and causes no harm to natural life (i.e., animal experiments in cosmetic testing), biologic resolvability, and the consumption of minimal amounts of natural resources (Kirgiz, 2016).

Energy efficiency, eco-friendly packaging, recyclability, non-toxic materials, and biodegradability are all characteristics of green products (Mangun and Thurston, 2002; Massawe and Geiser, 2012). Throughout their entire life cycle, these green products are supposed to be designed and manufactured using energy-efficient techniques and processes that use fewer physical resources (Janssen & Jagger, 2002). These products are also made with environmentally friendly materials

and/or packaging (Elkington and Makower, 1988). Researchers have differing viewpoints on what makes a product green. Green products, according to Lin and Chang (2012), are ones that are biodegradable, nontoxic, and have environmentally friendly packaging. Green products, according to Chen and Chang (2013), should not have a negative influence on the natural environment or human health. Green products, in compared to conventional items, should perform better on ecological factors, according to researchers (Ottman et al., 2006; Schiederig et al., 2012).

In fact, the most significant distinction between green and non-green items is that a green product's performance improves with time in terms of its greenness (Schiederig et al., 2012). Green product qualities include low water usage, reduced packaging, organically/locally grown, fair trade, energy efficiency, biodegradability, easy to dissolve or decompose in soil, air, and water, non-toxic and low volatile organic compounds, and recyclability, to name a few (Mangun and Thurston, 2002; Massawe and Geiser, 2012).

In reality, no product has no environmental impact. The goal of the green marketing concept, on the other hand, is to reduce this influence. In the business world, a green product is one that aims to improve or sustain the natural environment by conserving energy and resources, as well as reducing or eliminating waste and toxic substances (Ottman et al., 2006). The duty for releasing new products to the market as well as making essential adjustments to existing products and manufacturing procedures falls under the product policy. Consumers are becoming aware of numerous environmental issues and difficulties, and they are actively contributing to reducing their environmental impact by purchasing green products. Table 1 listed some of the benefits offered by green products.

Table 1. Benefits offered by green products

S.No.	Type of products	Benefits
1.	Household cleaning products	Eco-friendly household cleaning products constitute biodegradable contents, good for health, oppose hazardous materials, improves air quality, and supports less packaging waste.
2.	Organically grown food	It comprises advantageous nutrients, produced with the use of eco-friendly and fewer pesticides, reduced chemical and hazardous materials content.
3.	Eco-friendly electronic products	Energy efficient, cost benefits, longer shelf life, saves money, reduce e-waste, produce less harmful emissions.
4.	Eco-friendly vehicles	Low running cost, lessened noise pollution, clean environment, produce less hazardous gases, lower

		carbon emission, cost-effective, long-term benefits.
5.	Recyclable bags	Save energy during manufacturing, reduce waste, sustainable usage, less use of oil in manufacturing process, less pollution, less plastic waste.
6.	Eco-friendly kitchenware	Ensure a healthy lifestyle, less microplastics intake while eating, healthy to cook food, less wastage, long term sustainable use, made of recyclable materials, less plastic waste, durable and sustainable.
7.	Sustainable clothing	Sustainable or eco-friendly clothing reduces waste, reduces carbon emissions, reduces water pollution, saves water, and supports ethical labor practices.
8.	Eco-friendly cosmetics	Protect the health, save the environment, less side effects, rich in nutrients, free of toxic chemicals, use natural flavors and fragrances, use organic oils, good for hair and skin, less packaging, less wastage, biodegradable.
9.	Eco-friendly building materials	Water-efficient, energy-efficient, less operation cost, low maintenance, improve quality of the environment, better health.
10.	Zero-waste packaging	It refers to packaging in which each material is recyclable or reusable. Saves the environment, has no waste, biodegradable.

Source: Author's own construction

2.1.1 Environmentally sustainable products

The last few decades have witnessed a positive and high growth of pro-environmental activities, attitude as well as knowledge among the consumers that are environmentally conscious (Laroche et al., 2001). Concern for the environment is on the rise these days, and it has a direct impact on an individual's values and lifestyle changes. Consumers are understandably concerned about environmental sustainability in an increasingly environmentally sensitive atmosphere. A majority of customers have long recognized that their purchasing patterns and behaviors have a direct impact on environmental balancing issues (Laroche et al., 2001). Environmental threats have enhanced green customers' purchasing behavior, as they are now more willing to pay a premium for ecologically friendly alternatives to conventional products. Consumers are now thinking about environmental issues while shopping, such as checking that a product is made of recycled materials before purchasing it and then purchasing things that are more environmentally friendly (Awad, 2011).

The production of environmentally friendly items has expanded into a vast new arena for societal upliftment and profitability, as seen in both consumer and commercial applications. This green business model can assist enterprises and corporations in changing their production and marketing methods. Businesses can reap a plethora of benefits if they combine an environmentally responsible perspective with improved safety procedures (Prinzing, 2013). Prinzing (2013) also stated that transitioning to a green or eco-friendly firm will assist in lowering the costs associated with excessive and unnecessary trash. Also, a green business model helps companies to provide safe and healthy work environment to the employees along with sustainable and efficient operations of the business (Prinzing, 2013). Furthermore, according to some academics, green products have the advantage of providing competition to enterprises that do not aim toward environmentally friendly manufacturing and consumption (Chen and Chang, 2013). Green practices, as well as competitive technologies and competitively valued products with improved environmental performance in comparison to other alternatives, are important in order to reduce the negative environmental effects caused by an increasing global population that demands more products and services. To solve the present challenges of this century, significant efforts are needed at all levels of development.

However, some consumers might be there who are unwilling to purchase green products due to other causes such as, size of packaging, size tags, and unit bias (Lin and Chang, 2012). For this reason it is clear that product preferences are necessary to comprehend consumer's intention to buy green products. Also, it is found that some other reasons too influence consumer's behaviour to not buy green products, like they consider such products to be of least beneficial in comparison to the conventional products (Lin and Chang, 2012). In addition, experts believe that there are additional elements that influence consumers' attitudes about green products, such as brand names, price, the perception that they are of low quality, images demonstrating product ineffectiveness, and so on.

2.1.2 Socially sustainable products

Since the mid of 1990s, the people or more specifically the consumers have started getting social and environmental awareness (Strong, 1996). From that time, the consumption patterns of the consumers related to environment has changed and it came out of the boundaries of culture and has spread in the society as a whole (Wright et al., 2006; Crane and Matten, 2004; Carrington et al., 2010; Tsarenko et al., 2013; Hanas, 2007). Besides, retailers wanted to come forward with the business model which is more sustainable in nature and through which they can retain their relevancy among the consumers that are willing to change their attitude towards environment (Tsarenko et al, 2013). For a long time, the production of environmentally friendly products has

been a study topic. Nonetheless, it appears to be being questioned at the moment. Politics, society, and institutions, as normalizing organizations, require the production of goods that are both environmentally benign and sustainable, as well as the acceptance of social responsibility. Design for sustainability and design for society, for example, are concepts coined by research programs and research institutions (Hanusch and Birkhofer, 2010). Late 1980s was the decade that manifests the beginning point of green marketing and at that time this concept was announced and discussed for the first time in the business world (Peattie and Crane, 2005; Lee, 2008). And this new wave of green marketing has led many marketers to get involved in several green practices and to generate high positive response from consumers, which would directly, leads to increase in profit, market shares, good value proposition and increased sales (Vandermerwe and Oliff, 1990; Lee, 2008). Green marketing is a new type of marketing that emphasizes on environmental protection and client satisfaction. In today's industry, green marketing has become a highly essential notion.

Furthermore, the image is created that engineering designers are in charge of developing cost-effective, ecologically and socially sustainable goods and allowing corporations to market them (Hanusch and Birkhofer, 2010). There are several assessment criteria and methodological assistance available for the economic and ecological dimensions, but for the social dimension, neither a proven level of knowledge nor an established work methodology for the implementation of social sustainability of goods appears to exist (Panda et al., 2020). Because of this flaw in the social component, it is vital to examine the need for technical design and the responsibilities assigned to the creation of socially sustainable goods.

However, there are several studies that were conducted to analyse the main factors influencing the green consumption and purchase behaviour of the consumers such as, values and attitude (Ramayah et al., 2010; Barber et al., 2014; Chairy, 2012; Liobikienė, 2017; Gilg et al., 2005; do Paco et al., 2013; Shimul et al., 2022), perceived consumer effectiveness (Liobikienė, 2017; Tan, 2011; Berger and Corbin, 1992; Cho et al, 2013; Zhao, et al., 2014; Barbera and Ajzen, 2021), environment consciousness (Boztepe, 2012; Liobikienė, 2017; Huang et al., 2014), environmental concern (Kanchanapibul et al., 2014; Liobikienė, 2017; Newton et al., 2015), attitude towards green products (Zhao et al., 2014; Mostafa, 2009; Cheah and Phau, 2011; Khaola et al., 2014; Raimondo et al., 2022), environmental knowledge (Mostafa, 2007; Hamid et al., 2012; Lee, 2010; Roh et al., 2022), green purchase behaviour (Mostafa, 2007; Albayrak et al., 2013; Akehurst et al., 2012; Phan et al., 2017; Huang et al., 2021), these are the difficult-to-understand notions that are crucial to behavioural and cultural psychology. Many scholars have explored and analyzed these constructs in the context of analyzing customers' green purchasing decisions. Despite their environmental awareness and worries, customers have different attitudes and behaviors when it

comes to purchasing things. The adoption of such items that are deemed to be ecologically sustainable is low, and the reason for this is inconsistency in customer intentions and purchasing behavior.

2.2 Green Marketing

Green marketing, according to the American Marketing Association (AMA), is a type of marketing in which products are marketed as environmentally friendly, and it includes activities such as product adjustments, green packaging, new advertising strategies, and product modification in order to raise awareness (Yazdanifard, 2011). Green marketing, often known as eco-marketing, refers to actions that are aimed at meeting customer requirements and wants while having the least amount of detrimental influence on the environment (Polonsky, 1994). Green marketing, also known as environmental marketing or sustainable marketing, is defined by Pride and Ferrell (1993) as an organization's efforts to design, promote, price, and distribute products that do not affect the environment.

Most firms that aim to develop a sustainable business model while reducing adverse environmental impact are finding that environmental sustainability has become a difficulty. Environmental sustainability is currently the most pressing concern among businesses and consumers (Nidumolu, 2009).

Human activities are influenced by environmental challenges, which also have an impact on corporate development. Due to increased customer knowledge, green and environmental issues have become more important in businesses around the world (Chen and Chang, 2010). Consumers and businesses alike are increasingly favoring green products as environmental protection becomes a major priority around the world. Environmentally friendly items, on the other hand, had an impact on the consumer's buying decision.

2.2.1 Brief history of green marketing

When there was a rise in environmental awareness in the 1960s, green marketing began to emerge (Feldman, 1971). The first workshop on 'ecological marketing' was held in Texas (US) in 1975, and for the first time, the need of promoting environmentally friendly products was recognized (Indoria, 2012). Green marketing has gone through several stages since then.

Green marketing can be divided into three stages, according to Peattie (2001). The first phase was dubbed 'ecological green marketing,' and it focused on environmental issues and solutions (Henion and Kinnear, 1976). During this phase, marketers focused on local concerns and specific environmental issues such as air pollution, depletion of oil reserves, pesticide consequences, and

so on (Peattie, 2001). According to Peattie (2001), ecological marketing was a niche sport at the time, with few customers and businesses prepared to modify their ways.

The second phase, dubbed "environmental green marketing," occurred in the latter half of the 1980s. The emphasis has moved to embracing clean technology, which was anticipated to be pollution-free and waste-free. 'Sustainable green marketing,' which gained popularity in the 1990s and early 2000s, was the third phase of green marketing. Marketers' approaches became more radical at this point, and the focus moved to embracing sustainable business practices (Peattie, 2001). It's worth noting that, near the end of this period, a severe issue about green marketing arose as a result of a few occurrences of fraudulent green marketing claims (Kumar et al, 2011).

Peattie and Crane (2005) highlighted five failed marketing tactics that have impacted the viability of green marketing. Green spinning, green selling, green harvesting, environpreneur marketing, and compliance marketing were the five marketing methods. In green spinning, businesses that face environmental criticism do not change their production technology, regulations, or methods, instead relying on their public relations department to defend them.

In a green selling strategy, no changes to the product are made, but advertising methods are tweaked slightly to highlight the product's environmentally friendly features. Green harvesting entails lowering packaging and energy use solely for the benefit of the company. Green products, on the other hand, have remained at a premium price, which has hampered their wider appeal. Business firms use an enviropreneur marketing strategy to design and promote green products without first discovering what customers genuinely want and need. Business firms that use the compliance marketing strategy do not take any voluntary green activities and instead only follow the statutory environmental protection standards.

Ottman et al. (2006) looked into the reasons for green marketers' failures and coined the term "green marketing myopia." As previously said, green marketing must emphasize both enhanced environmental quality and increased consumer happiness. Green marketing myopia is caused by misjudging either of them or overemphasizing the increased environmental quality. According to Ottman et al. (2006), a large number of green products fail because marketers overemphasize the product's greenness while ignoring consumers' broader expectations. According to recent studies, despite the fact that green marketers' statements have been found to be false, customers' environmental concerns have not decreased much. In 2008, the search phrase "going green" received 31 million hits on search engines like Google and Yahoo (Haytko and Matulich, 2008). Furthermore, according to a 2008 Mintel International Group study, 36% of customers were willing to buy green products on a regular basis (Montague and Mukherjee, 2010).

Green marketing is the promotion of a company's environmental initiatives. It should be mentioned that for the marketing of green activities, scholars have also used the phrases environmental marketing and ecological marketing (Prakash, 2002). Green marketing has gotten a lot of attention from researchers all across the world over the years. In fact, a whole special edition of the Journal of the Academy of Marketing (February 2011) was devoted to the topic of sustainability, highlighting the expanding role of marketing in environmental protection and preservation through the development and promotion of green products (Huang and Rust, 2011; Hult, 2011).

Researchers have defined green marketing using different perspectives. In their pioneering study on green marketing, Henion and Kinnear (1976) have defined green marketing as "a process of implementation of the marketing programmes aimed at targeting environmentally conscious consumer segment". All of the definitions of green marketing agree that the most important aspect of green marketing is product promotion that is environmentally friendly. However, as Ottman (2008) points out, consumers do not want to sacrifice product quality for environmental reasons, thus marketers must not overlook the product's primary function.

According to the American Marketing Association (AMA), the term green marketing is defined as the marketing of products that are environmentally safe. Pride and Ferrell (1993) defined green marketing as "an effort of the organization in the development, promotion, distribution, and price of the product that will have a negligible effect on the environment. They also termed green marketing as environmental marketing or sustainable marketing". On the other hand, Polonsky (1994) gave the definition of green marketing "as the activities that involve satisfying the needs and wants of the consumer with no negative influence on the environment".

2.2.2 Green marketing practices

Green marketing strategies entail a company's long-term holistic thinking, from its manufacturing processes to product distribution, in order to make profit while also protecting the environment. Environmental marketing has numerous advantages, including the possibility for profit. Companies that employ green marketing in their business changes and embrace green product development might reduce operating and manufacturing costs in the long run. The majority of firms have converted their traditional technology into solar panels in order to save money as an investment (Ottman et. al, 2006). Some businesses attract customers by using pollution-free slogans in their advertisements, which helps to increase consumer awareness of green products and environmental challenges (Ankit and Mayur, 2013). Many companies, on the other hand, adapt environmental laws and regulations, such as the restriction and limitation of the use of hazardous and chemical constituents in their manufacturing processes (Tsai et al, 2012), reducing the negative impact on the environment while increasing consumer satisfaction with green products.

Henion and Kinnear (1976) have defined green marketing as a "process of implementation of the marketing programmes aimed at targeting environmentally conscious consumer segment". Charter and Polonsky (1999) took a more universal view of green marketing and defined it "as a holistic and environmentally responsible management process that commences with the identification and anticipation of stakeholders' requirements and culminates only after the satisfaction and fulfilment of those requirements". According to Prakash (2002), "green marketing not only covers the promotion of eco-friendly attributes of products but also involves the promotion of system, policies and processes of the business firms that manufacture and sell the green products". Polonsky (1994) further broaden the concept of green marketing by defining it "as a process comprised of all exchange activities aimed at satisfying consumers' needs and wants with a minimal detrimental impact on the natural environment. This definition emphasized on protection of environment without sacrificing the very core of marketing i.e. the satisfaction of consumer needs and wants".

Green marketing benefits both the bottom line and the top line of a company. While changing company or manufacturing processes may incur initial expenses, it will save money in the long run. Installing solar energy, for example, is an investment in future energy cost savings. Companies who develop new and improved products and services with environmental implications in mind get access to new markets, raise earnings significantly, and gain a competitive advantage over companies that do not promote environmentally responsible alternatives.

Green marketing is the marketing or promotion of a product based on its environmental performance or improvement. It is also the holistic management process responsible for identifying, predicting, and serving the needs of customers and society in a profitable and sustainable manner. Thus, green marketing is a holistic and responsible strategic management approach that identifies, predicts, satisfies, and fulfills stakeholder demands for a reasonable return while ensuring that human or natural environmental well-being is not harmed.

2.2.3 Green vs Traditional marketing

Traditional marketing and green marketing are diametrically opposed in many ways. Green marketing, as seen in Table 2, not only focuses on a company's profit and customer pleasure, but also considers the environmental impact of the company's actions (Chamorro and Bañegil, 2006; Naz and Magda, 2020).

Table 2. Green marketing vs Traditional marketing

	Green Marketing	Traditional Marketing

Parties involved	Firm, customer and environment	Firm and customer
Goals	Customer Satisfaction Reaching firm objectives Reducing environmental negative impact	Customer Satisfaction Reaching firm objectives
Responsibility	Social responsibility Effect on all stakeholders	Economic
Marketing decisions	Entire value chain involved from raw material to post consumption	Manufacturing to consumption of product
Environmental Demands	Environmental intention	Legal requirements

(Source: Chamorro and Bañegil, 2006; Naz and Magda, 2020)

Product, pricing, promotion, and place (4P's) are all part of the green marketing mix, but marketers must adapt it differently from the traditional marketing mix. These elements of the marketing mix are critical in green marketing for a company to achieve its objectives and generate consumer pleasure while also benefiting the environment.

Green marketing's product is known as a green product, an eco-friendly product, or an environmentally friendly product. These products are made to have as little negative impact on the environment as possible during their manufacturing, distribution, and consumption (Tomasin et. al, 2013). In nature, green items are biodegradable, recyclable, and reusable (Blengini et. al, 2012). As a result, green products are thought to be those that have a minimal detrimental impact on the environment and on the health of consumers (Shrum et. al, 1995).

The pricing of the product is another key component of the marketing mix. The consumer will only pay the higher price if they believe the product will provide them with additional value (Surya and Banu, 2014). Drozdenko et al. (2011) conducted a survey of 398 Pennsylvania homes to assess customer perceptions of green product pricing. Consumers are willing to pay an extra two thousand dollars for a hybrid car (green product) if they save one thousand dollars per year, according to the findings. As a result, the price of the green product is not a barrier to its marketing; rather, it is how the marketers persuade consumers that paying a higher price will provide them with more value.

Spreading the green message is a problem for marketers in the green marketing mix. Promotion, which includes advertising, sales, customer relations, and direct marketing, is another component of the marketing mix (Kotler and Keller, 2009). Green advertising is the promotion of

environmentally friendly or green products. It specifies that environmental protection and energy saving were taken into account during the manufacturing process (Chang, 2011).

Another problem for producers is the availability of green products on the market, as well as where and when to make such products available to consumers. This component of the marketing mix assists the company in determining the best market for its product to be offered to consumers (Nguyen, 2022). Many studies have focused on markets and locations that offer environmentally friendly products to consumers who are willing to purchase them (Morone et al., 2021).

2.3 Sustainable development and green marketing

The Brundtland Report World Commission on Environment and Development, published by the United Nations in 1987, was the first to address the concept of "sustainable development." Sustainable development, according to the Brundtland Report, is "development that meets the demands of the present generation without jeopardizing future generations' ability to satisfy their own needs." The two primary core parts of the notion of sustainable development are sustainability and development, which contribute to the concept's formation (Klarin, 2018). However, there may be a conflict between sustainability and development, and both may have unintended consequences (Sharpley, 2000). Neoclassical economists argue that progress and sustainability are not mutually exclusive (Lele, 1991). Sachs (2008) claims that there is no such thing as a free lunch in this case.

Academics, corporations, and policymakers, such as the United Nations and the European Union, have given sustainable development a lot of thought (Silvestre and Tîrcă, 2019). Since its beginnings, the theory of sustainable development has gone through several stages of growth. Although the concept has been accepted in a variety of contexts, it has also been subjected to a variety of interpretations and challenges over time. One of the most frequently mentioned definitions in the literature is that of sustainable development (Klarin, 2018). The notion of sustainable development attempts to meet human needs and wants in the present without compromising future generations' ability to exploit natural resources.

The World Commission on Environment and Development (WCED) issued "Our Common Future" in 1987, which later became known as the Brundtland Report. According to this research, the global environmental concerns are caused by extreme poverty in the South and non-sustainable manufacturing and consumption processes in the North. Sustainable development, according to the Brundtland report, is defined as development that meets current needs and wants without jeopardizing future generations' ability to meet their own needs (Silvestre and Tîrcă, 2019).

At the moment, the globe is confronted with two major challenges: the fastest-growing population on the planet and its impact on the environment. Increased environmental pressure must be avoided

first and foremost by internalizing the external effect (Kasztelan, 2017). The primary challenges are concerns related to climate change, due to the magnitude of the present hazards. They necessitate taking the necessary preventive measures, but due to a lack of agreement in international negotiations on burden sharing, individual countries have looked for ways to balance their national economic growth paths with potential problems such as pollution and depletion of natural resources on their own. The creation of the notion of green growth was a result of the aforementioned conditions (Satbyul et al. 2014).

Green growth is linked to the concept of green economy, which is concerned with society's total welfare and justice while also avoiding negative environmental and ecological repercussions (UNEP, 2011). According to the OECD, ecosystem imbalances generated by negative economic and social processes pose a risk to an economy's development and growth processes, making the formulation and execution of green growth plans critical. Furthermore, natural resources such as mineral resources are sometimes undervalued and as a result are not adequately managed, resulting in additional expenses to the economy and a decline in societal well-being (Kasztelan, 2017).

There is a dearth of trustworthy policies to deal with such concerns, which leads to uncertainty, which stifles innovation and hence delays the pace of sustainable development. Furthermore, the primary goal of green growth plans and regulations should be to encourage businesses and customers to engage in more environmentally friendly activities, as well as to provide genuine incentives for the creation of eco-innovations (OECD, 2014).

Green growth attempts to promote economic development and growth while ensuring that natural resources are used sustainably and that ecological services and resources continue to be provided to promote welfare and growth. Green growth aids in the production of long-term growth and development by combining economic and environmental policies and procedures into a single intellectual policy (Samans, 2013). It is growth that is efficient in its use of natural resources, clean in that pollution and environmental damage are minimized, and resilient in that natural dangers are taken into account (World Bank, 2012).

The goal of the green economy is to increase human well-being and social fairness while lowering environmental dangers and ecological scarcities (UNEP, 2011). The green economy concept is based on the economic, environmental, and social foundations of long-term development. A larger definition of 'inclusive' green growth or sustainable development considers all aspects of social sustainability, including human development and the conditions of the poor and vulnerable.

Many organizations throughout the world have adopted green business policies and practices because they provide a value proposition, a competitive advantage, and societal advantages

(Yeganeh and Glavas, 2008). The term 'green' is usually connected with something that is environmentally friendly, natural, or has the least negative impact on the ecosystem.

2.3.1 Sustainability in Indian Scenario

As a result of human actions during the last century, the climate system is getting increasingly complex. Deforestation, urbanization, increased and rapid changes in gaseous composition in the environment, increased water and soil pollution, rapid change in greenhouse gases, and corresponding changes in eco-systems such as global warming, climate change, glacier melting, droughts, and so on are all consequences of increasing globalisation and industrialisation (Li et al., 2011; Felton et al., 2016). In an overpopulated country like India, environmental problems are no longer uncommon. It has been decades since the government, enterprises, and companies, as well as stakeholders, have worked to ensure consistent and sustainable economic growth with minimal environmental degradation. Environmental degradation, climate change, and global warming are examples of challenges that have prompted producers and consumers to be concerned about environmental protection.

As the globe undergoes rapid changes such as globalization and internationalization, technical improvements, enhanced communication and information systems, big data analytics, and new financial and economic systems, the impact of climate change will continue to grow. The world's population is growing, living standards are changing, human activities are having a negative influence on the environment, and natural resources are becoming scarce (Herrmann, 2010). It is apparent that the industrial production system plays a big role because it consumes around one-third of the world's primary energy (IEA, 2007). As a result, there is a pressing need to replace current socioeconomic development with more sustainable development, as evidenced by changes in the micro and macro environments of businesses, increased awareness, and increased environmental limitations (Urbaniec, 2015).

According to studies and surveys on green products, demand for green products is increasing in Indian marketplaces. Consumers are willing to pay more for green products if they know they are helping to safeguard the environment. Government intervention, product life cycle, product availability, and environmental concern have all become significant drivers of eco-friendly product demand in the market, and these drivers will help shift the demand curve for green products to the right.

According to a recent survey (Tripathi, 2018), approximately 87 percent of Indian drivers and vehicle owners would consider purchasing an electric vehicle if it helped to reduce air pollution.

India, as the world's third-largest automobile market, will boost future demand for electric vehicles and provide companies with opportunity to expand their green market.

The LED lighting market is expanding as a result of government support for the use of LED lighting in smart cities, streets, and homes. LEDs are more expensive than non-green alternatives, but they have a longer life cycle and have less negative environmental impact. As a result, customers are becoming more aware of the advantages of green lights and how they might benefit them in the long run. According to 6Wresearch, the LED lighting industry in India is expected to develop at a 26.6 percent CAGR from 2017 to 23. In 2016, the Indian government announced a plan to replace traditional lighting with LED lighting by installing 770 million bulbs and 35 million street lights by 2019.

More than 63 percent of customers are familiar with green products, and 85 percent believe they are healthier for the environment, according to the survey (DuPont, 2018). Biobased components, they say, not only make a product greener, but also give greater performance, which is crucial for long-term acceptance. It's worth noting that India's belief in the environmental benefits of green products (85 percent) is higher than those of other countries surveyed by DuPont in previous years. According to previous surveys, China has a 70 percent confidence level, Canada has a 65 percent confidence level, and the United States has a 60 percent trust level.

Many companies in India are going green in order to take advantage of the green marketing opportunity. Some instances are as follows:

State Bank of India: This banking giant has not only saved money and gained carbon credits by installing eco-friendly equipment in its 10,000 new ATMs, but it has also set a good example for others to follow. SBI offers a variety of services, including paperless banking, which eliminates the need for deposit slips, withdrawal forms, checks, and money transactions. All of these transactions are completed using SBI shopping and ATM cards. Through a 15-megawatt wind farm created by Suzlon Energy, the State Bank of India became the first Indian bank to harness wind energy. The wind project is the first phase in the State Bank of India's green banking initiative, which aims to reduce the bank's carbon footprint and promote energy-efficient activities, particularly among its consumers.

Nerolac Paints Ltd: Nerolac's Lead Free Paints has always been dedicated to the well-being of society and the environment, and as a responsible corporation, it has always taken steps to improve health, education, community development, and environmental preservation. Hazardous heavy metals have been removed from Nerolac's paints. Hazardous heavy metals such as lead, mercury, chromium, arsenic, and antimony can cause harm to humans.

Tata Motors: Tata Motors Limited, India's largest automobile firm, has established a target of using 100% renewable energy for its own operations. Tata vehicles meet European End-of-Life vehicle criteria for metallic and non-metallic balance in terms of materials used in their construction. Tata has a well-known sustainability program and has already been named the World's Greenest Company by Newsweek. It also has an 80.4 percent worldwide green score, owing to its initiative in developing technologies for agricultural and community advantages.

Wipro: Wipro Infotech was the first firm in India to introduce eco-friendly computer peripherals. Wipro has introduced Wipro Greenware, a new line of desktops and laptops for the Indian market. These goods comply with the RoHS (Restriction of Hazardous Substances) directive, decreasing e-waste in landfills.

Eco-friendly Rickshaws: The government has introduced new environmentally friendly rickshaws in order to prevent pollution. E-rickshaws are electric vehicles that are used for public transportation. These electric automobiles may now be found all throughout the country. To protect the environment, these electric vehicles have transformed public transportation into a green system.

LG: LG India has been a leader in developing environmentally friendly electronic devices. Its selling point is that it uses 40% less energy than traditional LED monitors. They also used halogen and mercury sparingly in order to reduce the use of dangerous components in their goods.

Samsung: Samsung India has always had a wide choice of LED TV screens, and now they've added an environmentally friendly LED backlight to their lineup. They consume 40% less electricity and contain no hazardous compounds such as mercury or lead.

India is a developing country, and its industries are exploding with opportunity and demand. In 2017, India was among the top ten countries in the world in terms of renewable energy capacity installed (Figure 4).

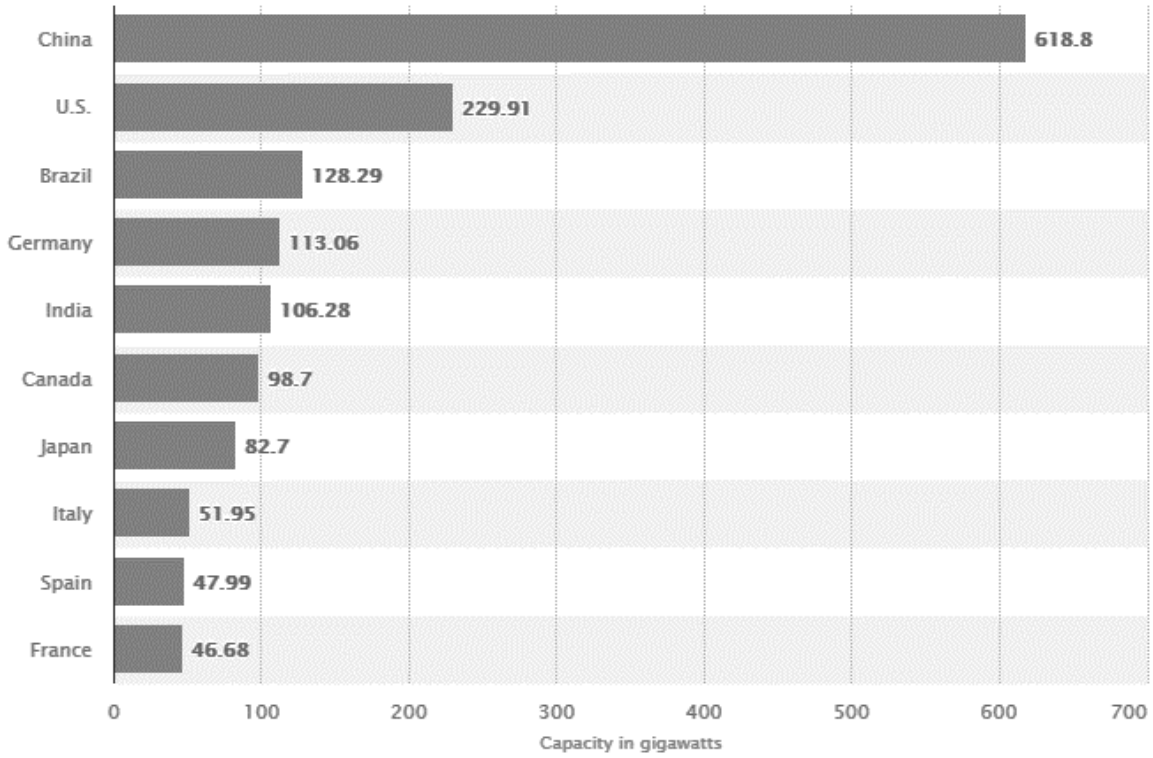

Figure 4. Top ten countries in renewable energy capacity installed

Source: Statista (2018)

This statistic shows the top countries in the world in terms of installed renewable energy capacity in 2017. India came in fifth place.

In India, green technology has a bright future ahead of it. Green technology is gaining popularity since it provides both environmental and technological benefits. The usage of renewable energy sources is a part of green technology. Power generation from renewable sources of energy includes wind, water, and sunlight. With the unrivaled growth of the green technology industry and government participation, an increasing number of new businesses are springing up. The new businesses are also receiving full support and assistance from the industry's other major participants, as well as government agencies. The government provides special subsidies as well as financial and technological assistance. Marketing methods raise awareness, which leads to increased demand for green products.

Governments, like all marketing-related activities, must "secure" the buyer and society; this assurance has significant green marketing implications. Environmental marketing rules enacted by the government are designed to protect buyers in a number of ways:

1. Reduce the production of harmful goods or outcomes. Change the way consumers and businesses use and use damaging products.

2. Ascertain that a diverse selection of purchasers can evaluate the merchandise's ecological synthesis. The government specifies criteria and guidelines for regulating the amount of hazardous wastes delivered by businesses.

In order to reduce air pollution and reduce reliance on fossil fuels, India's government wants more than 30% of vehicles to run on electricity by 2030. According to BNEF, which anticipates EVs to account for roughly 7% of sales in India by 2030, cheap fossil fuel-powered automobiles and a lack of state incentives for electric vehicles make purchases by the government and enterprises important for EV sales.

In addition, the Indian government is drafting new requirements for the installation of environmentally friendly lighting and power sources. As a result, people are becoming more conscious of green lights or LED bulbs, and they are requesting LED lights. It increased market demand for LED lights, and manufacturers and suppliers began attempting to close the LED industry's supply-demand imbalance.

2.3.2 Sustainability in Global Scenario

The European Union is working to address global environmental issues. The European Commission has recognized the importance of playing a role in promoting environmental and human quality of life. The European Green Capital Award was established in 2006 to recognize cities that are working to conserve the environment and improve people's quality of life. These cities serve as models for other cities seeking to achieve sustainable development through the application of innovative and efficient practices, and environmental indicators in cities that have received the European Green Capital award are found to be higher than in other cities (Ratas and Mäeltsemees, 2013).

In order to achieve more integrated and systematic interdisciplinary approaches to sustainable development, considerable changes in economic activity are required (OECD, 2012; United Nations, 2012). Furthermore, well-established participation methods are required to enable the realization of long- and short-term social, economic, and environmental goals (Borys, 2011). It should be remembered that sustainable development is a multifaceted and multidimensional concept that encompasses the interdependence of social, economic, and environmental order in socio-economic development, as well as the need to conserve resources for future generations (Kates et al., 2005; Zieliska, 2014).

It has been determined that the preceding financial and economic crises resulted in a reduction in the negative environmental impact of human activities. However, as economic growth resumes, the detrimental environmental impact may become even more pronounced. Such concerns were

addressed at the OECD Ministerial Council conference titled Green Growth Strategy, often known as Ecological Economic Growth or Ecological Development Strategy (Kasztelan, 2017).

Green growth, according to the OECD, is defined as the implementation of policies that promote economic growth and development while also ensuring the conservation of natural resources and natural assets, all of which contribute to the economy's and ecology's prosperity and progress. Green growth aims to accelerate eco-innovations and investments in environmentally friendly processes and technologies, resulting in new ecological prospects and long-term development (Kasztelan, 2017). Such procedures have been followed in European countries, resulting in a consistent reduction in carbon dioxide emissions.

According to the European Commission report, over 1,623 licenses of European Union Eco label products have been awarded to around 77, 358 products, including goods and services, on the market as of September 2019, nearly doubling the number of products in 2016. Textiles, tissue paper, hand dishwashing detergents, paints and varnishes, cosmetics, and other products have experienced the most development. Italy, Portugal, Spain, Germany, and France are the countries with the most green label items given. Between 2010 and 2019, the following graph (Figure 5) depicts the evolution of European Union Eco Label products and licenses.

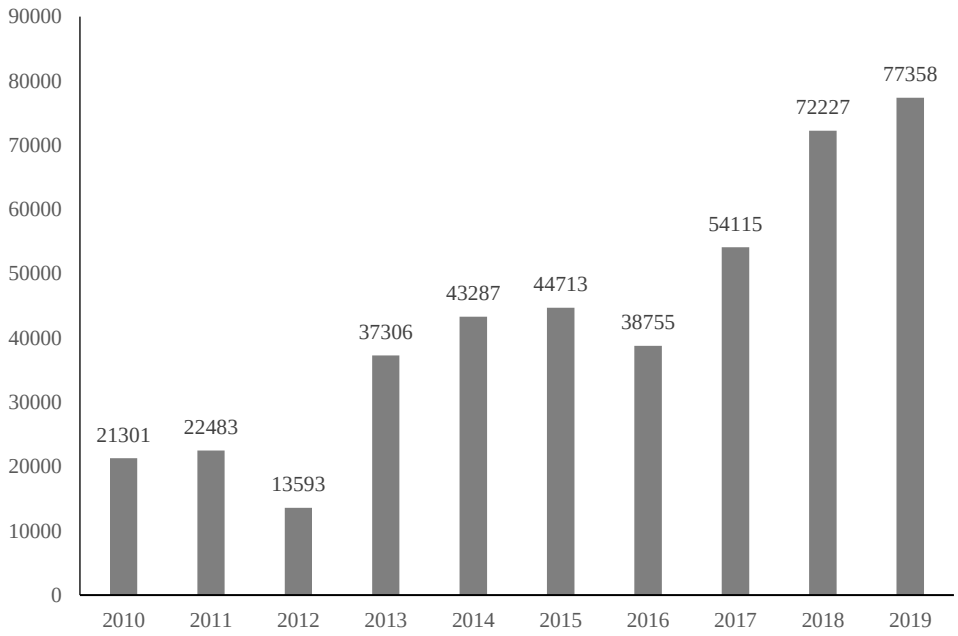

Figure 5. Evolution of European Union Eco-label products from 2010-19

Source: European Commission (2019)

The Eco Label is intended to promote products that have the potential to reduce negative environmental consequences and to facilitate producer engagement in a sustainable environment, thereby assisting European customers in distinguishing between traditional, healthy, and eco-

friendly items. This EU Eco Label is a high-quality environmental label that is recognized throughout Europe. This mark is given to items that meet the criteria of being environmentally friendly throughout their whole life cycle, such as from raw materials to production, distribution, and disposal.

Green growth and the transformation of the economy into a green economy aid the country in minimizing environmental pressures and waste. Greenhouse gas emissions are reduced as environmental pressure is reduced. The greening of the economy, as well as corresponding changes in manufacturing processes and supply chain management, tend to reduce carbon dioxide emissions. Figure 6 depicts the reduction in production-based carbon dioxide emissions in several European nations, including Hungary, Slovakia, Switzerland, Sweden, and Portugal, from 2000 to 2017.

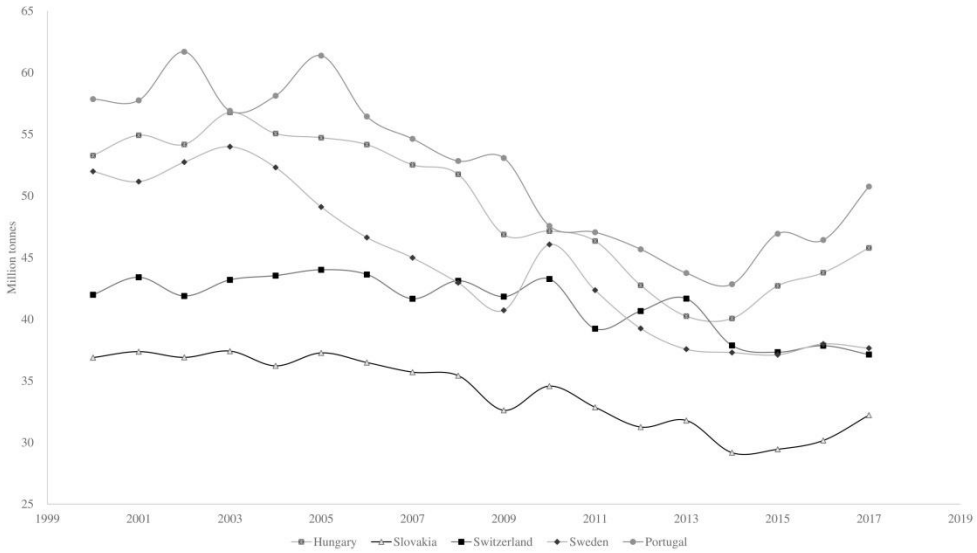

Figure 6. Production based carbon dioxide emission from 2000-17

Source: OECD (2017)

2.4 Overview of the previous studies

Many studies are available on green preferences of consumers all around the world. Some studies are directly linked to the green purchase behavior of the consumers and some studies shows the sustainable and eco-friendly intention of the consumers. The summary of some of the previous studies is comprised in Table 3.

Table 3. Overview of previous studies related to green preferences of consumers and sustainable environment friendly lifestyle

No.	Findings	Country	Author (Year)
1.	Environmental and Social sustainability awareness pose significant positive impact on green purchase attitude through altruism.	India	Panda et al. (2020)

2.	Green product information has a positive significant influence on green purchase behaviour which is mediated by excessive product packaging.	Taiwan	Chang et al. (2021)
3.	Gender has positive significant impact on green purchase behaviour, which implies that females are more inclined towards buying green products.	Poland	Witek, and Kuźniar (2021)
4.	Green products awareness is increasing in a developing country like India.	India	Chaudhary (2018)
5.	Attitude of consumers towards sustainable clothing positively influence their green purchase intention.	Germany	Rausch and Kopplin (2021)
6.	Green purchase intention and perceived consumer effectiveness have positive impact on green purchase behaviour.	USA and Asia	Kamalanon et al. (2022)
7.	Perceived behavioural control and subjective norms have direct positive influence on green purchase intention.	Pakistan	Mazhar et al. (2022)
8.	Perceived consumer effectiveness and concern for environment play a significant role in creating green and sustainable purchase behaviour. Also, age of consumers has significant impact on green purchase behaviour.	Italy	Casalegno et al. (2022)
9.	The highest predictor of green purchase behavior is WTP.	Germany	Moser (2015)
10.	Environmental concern and eco-literacy have an impact on intentions to act in an environmentally responsible manner.	Greece	Pagiaslis & Krontalis (2014)
11.	Consumers who buy environmentally friendly products on a regular basis are proven to have a negative influence on others who have a bad attitude toward the environment.	Greece	Tilikidou & Delistavrou (2014
12.	Despite of the environmental orientation, the ones who buy products concerned with the sustainability management index are more expected to convey word of mouth suggestions.	USA	Allen & Spialek (2018)
13.	There is no direct link between environmental knowledge and pro-environmental conduct.	USA	Kollmuss & Agyeman, (2002)
14.	The collectivism-individualism dimension, which moderates the influence of subjective norm on behavioural intention, is thought to be at the root of cultural differences.	China and USA	Chan, R. Y., & Lau, L. B. (2002)
15.	Personal competence and collective competence, or confidence in one's ability to achieve goals by working with a group, are required for environmental action in the home or in the public arena, such as schools and communities.	USA	Chawla & Cushing (2007)
16.	Proposed a New Environmental Paradigm (NEP). New Environmental Paradigm will rapidly substitute the	USA	Dunlap& Van Liere, (1978)

	traditional world opinion of society and hence will become the new dominant social paradigm.		
17.	Consumers' interior and external environmental views are positively influenced by their level of collectivism, long-term orientation, political involvement, deontology, and law adherence, but they are unrelated to liberalism.	Cyprus	Leonidou, et. al, (2010).
18.	It is found that the knowledge of environment is not significantly affecting the attitude. Also, explicit and implicit behaviour are related moderately and significantly.	USA	Levine& Strube, (2012)
19.	Women outperformed males on two components of green purchasing and environmental attitude measures, namely overall attitudes and pro-environmental behavior.	Los Angeles	Mainieri, et. al, (1997)
20.	In contrast to the findings of previous studies that are in relation to consciousness for environment with collectivism it is found that effect of concern of GBB in India is much lower than USA, may be because of the importance given to development of economy over environment.	USA and India	Muralidharan, et. al. (2016).
21.	It is found that impact of several aspects like attitudes, knowledge and awareness, personal norms and self-individuality on consumers purchase intention of energy saving machines is more than the other social norms.	Vietnam	Nguyen, et. al, (2018).
22.	The positive impact on the behaviour related to environment is generalised by the constructive hope. However, the hope relying on denial has negative correlation with environmental attitude in two samples among which it is a significant negative catalyst in the group of teenagers.	Sweden	Ojala, M. (2012)
23.	The biospheric value has a considerable impact on the intention to visit a green hotel, with a higher value creating a higher intention.	USA	Rahman & Reynolds, (2019).
24.	In this study it is found that females are in large motivated for green consumption than their male counterparts and the most used terms that describes green image involve environment friendly, green, recyclable and biodegradable.	Texas, USA	Smith, K. T. (2010).
25.	Some symbols and terminology is being identified in order to convey the green message, hence the millennials are paying attention on the packaging of the product, the reputation of firm and reading the label of the products in order to identify whether the product is eco-friendly or not.	USA	Smith & Brower, (2012).
26.	The aspects that affect the GBB of consumers in India are altruism, environmental awareness, interpersonal influence and attitude towards environment.	India	Uddin & Khan, (2018)

27.	One of the biggest antecedents of attitude toward green products and willingness to acquire green items is environmental concern.	India	Jaiswal, D., & Kant, R. (2018)
28.	This study used neutralisation theory to identify two further barriers to green consumption: safeguarding one's sense of self and consumer loyalty to the brand.	New Zealand	Johnstone & Tan (2015).
29.	Both green purchases and environmentally friendly behavior were significantly influenced by environmentally friendly social norms and gender.	Austria and Lithuania	Liobikienė et, al. (2017).
30.	The ecological market category is best defined by environmental patterns and self-fulfillment values. This category of consumers is defined by a sense of self-fulfillment and a desire to improve themselves. They also have an ecological lifestyle, which includes environmental awareness, product selection and recycling, and participation in environmental events.	Spain	Fraj & Martine(2006)
31.	Ecologically conscious consumer behaviour (ECCB) has a positive impact on green purchase behaviour (GPB), higher than green purchase intention (GPI).	Portugal	Akehurst, et. al, (2012)
32.	Environmental consciousness is in positive connection with the gender, level of qualification and income.	Hungary	Nagy, S. (2004).
33.	Environmental values have a considerable influence on ecological behavior intention (EBI); there was a moderately significant association between EBI and general ecological behavior (GEB).	Hungary	Nagy, et. al, (2012a)
34.	There is a strong link between consumer environmental awareness and the economic benefits of green products.	Greece	Maniatis, (2016)
35.	Higher first costs, out-dated accounting methods, and complex projects are perceived as the largest barriers for green products.	Germany	Ilg, P. (2019)
36.	There is a positive attitude of consumers to the socially responsible companies.	Hungary	Kovács, I., & Valkó, (2013)
37.	In all of the nations studied, there are segments of elderly customers who practice environmentally conscious consumer behavior, and there are portions that do not. These groups cannot be distinguished by socioeconomic factors, but they do differ in their overall ethical purchasing habits.	Hungary, UK, Germany and Japan	Sudbury Riley, et. al,. (2012).
38.	Strong correlation between the intensity of environmental education and the environmental knowledge of university students.	Hungary	Zsóka, et. al, (2013)
39.	The causal model demonstrates the link between the predicted want, the goal of long-term behavior, and actual behavior.	Spain	Rodríguez-Barreiro et. al., (2013)
40.	Students had a very favorable perception of their own environmental consciousness, demonstrating that the responses have a positive bias: reported environmental consciousness (attitudes) and actions are not always in sync.	Hungary	Szerényi et. al., (2011)

41.	Female respondents appear to be more pleasure-seeking in their consumption, but they are also more price sensitive than male respondents. Sustainable consumption must begin early in life, in childhood, and should continue throughout one's life as part of a lifelong process.	Hungary	Süle, M. (2012).
42.	The most essential, incredibly crucial value that supports pro-environmental behavior has proven to be security.	Hungary	Nagy et. al., (2012b)
43.	Environmentally conscious purchases are less prevalent as the active will is still missing from purchasing decisions as consumers are highly price sensitive.	Hungary	Ferencz et. al., (2017)

Source: Author own construction based on previous literature

2.5 Green or Sustainable Consumption Behaviour

Human activities are influenced by environmental challenges, which also have an impact on corporate development. Due to increased customer knowledge, green and environmental issues have become more important in businesses around the world (Chen and Chai, 2010). Consumers and businesses alike are increasingly favoring green products as environmental protection becomes a major priority around the world. Eco-friendly items, on the other hand, had an impact on the consumer's buying decision.

Businesses are being established all over the world in order to protect natural resources in order to meet the demands of future generations. The realization of human thinking towards nature was brought about by the constant fluctuation in natural resources and their overuse. This realization leads to the development of certain consumption patterns, as well as a rise in green purchasing behavior among people (Sharma et al., 2013). Green purchasing behavior refers to the consumption and utilization of products that have a low environmental impact (Mainieri et al., 1997). Green purchase behavior, according to Mostafa (2007), is defined as the purchase of recyclable products that do not harm the environment. Purchasing and consuming green items, according to Clem (2008), is a social behavior that people engage in to save or protect natural resources.

To lessen the direct or indirect impact on environmental degradation, it is vital to create environmentally conscious behavior among individuals, such as purchasing green items. In previous literature as well, it was reported that purchase behavior is greatly influenced by consumer awareness of products and attitude, according to Roberts (1996). Similarly, Arcury (1990) found that those who are more knowledgeable about environmental issues have a more favorable attitude toward green items. Actually, awareness of environmental issues is a motivator for more constructive behavior toward environmental protection (Laroche et al., 2001).

Schahn and Holzer (1990) backed up the idea that people's responsible behavior toward environmental safety is based on their understanding of environmental issues. Humans' purchasing behavior for green items indicated a propensity toward environmental conservation, according to studies done in this area (Punyatoya, 2014; Jain and Kaur, 2004). Researchers determined that there is a link between green behavior and environmental awareness, despite the results of the value-action gap theory being less than persuasive (Lee, 2011; Nath et al., 2013). There has been evidence of a link between pro-environmental behavior and environmental awareness (Khan & Kirmani, 2015; Chen & Chang, 2012; Punyatoya, 2014; Kotchen & Reiling, 2000). Kaiser et al., (2007) found a substantial link between pro-environmental behavior and people's attitudes in a study. After conducting an investigation, Nath et al. (2013) came to the conclusion that environmental awareness plays a crucial influence in green product adoption. According to Schultz et al., (2004), environmental involvement refers to people's attitudes and feelings about saving the environment.

Lee (2011) also claims that GPB has a direct and indirect association with environmental awareness. In a study of Hong Kong adolescents conducted by Lee (2008), environmental awareness was found to be the second most important factor in explaining GPB. According to Singh (2011), environmental consciousness increased people's desire to buy green items. It is critical for adolescent users to understand their unique involvement in environmental protection (Lee, 2008).

Human ambition to buy green items, according to Brown (2003), is a powerful force to buy green products. It was also discovered that consumers who have a higher intention to purchase green items are more likely to do so than those who have no intention to purchase green products. Blackwell et al., (2001) also supports the idea that people only buy what they want. As a result, the purpose to purchase a green product is critical. It is also noted that consumers who have a practice of using or want to use green products are willing to pay a higher price for them (Peattie, 2001; Laroche et al, 2001).

According to Mahenc (2008), a higher price for green or eco-friendly products is a sign of a safe environment because producing environmentally friendly products requires a greater cost. People's purchasing behavior is incorrectly correlated with purchase intention, according to D,Souza et al., (2006), even when the quality of green items is inferior to that of conventional ones, which are cheaper. Similarly, Gan et al., (2008) found that the quality and brand name of conventional products were the most essential factors for buyers. Green products should be competitive in terms of environmental impact, as well as quality and durability (Diamontopoulos et al., 2003). When it

comes to purchasing green items, packaging is equally crucial. The labels and packages, according to Dantas et al., (2004), have an impact on the buyer.

2.6 Theory and Important Constructs

This section will provide a brief discussion of the theory of planned behavior used in this study and other studied constructs based on previous literature.

2.6.1 Theory of Planned Behavior

This research is based on a theoretical framework of the Theory of Planned Behavior (TPB). The Theory of Planned Behavior (TPB) was established for understanding actual behavior and behavioral intentions. Icek Ajzen derived it from the theory of reasoned action in order to boost its predictive power (Ajzen, 1991). According to TPB, human behavior is driven by intention, subjective norms, and perceived behavioral control (PBC). The relative importance of these three characteristics in explaining a person's intention and action is believed to vary depending on the context and behavior (Ajzen, 1991). The perceived ease or difficulty of doing behavior is referred to as PBC (Ajzen, 1991). Intention denotes a person's motivation in terms of a plan or decision to engage in a specific behavior (Conner & Armitage, 1998). Subjective Norm (SN) refers to a person's perception of societal pressure to perform or not perform a given behavior (Ajzen, 1991).

The stronger the intention, the more the SN, and the greater the PBC is, it is more likely that the person’s behavior will be influenced. Attitudes (favorable or unfavorable perception of a particular behavior), subjective norm (felt social pressure), and PBC all influence behavioral intention. Individuals with more positive attitudes, a higher subjective norm, and a higher perception of behavioral control will be more likely to engage in the behavior in the issue. The TPB is now one of the most widely utilized social-psychological models for predicting and explaining human behavior (Ajzen, 2015). It has been successfully used in a variety of domains and behaviors. Despite the fact that TPB has been successful in predicting and explaining a wide range of purchase decision and food choice behaviors, many previous studies have looked into the impact of additional variables in the TPB theoretical framework (Graham et al., 2015; Webb & Sheeran, 2006, Paul et al., 2016).

Several research have backed the TPB model for predicting customer green buying intentions (Maksan et al., 2019; Nekmahmud & Fekete-Farkas, 2020; Yadav & Pathak, 2017; Xu et al., 2020). Yet, some literature reported that the TPB fails to account for consumers' pro-environmental behavior in a variety of situations, various research has broadened this theory by introducing other variables (Lindenberg & Steg, 2007; Dean et. al., 2012). However, additional

factors should be proposed and incorporated with discretion and after careful consideration (Ajzen, 2015).

Proposed model by Ajzen (1991) for the theory of planned behavior is presented in figure 7.

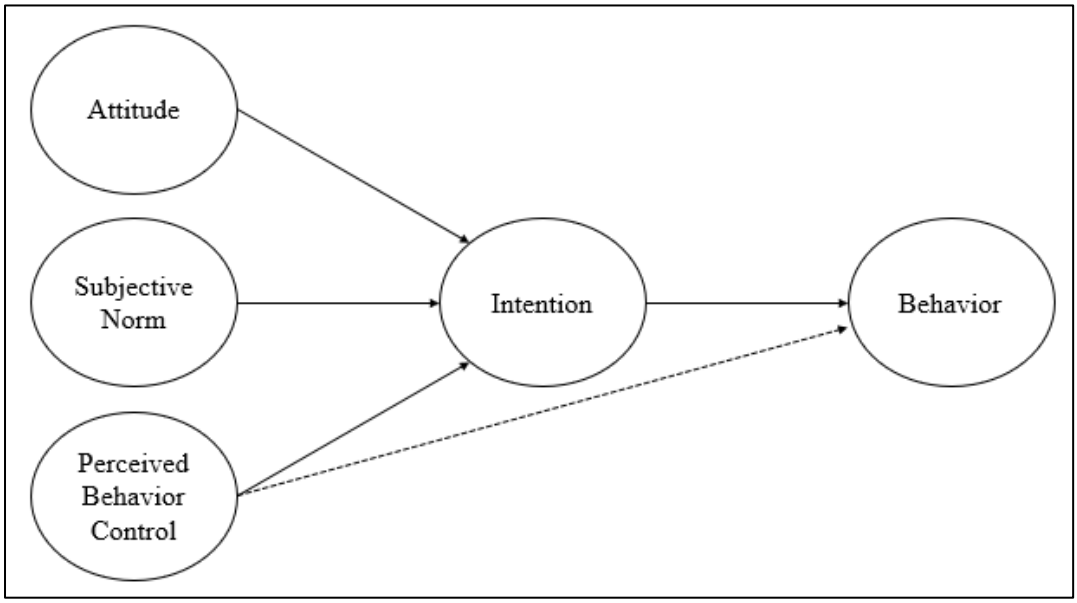

Figure 7. The Theory of Planned Behavior model by Ajzen (1991)

TPB has previously been used extensively in a number of research including environmental challenges such as environmental sustainability awareness (Ahmed et al., 2021; Wang et al., 2021a; Moon et al., 2021), recycling (Ma et al., 2021; Wan et al., 2022; Liu et al., 2021), and environmental attitude (Raimondo et al., 2022; Naz et al., 2020; Leeuw et al., 2015). Recent research in India on green product behavior have used a TPB extension (Varshneya et.al., 2017; Yadav and Pathak, 2017). In these investigations, the model was validated in an Indian environment to determine green buying intentions.

TPB, as previously stated, is made up of three predictor variables (attitude, subjective norms, and PBC) that predict intent to use a specific product for instance sustainable green product. Therefore, the current study attempts to extend TPB for a better understanding of the green purchase intentions of consumers by including several other variables including social sustainability awareness, environmental sustainability awareness, willingness to pay, and green purchase behavior along with variables of TPB theory like perceived behavioral control, subjective norms, and attitude towards green products.

2.6.2 Environmental Sustainability Awareness

Environmental sustainability is defined by Holdren et al. (1995) as "the maintenance or improvement of the integrity of the Earth's life-supporting systems." Environmental sustainability is a prerequisite for social sustainability since it strives to improve human well-being by

conserving the sources of the raw materials used to meet human needs (Goodland, 1995; Panda et al., 2020). When it comes to the Indian clothing business, the majority of previous research has focused on organic apparel and fabric composition. Young Indian consumers, on the other hand, are aware of green products and are willing to purchase them (Prakash et al., 2018).

Furthermore, some researchers have discovered a link between the social and environmental aspects of sustainability. Having awareness or basic information, according to existing studies (Marshall et al. 2005; Johnson, 2006; Rothenberg et al., 2001), is critical for taking action. Young customers are now taking action to help the environment. As a result, the garment business is one of the industries that has adapted its behavior (Wiederhold and Martinez, 2018). Meanwhile, people are shifting their purchasing habits and embracing green principles (Babutsidze and Chai, 2018). Previous research has shown that Indian consumers are environmentally conscious, and that their green shopping decisions are influenced by a variety of factors (Prakash and Pathak, 2017). Hence, this study attempted to identify the influence of environmental sustainability awareness on the attitude of the consumers towards green products which might further impact the green purchase intention and behavior of the consumers.

2.6.3 Social Sustainability Awareness

According to the literature on sustainability, scholars have placed less attention on the social dimensions of sustainability (Kumar et al., 2017; Ahmadi et al., 2017; Panda et al., 2020). Researchers have characterized social sustainability in a variety of ways, making it challenging to come up with a unified definition (McKenzie, 2005; Stöckigt et al., 2018; Kumar et al., 2017). Health, influence, competence, meaning-making, and impartiality are some of the elements of social sustainability (Missimer et al., 2017). In general, social sustainability is defined as a situation that improves people's lives in their communities, as well as a process that can help them achieve that condition (McKenzie, 2005; Panda et al., 2020).

Health concerns, environmental preservation, green lifestyle, social norms, and beliefs all have a part in choosing eco-friendly items (Groening et al., 2018; Kirmani and Khan, 2018; Nilashi et al., 2019; Walcher and Ihl, 2020; Naz et al., 2020; Golob et al., 2018; Groening et al., 2018). According to recent research conducted around the world, there has been a considerable increase in global awareness of green items in various countries. Consumers are aware of eco-conscious clothing, according to Bhandari et al. (2022). Many people are expected to purchase green clothing, and there is currently a market for eco-friendly clothing purchases. Khare (2020) discovered that when purchasing green apparel, Indian consumers value their previous environmental behavior, green peer influence, and green apparel expertise. Another recent study has proven that sustainability concerns transform the attitude of the consumers towards food

supply chain shortage (Wang et al., 2021b). However, researcher found a major research gap in identifying the impact of social sustainability awareness on the attitude of consumers towards sustainable products. Hence, this study attempted to provide evidence for this relationship as sustainability awareness is a crucial construct in transforming the attitude and intention of consumer.

2.6.4 Attitude towards Green Products

A consumer's attitude, according to Ajzen (1991), is defined as an unfavorable or favorable judgment of a person for a specific behavior. A large number of definitions of attitudes can be found in literature. It is a set of beliefs about a specific conduct or a product, according to Schwartz (1992), that may result in the desire to undertake that act. According to Ajzen and Fishbein (1980), attitude is an individual's negative or positive appraisal of a certain behavior and its implementation. Eagly and Chaiken (2007) characterized it as a psychological path that influences a person's dislike or preference for a particular product or object. Green attitude (GA) is the degree to which an individual's green purchasing behavior is favourably or adversely regarded when it comes to green products or services (Chen & Deng, 2016).

Attitude has a favorable and significant relationship with GPI, according to previous research (Laroche et al., 2001; Mostafa, 2009; Barber et al., 2014; Chang & Wu, 2015; Yadav & Pathak, 2016; Sreen et al., 2018; Arshad et al., 2021). Khaola et al. (2014) conducted a study to assess people's environmental concerns and attitudes toward environmentally friendly items in Lesotho. The ATGP was found to have a considerable impact on the people of Lesotho's environmental concern, whereas the interaction effect of intention and environmental worry was non-significant when it came to environmentally friendly products. A person's attitude can be influenced by a number of variables. To corroborate this, Anvar and Venter (2014) conducted a study on South Africans to assess the impact of several factors on people's attitudes and behaviors toward environmentally friendly items.

It was discovered that pricing, social influence, and environmental awareness all had a substantial impact on people's attitudes toward environmentally friendly items. Asian customers' attitudes toward environmentally friendly items vary depending on a variety of criteria such as knowledge, awareness, and belief. According to a research of Malaysian customers, consumer attitudes toward these products are not very positive, but attitudes toward green products and environmental knowledge play a positive role on purchasing behavior (Mei et al., 2012). The TPB, on the other hand, claims that a person exhibits positive behavior if they have a positive attitude toward that behavior (Ajzen, 1991). However, some researches have shown that an individual's attitude toward

green items does not necessarily influence their intention or buying behavior (Naz et. al., 2020; Moser, 2015).

2.6.5 Subjective Norms

Subjective norms (SN) is referred as "perceived social influences/pressures because of which an individual might indulge himself/herself in a particular behavior". In other words, SN is considered as "a social pressure that is being exerted on a person to perform a certain action or behavior" (Ajzen et al., 2018). According to Al-Swidi et al. (2014), it tells "the belief of an individual that if they perform a particular behavior then how they would be regarded by their reference group".

According to previous research, subjective norms are the most important predictor of purchase intention (Al-Swidi et al., 2014; Alsaad, 2021; Roh et al., 2022). Subjective norms and electric car utilization were found to have a strong link in a study on electric car usage (Moons and De Pelsmacker, 2012). However, in India, there have been mixed results, with a few research indicating that there is no clear association between subjective norms and green buying intention (Chaudhary & Bisai, 2018; Paul, Modi & Patel, 2016; Varshneya et.al., 2017), but several recent studies suggest that subjective norms and green buying intention have a considerable direct relationship (Yadav & Pathak, 2017; Sreen et al., 2018).

2.6.6 Perceived Behavioural Control

Ajzen (1991) implies PBC as the "perceived ease or difficulty of performing a behavior". According to Stern (2000), "PBC shows the acquisition of resources and opportunities like skills and cooperation with others". PBC (perceived behavior control) is similarly important in predicting purchase intention in TPB (Jaiswal and Kant, 2018). PBC can be defined as "it can be an individual's perception or individual beliefs that control over the ability to carry out the behaviour" (Mishal et al., 2017; Sreen et al., 2018). Furthermore, because of their immediate effect, it is easy to see how these beliefs might change intentions and behaviors (Wiederhold and Martinez, 2018).

Much research have been done in the past to look into the influence of PBC in organic food purchases, green product purchases, and so on (Molinillo et al., 2020; Barbera and Ajzen, 2021; Shimul et al., 2022). PBC was discovered to have a strong favorable effect on buying intent (Huang et al., 2021; Lee and Lina, 2018). It can be inferred that these ideas have the potential to alter many customers' perceptions and skills. However, other research suggests that PBC may have the opposite effect on buying intent (Barbarossa and De Pelsmacker, 2016).

2.6.7 Willingness to Pay

Willingness to pay is defined as a consumer's maximum willingness to spend a higher price for a green service or product (Li and Meshkova, 2013). Several studies have been conducted in the past to see if green consumers are prepared to pay a premium price for environmentally friendly products. According to multiple studies, consumers are willing to pay a higher price if they are persuaded that changing their consumption patterns will help conserve the environment (Rodriguez et al., 2007; Naz et al., 2020; Xu et al., 2020). However, some studies show that many customers are unwilling to pay a premium for green products because they believe that they can protect themselves and the environment from the risks associated with meals and products even if they do not use green items (Khaola et a., 2014). Several studies, on the other hand, reveal that many consumers are unwilling to pay a higher price for green items while knowing the benefits (Karasmanaki, 2021; Wei et al., 2018).

Furthermore, some customers believe that they should not have to pay extra to assure a product's safety (Khaola et al., 2014), as this is something that firms or the government should consider. Consumers are willing to pay more for the safety and preservation of their own advantages, according to research conducted by Xu et al. (2020) and Saphores et al. (2007) on Chinese consumers and California households, respectively. Similarly, WTP is regarded as a critical and powerful aspect in comprehending GPB, as it has a direct impact on a consumer's purchasing behavior (Prakash & Pathak, 2017). The findings of Prakash and Pathak's (2017) study on young Indian consumers found that, while Indian customers are generally optimistic.

However, despite businesses' costly sustainable initiatives, the available evidence on consumers' willingness to pay extra for green products is equivocal. For example, according to one survey, Japanese consumers are prepared to pay an additional 8–22% for green food products (Sakagami et al., 2006). Sanjuán et al. (2003) found that the most concerned Spanish customers were willing to pay a 22–37 percent price premium for green food products. To make matters even more complicated, Van and Wohl (1995) claimed that highly educated customers did not display willingness to pay for green food products since they are knowledgeable about food hazards and benefits. Most Canadian respondents were prepared to spend 10% more for green products, according to Vladicka and Cunningham (2002), however Argentine consumers' WTP ranged from 6–300 percent (Rodriguez et al., 2009). Some consumers, according to Canavari et al. (2002), were unwilling to pay higher prices for pesticide-free items because they considered that people should not have to pay more for product safety.

2.6.8 Green Purchase Intention

Purchase intention is commonly characterized as a requirement for motivating and encouraging consumers to buy products and services. Many studies look at consumers' intentions in order to see how they really behave. Green purchase intention, according to Chen and Chang (2012), is the prospect of customers wanting to buy ecologically friendly products. Green items are being purchased by consumers in order to protect or not harm the environment (Roe et al., 2001). Green buying intention refers to a person's willingness to engage in or complete a specific type of green purchasing behavior (GPI). Consider buying green products, switch to green versions of products and changing to other brands for ecological reasons are three items proposed by Chan (2001) to measure green purchase intentions. Customers' current and future purchasing decisions for green or environmentally friendly products are measured using green purchase intention. It also aids in estimating customer demand for green products.

Chakraborty et al. (2022) conducted a study on Indian consumers to see how various factors affected their willingness to buy environmentally sustainable products. The data demonstrated that availability of products and sustainable orientation of consumers had a significant influence on Indians' GPI to buy green items. Also, belief of customers had considerable impact on people's purchasing decisions. Furthermore, customers are concerned not only about environmental quality, but also about the environmental consequences of their purchases. People who are more environmentally conscientious and want to recycle things are more likely to demonstrate GPB, according to research (Naz et al., 2020).

Furthermore, GPI has been shown to have a considerable influence on GPB in various studies (Kaiser et al., 2005; Naz et al., 2020; Jaiswal and Kant, 2018; Prakash and Pathal, 2017). Kautish et al. (2019) performed research to evaluate the impact of numerous key components that relate environmental friendliness to people's purchasing behavior for environmentally friendly items. In Washington, Levine and Strube (2012) conducted a study to determine the impact of GPI on GPB among college students. The study's findings revealed that intentions have a large and significant influence on young university students' purchasing behavior, and that promoting a positive attitude enhances people's intention to act in a more environmentally friendly manner, resulting in greater GPB.

III. Materials and Methods

3.1 Research Process

This chapter will provide a description of materials and methods employed to accomplish this research. The process of research includes six phases which were followed to achieve the objectives of the research. These six phases involved- (1) Defining problem, (2) Approach development to find the solution, (3) Formulating research design, (4) Questionnaire development and data collection, (5) Analysing data through statistical techniques, (6) Presenting and Discussing results. Figure 8 shows all phases of research process-

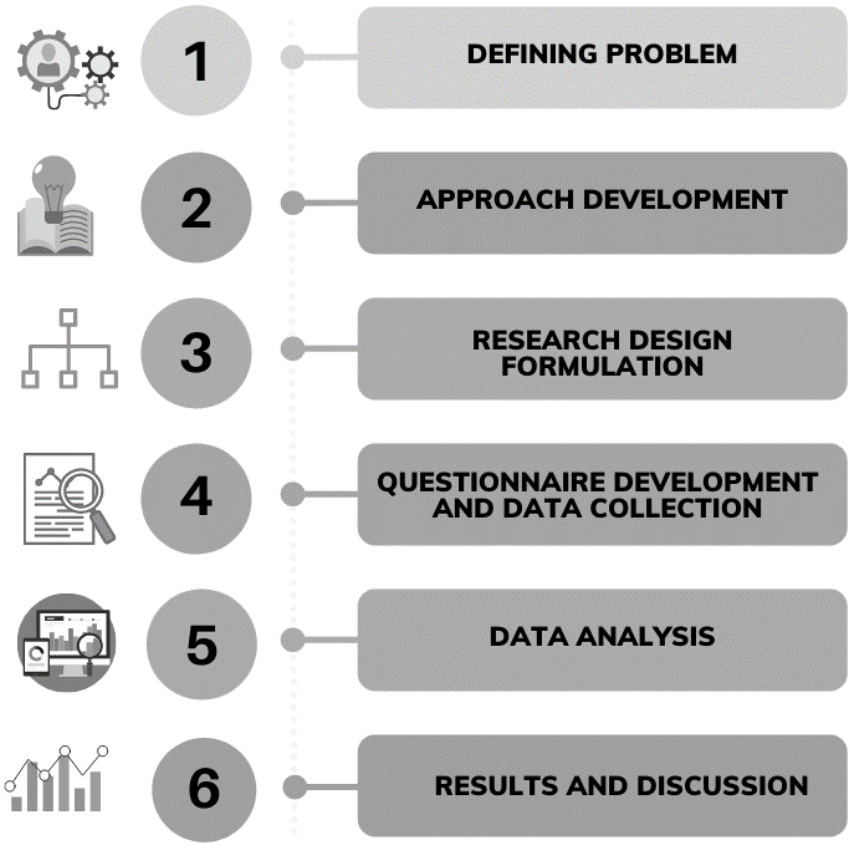

Figure 8. Phases of research process
Source: Author's own construction

These six stages are explained below-

1. To gather information on the studied field of research, a thorough review of the existing literature was conducted.

2. Based on the findings of the literature review, a conceptual model was presented.

3. To test the validity of the suggested model, hypotheses were developed.

4. To collect data, a well-structured and closed-ended questionnaire was created.

5. With the help of proper statistical techniques, data was generated and analyzed.

6. To get conclusions, the data analysis results were interpreted.

3.2 Research Design

A research design, according to Baran (2022), is the planning that goes into conducting the research. The research design is the conceptual framework in which the study is carried out. It lays up the framework for data collection, measurement, and analysis (Malhotra and Dash, 2011). To design the research is among the most important steps in conducting any research (Abutabenjeh and Jaradat, 2018). According to Abutabenjeh and Jaradat, (2018), a research design is "a blueprint to guide the research process by laying out how a study will move from the research questions to the results."

In fact, a research design entails the following steps (a) study objective; (b) designing the exploratory, descriptive, and/or causal stages of the study; (c) research instrument and research method; (d) determining the sampling process and sample size; and (e) creating a data analysis plan.

The shaded part of figure 9 portrays the followed approach or research design-

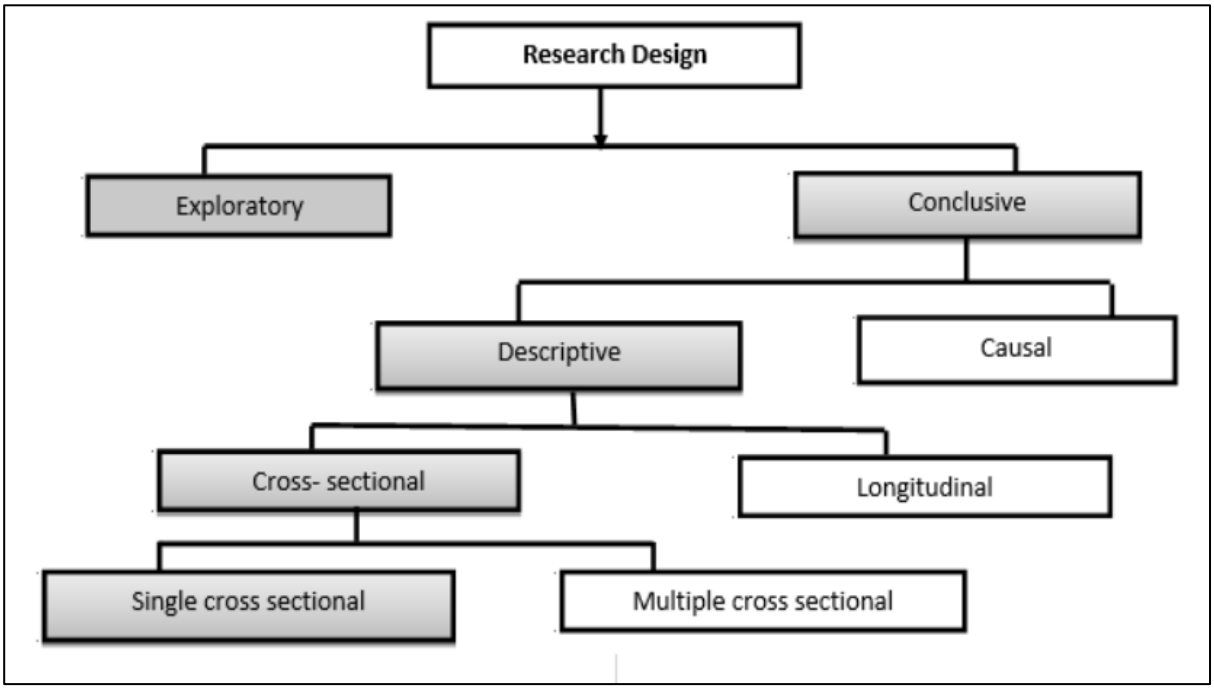

Figure 9. Research design
Source: Malhotra and Dash (2011)

The current research's initial phase was exploratory in character. At this point, the researcher's major goal was to investigate the key constructs that influence consumer attitudes towards

sustainable products. The current investigation is a hybrid of exploratory and conclusive (descriptive) research. At this point, there is uncertainty concerning the crucial characteristics and factors affecting the purchase behavior or intention of the consumers. Also, the methodology employed in existing literature and relationships established between the studied variables. So a thorough exploratory research was conducted to identify these issues which included getting a rudimentary concept of how different components are linked, as well as understanding the methods used by prior researchers.

The goal of the study's second phase was to conduct an in-depth investigation of the relationships between variables linked with attitude, purchase intention, and purchase behavior, in order to draw some particular findings. The research process was structured and formalized during this phase, and the information required was explicitly defined. To begin with the research, sample size and target population was determined, and large sample was gathered. Then, data was examined, and outliers were removed. The conclusion or findings were drawn from data analysis. Therefore, it can be regarded that the character of the study at stage is descriptive as it was intended to analyze the type of correlations among studied variables. However, according to Malhotra and Dash (2011), if the information drawn from respondents was gathered at once and only one sample of target population was recruited, then the research is regarded as single cross-sectional research.

3.3 Research tool

The data gathering tool used in this research was a closed ended structured questionnaire. Close-ended structured questionnaires are those that have a pre-determined response format and are made up of closed-ended questions with a pre-defined set of options (Malhotra and Dash, 2011). A pre-created set of various constructs and their respective questions to which respondents respond and contribute to the data collection process is termed as questionnaire (Sekaran and Bougie, 2016).

The benefits of a closed-ended structured questionnaire, as documented in a large number of prior research, are that it is easier to analyze, code, compare answers, and saves time and resources (Frew et al., 2003; Malhotra and Dash, 2011). Because of these benefits, as well as its application in a large number of past consumer studies on green preferences (Paco et al., 2010; Naz et al., 2020; Panda et al., 2022; Mostafa, 2007) the researcher used closed-ended and well-structured questionnaire.

3.3.1 Questionnaire Design and Development

The purpose of this empirical study is to test the hypothesised relationship. Customers are becoming more aware of sustainability issues; as a result, service providers must be mindful of their shifting preferences (Jaiswal and Kant, 2018). As a result, we conducted this research in the

following manner. There are eight constructs in the proposed model including variables of the Theory of planned behaviour: (1) social sustainability awareness, (2) environmental sustainability awareness, (3) Attitude towards green products, (4) subjective norms, (5) perceived behavioural control, (6) green purchase intention, (7) willingness to pay, and (8) green purchase behaviour. Table 4 lists the indicative variables for each of the discovered constructs.

The items in the questionnaire refer to the questions that are going to be asked to the respondents to collect the data on the basis of their response. It should be kept in the mind that the response of the subjects can be either positive or negative, and the interviewer should not force the respondents for the sake of his positive or negative result that the researcher wants. Also, to reduce the biasness in the responses of the subjects the questions are asked to make in both the negative and the positive manner like the words that are being used to make the questions should include both negative and positive language (Sonderen et al., 2013). The scales used in the conceptual model include both which were adopted from relevant literature and the ones which were pretested by the researcher in the previous published papers. The scales and respective items used in the published papers are given below.

The questionnaire was divided into three sections. The first section of the questionnaire constitutes questions concerning the demographic profile of the respondents. The second section of the questionnaire comprises ten questions to examine the sustainable habits of the consumers, for instance, recycling, energy consumption, water consumption, etc. The third section of the questionnaire comprises questions to examine the variables ESA, SSA, ATT, SN, PBC, WTP, GPI, and GPB. These assertions were built on a "five-point Likert scale" devised by Rensis Likert (1931) for attitude evaluation. This scale is widely regarded as one of the most effective tools for assessing behavior (Taherdoost, 2019). Malhotra and Dash (2011) indicated that each Likert scale question contains five response classifications: "strongly disagree, disagree, neutral, agree, and strongly agree". As a result, the Likert scale is extensively employed to assess attitudes, beliefs, and approaches in marketing study since it allows respondents to express ideas of varying degrees.

Table 4. Constructs and respective indicators with codes

Constructs	Items		Sources
Environmental Sustainability Awareness	EA1	"I am aware of the environmental changes the world is going through."	Panda et al. (2020), Yong et al. (2020); Stöckigt et al. (2018)
	EA2	"I am aware of environmentally ethical products."	
	EA3	"I am aware about the growing pressure to change the way of living to combat the deterioration of the environment."	
	EA4	"I am aware about the personal responsibility towards environmental changes."	
	EA5	"I am aware that individuals can influence the overall environmental awareness levels."	
	EA6	"I am aware of that individual are making efforts to deal with environmental changes."	

	EA7	"I am aware that societal influence can increase individuals' environmental awareness."	
Social Sustainability Awareness	SA1	"I am aware that organisations must be careful about implementation of social practices."	Panda et al. (2020); Yong et al. (2020)
	SA2	"I am aware that similar products do not provide a common meaning to the society."	
	SA3	"I am aware that everyone does not have equal access to various products and services."	
	SA4	"I am aware that products are not updated as per societal needs."	
	SA5	"I am aware that products have impacts on my safety and health."	
	SA6	"I am aware about that some products help the developing communities."	
	SA7	"I am aware that some products have an operational impact on certain communities in a positive way."	
Attitude towards green products	AT1	"I believe that use of green products will help in reducing pollution and help in improving the environment."	Kumar et al. (2017); Ramayah et al. (2012)
	AT2	"I believe that use of green products will help in reducing wasteful use of natural resources."	
	AT3	"I believe that use of green products will help in conserving natural resources."	
Subjective Norms	SN1	"Most people who are important to me think I should purchase green products when going for purchasing."	Chaudhary & Bisai (2018); Yadav & Pathak (2017).
	SN2	"Most people who are important to me would want me to purchase green products when going for purchasing."	
	SN3	"People whose opinions I value would prefer that I purchase green products."	
	SN4	"My friend's positive opinion influences me to purchase green product."	
Perceived Behavioural control	PBC1	"Whether or not I buy green product at place of conventional non-green product is completely up to me."	Kim & Han (2010); Yadav & Pathak (2017)
	PBC2	"I am confident that if I want to, I can buy green product at place of conventional non-green product."	
	PBC3	"I have resources, time and opportunities to buy green product."	
Intention to buy green Products	GPI1	"I will consider buying products because they are less polluting in coming times."	Chaudhary & Bisai (2018); Naz et al. (2020)
	GPI2	"I will consider switching to environmentally friendly brands for ecological reasons."	
	GPI3	"I plan to spend more on environmentally friendly product rather than conventional product."	
	GPI4	"I expect to purchase product in the future because of its positive environmental contribution."	
	GPI5	"I definitely want to purchase green products in near future."	
Willingness to pay	WTP1	"I would pay more for a green product that is making efforts to be environmentally friendly."	Chaudhary & Bisai (2018); Naz et al. (2020)
	WTP2	"I would be willing to pay this extra percentage on the green products to support the organization's/ product efforts to be environmentally friendly."	
	WTP3	"I feel proud to have environmentally friendly products in my house though they are more costly than conventional products."	
Green purchase Behavior	GPB1	"When I want to buy a product, I look at the ingredients label to see if it contains things that are environmentally damaging."	Lee (2008); Jaiswal & Kant, R. (2018); Naz et al. (2020)
	GPB2	"I prefer green products over non-green products when their product qualities are similar.	
	GPB3	I choose to buy products that are environmentally friendly."	
	GPB4	"I buy green products even if they are more expensive than the non-green ones."	

Source: Author's own construction

3.4 Sampling Method and Sample Size

Sampling is defined as the selection of the fragment of the population that a researcher is taking into consideration for the study. The study is proposed to be conducted in India for analyzing the green purchase behavior of the consumers. It is taken into account that; the respondents have the knowledge regarding environmental issues, and they are the ones making purchase decisions. The study will be analysed using PLS SEM, hence the size of the data will be decided accordingly.

Some studies suggested that the structural equation modelling is very sensitive to the size of the sample as the findings for the small size of sample are resulted in unstable results.

A commonly used sample size assessment criteria in PLS SEM is the technique of ten times rule (Kock & Hadaya, 2018; Hair et al., 2012). This ten times rule has been justified in many studies conducted since long but none of the researcher suggested the original explanation of the rule. However, Nunnally (1994) have suggested that the best rule of estimation of sample size in SEM is to have 10 times a greater number of respondents than variables (Westland, 2010). In this regard it is decided to take more than 500 respondents as subjects to generate the data.

The research study is based on primary data gathered by urban purchaser survey via online survey using structured questionnaire. A snowball sampling approach was implemented to select the respondents that are the representative of the population from the urban areas of India. When gathering the data, it was made sure that the respondents have previous experience of green products and are accountable for buying assessments.

3.5 Data Analysis

To analyse the primary data and drawing inferences, both inferential and descriptive statistical methods were employed. For descriptive statistics and Exploratory factor analysis (EFA), SPSS V. 26 was used. In order to test the hypothesis, partial least square structural equation modeling (PLS SEM) was employed by using SmartPLS 3.0. Furthermore, R studio was used to draw stacked charts to examine the extent of sustainable habits shown by the consumers.

3.5.1 Data Preparation

The first step after generating the data was to prepare it for concluding analysis. Dealing with missing values, coding, editing, coding, and removing extreme values or outliers, and verifying for normalcy were all part of the process (Hair et al., 2010). As the objective of generating reports is to give summarized evidence from the collected data, one of the primary difficulties that researchers should address while preparing statistical reports is summarization. To assure comprehensiveness, reliability, and consistency of the collected sample data, it was examined and corrected for errors, omissions, readability, and consistency. Then characters and symbols were allocated to code the data of the questionnaire's variables to make it compatible for used statistical software like SPSS and SmartPLS. Table 5 presented the codes allotted to the items of the questionnaire.

Table 5. Types of questionnaire items and its codes

S. No.	Questions	Codes

1.	Likert scale-based questions	"Strongly Disagree" – 1 "Disagree" – 2 "Neutral" – 3 "Agree" – 4 "Strongly Agree" – 5
2.	Gender	"Male" – 1 "Female" – 2
3.	Education	"Bachelor" – 1 "Master" – 2 "PhD" – 3
4.	Age	"Under 18" – 1 "18-25" – 2 "26-35" – 3 "36-45" – 4 "Above 45"- 5
5.	Income	"Less than 20,000 INR" – 1 "20,000 INR- 40,000 INR" – 2 "40,000 INR- 60, 000 INR" – 3 "Above 60,000 INR" – 4
6.	Sustainable Habits	"Never" – 1 "Rarely" – 2 "Sometimes" – 3 "Usually" – 4 "Always" – 5

Source: Author's own work

3.5.2 Partial Least Square Structural Equation Modeling (PLS SEM)

The research findings are organized into three sections. First, the frequency with which individuals engaged in such behaviors is investigated. Secondly, the relationship that conventionally defined green purchase intention and green purchase behaviors were assessed. Finally, the various levels of behavioral commitment are investigated in relation to the numerous aspects that have been associated to green purchasing behavior, such as sustainability awareness, socio-demographics and psychological factors.

The present study used following methodology and measures for verifying the mentioned hypotheses and the model. Partial Least Squares based Structural Equation Modelling (PLS SEM) will be applied to examine the proposed conceptual framework. SEM is a very dominant, strong and multivariate method which is increasingly found in many scientific studies in order to test and analyse multivariate causal relations. Other modelling methods assess indirect and direct effects already assumed causal relations unlike SEM. This statistical method is around a millennium old and has gained progress since a very long time (Fan et al., 2016). SEM is a method that estimates a chain of dependent relationships out of the set of factors that are assimilated into the incorporated model (Hair et al., 2014).

In structural equation modelling a construct is a dormant or undetected notion that can be explained conceptually but not possible to examine directly and hence can be assessed by given variables

and several indicators that are included in questionnaire (Hair et al., 2010). Structural Equation Modelling is defined as a multivariate statistical analysis and is a combination of two accustomed multivariate procedures such as multiple regression analysis and factor analysis (Lowry and Gaskin, 2014). SEM is famous for another great strength that is the capability to divide the direct and indirect effects and to separate the multiple paths to check which unit can influence other unit (Eisenhauer et al., 2015).

In SEM models, there are two basic techniques to evaluating a connection namely CB-SEM (covariance-based structural equation modeling) and VB-SEM (variance-based structural equation modeling) (Hair et al., 2017). The most common type of VB-SEM is Partial Least Squares (PLS). Herman Wold (1982) was the first to create PLS-SEM, which he called PLS path modeling at the time. Currently, PLS-SEM is a more contemporary acronym for the approach (Hair et al., 2011). PLS-SEM and CB-SEM both appeared around the same time. In comparison to CB-SEM, PLS-SEM provides a structural equation modeling technique with far more flexibility. Manley et al. (2021) refer to many research objectives to classify when and why to use PLS-SEM. For instance-

(1) For exploratory research to extend the existing theories or to develop new theories.

(2) The research's major statistical goal is to make predictions.

(3) Multi-item latent variables are included in the study.

(4) The structural model is complex, containing several constructs, indicators, and/or causal linkages.

(5) Research focusing on small sample size.

(6) As is common of social sciences and survey data, data are not normally distributed.

Hence, this study employed PLS-SEM as the main objective of the research is to explore complex multi-item latent variable model and to extend the theory of planned behavior. In PLS-SEM the estimation and analysis of causal relationships is the main characteristic of this method. The specification of the correlation and causal relationship between the given variables is the very first stage of structural equation modelling. Also, the correlation and causal relation without any appropriate explanation or theoretical background weaken the causative relation in hypotheses (Shipley, 2016). This study is a pioneering work analysing the consumer’s behavior towards green products and therefore the appropriate method considered for validating and testing the conceptual model is PLS-SEM. The steps followed for conducting PLS-SEM are based on the methodology employed by Hair et al. (2014). This method is considered a standard methodological approach to conduct PLS-SEM.

The steps followed to conduct PLS-SEM are given in figure 10.

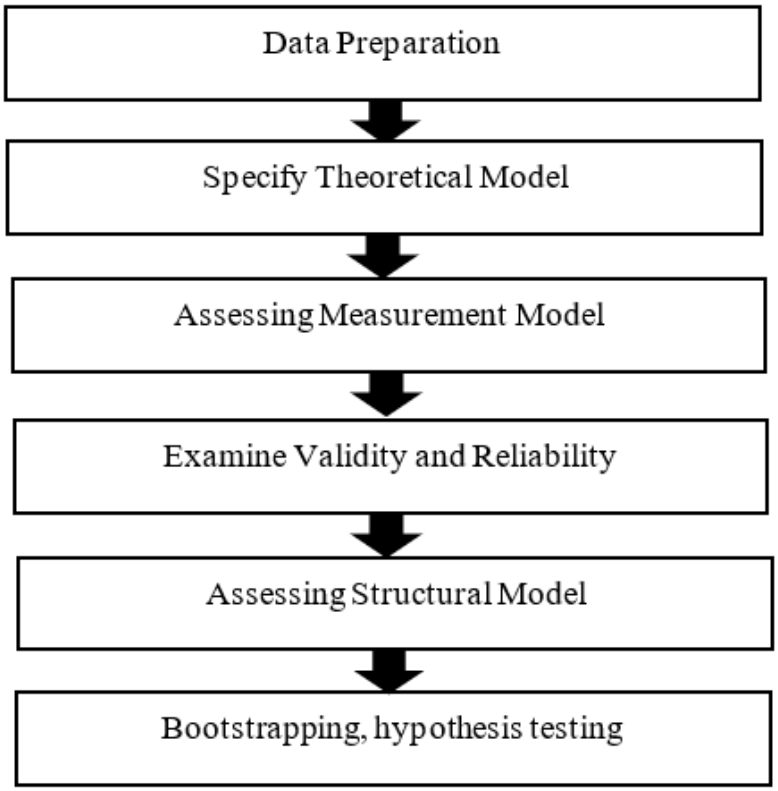

Figure 10. Steps followed in PLS SEM
Source: Author's own construction

PLS involved two models termed as outer and inner models. The outer model refers to the association of constructs and their respective items. Whereas, the inner model, on the other hand, depicts the link among the latent constructs (Wong, 2019). Furthermore, in the PLS SEM, the outer model constitutes two models namely formative measurement model and reflective measurement model.

Each item in the reflective model signifies a measure of the latent variable. Furthermore, the direction in this model is from the latent variable to its elements. In the formative paradigm, on the other hand, items establish their variables, and the path of communication is from the items to the latent variable (Hair et al., 2014). This study used a reflective measurement model as each item represents the latent variable.

3.5.3 Research Framework

In designing of the research, the conceptual framework is the one of the most important aspect. The conceptual framework is actually a diagram of the research that shows the paths on which the study has be moved on or in which direction the study has to be done (Adom et al., 2016). The

readers can easily understand the concept and design of the research by just analysing the framework proposed by the author, so it is easy for both the researcher and the readers to follow the conceptual framework. The conceptual framework proposed for the study is given below in Figure 11.

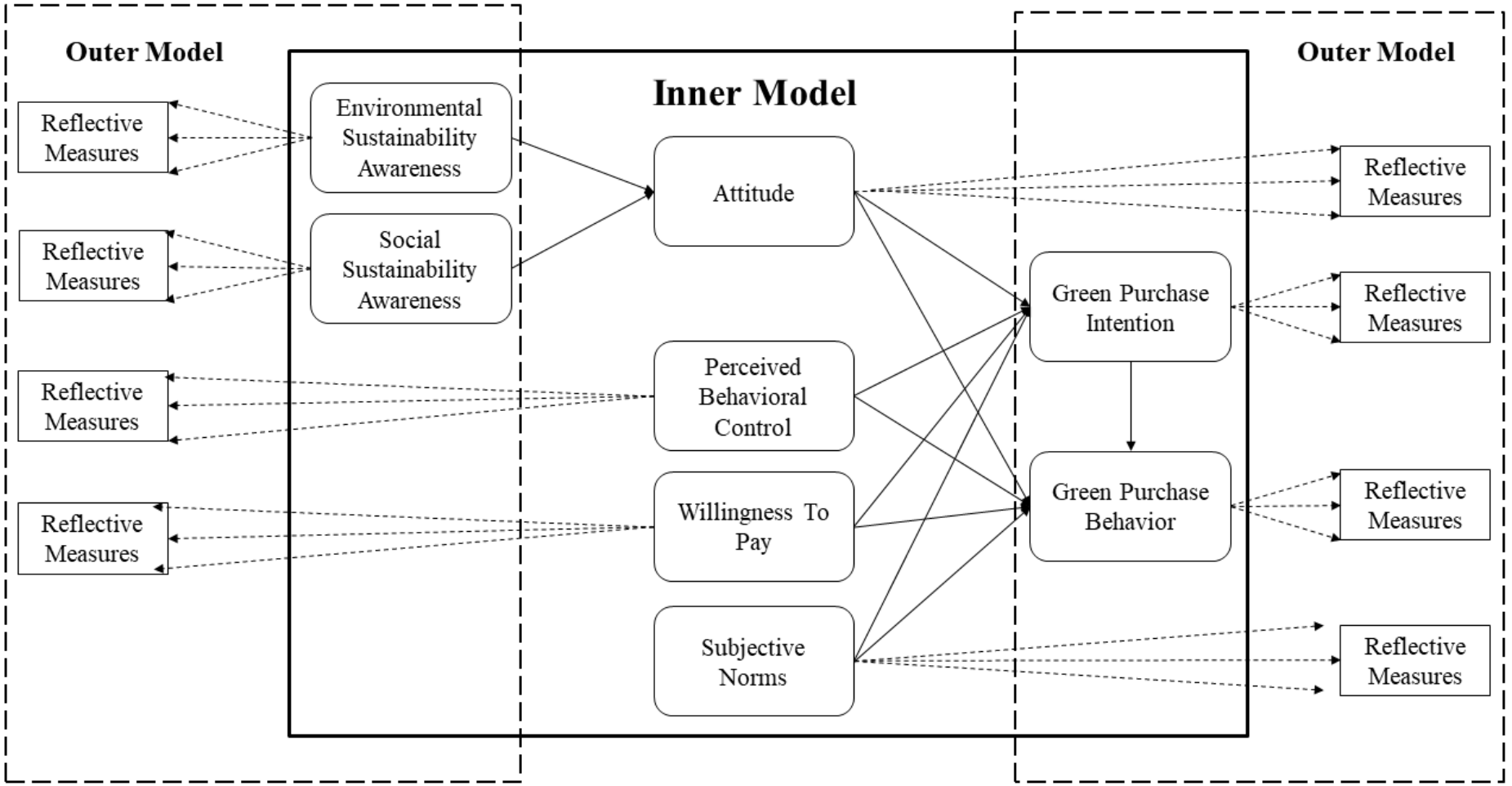

Figure 11. Inner and outer model of the Research Framework
Source: Author's own construction

3.6 Research Flowchart

The conceptual structure and step by step process to conduct the research is known as research flowchart. It contains the plan for the examination, amount and assemblage of data (Malhotra & Dash, 2011). Akhtar (2016) stated that design of research is the glue that holds all the research components together. He further stated that research design has following important features:

i. It specifies the relevant information and sources for the required information.

ii. It clarifies that which approach should have to be used to analyze and to collect the data.

iii. It also helps in deciding the economics and timeframe of the study.

iv. A good research design also includes the population which has to be studied.

This study is the combination of both conclusive and exploratory research. To find the important trends in consumer decisions regarding the purchase of green products, the link between these trends and the link to the methodologies used in the previous studies comes in the first phase of this study which will be exploratory in nature.

The second phase of this research will include the deep and thorough study of the trends and connections between the different variables which are representing the behaviour of consumers towards the green products. The deep analysis of all the variables in this phase will leads to the conclusion of the study which shows the conclusive nature of the study in this phase. Important things in this phase will be: Formal and structured process of research, clearly defined information, samples will be representative and large, data will be analysed quantitatively and at the end conclusion will be given based on the findings (Malhotra and Dash, 2011; Dexter, 1994). As the intention in this study will be to explain the degree of the relationship between the consumer behaviour trends for green products, so more specifically, this study will be descriptive in nature.

Figure 12 depicts the research flowchart used in this study to conduct the research.

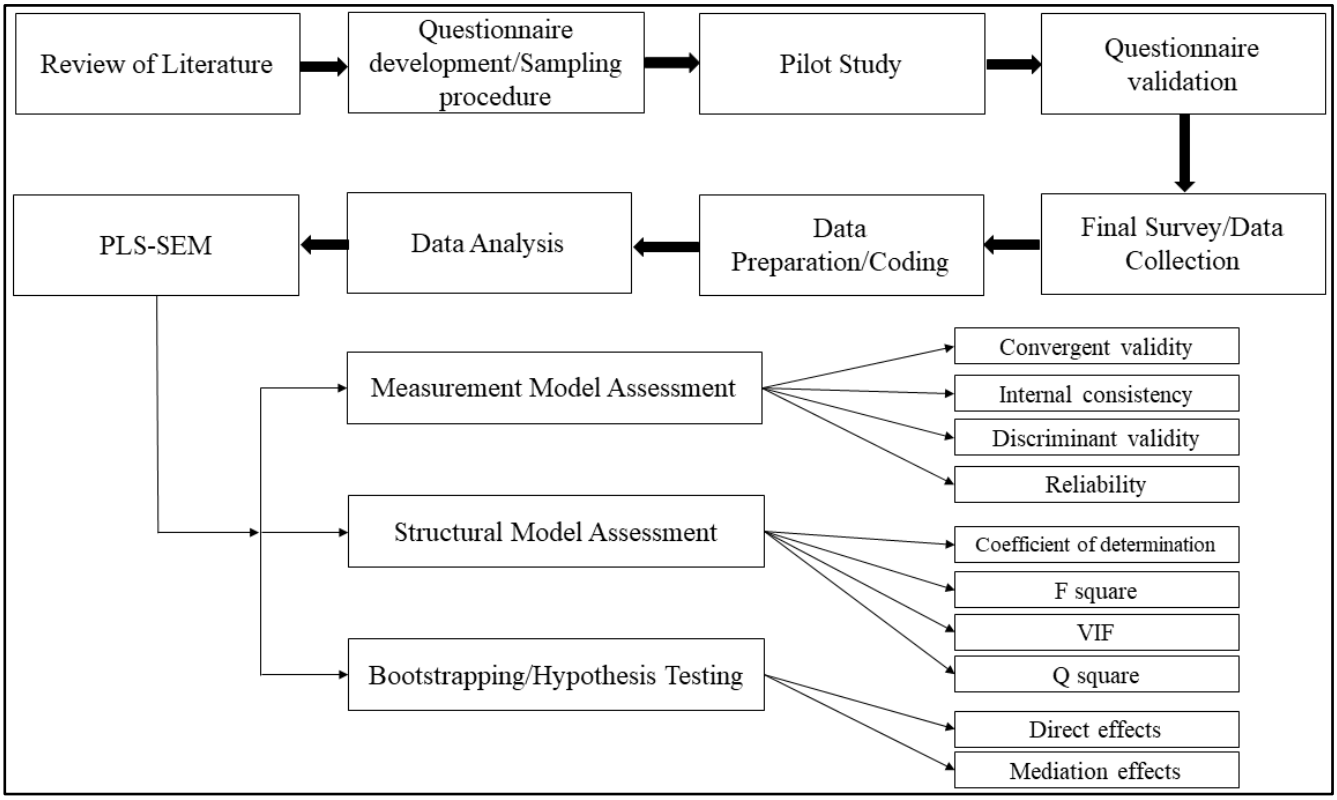

Figure 12. Research Flowchart
Source: Author's own construction

3.7 Pilot Study

Pilot study or pretesting of the questionnaire is the phase in the growth of the questionnaire that will identify the prospective success of the questionnaire. It is conducted before the final circulation of the questionnaire to the sample population (Reynolds et al., 1993). A pilot study need to be conducted to confirm that the questions and information in scenario of the purchase decisions of the consumers has been carried unmistakably to the respondents. With the pilot study the precision of the likert scale will be checked thoroughly as well. Approximately, 40-100 respondents will be interviewed for the pilot testing.

A comprehensive structured questionnaire for urban consumer survey will be developed following standard scales and question types to record the consumers' responses to green/ environmentally friendly attributes of the products under study. The questionnaire will be pilot tested to make it effective and respondent friendly. The questionnaire will be divided into various sections to capture the data on socio-demographic, habitual, and psychological factors of the respondents as well as consumers' attitudes towards green products and buying behaviour.

For this study, by considering the number of constructs around 70 samples were decided to collect the data for conducting a pilot study.

3.7.1 Validation and Reliability of the questionnaire

The degree of consistency between several measurements of a variable is measured by reliability (Hair et al., 2010). Cronbach's alpha is the most often used metric of internal consistency, or reliability. It may be thought of as a correlation coefficient between the questions used to measure a particular parameter (Sekaran and Bougie, 2016). Before conducting the final survey, the reliability test through a pilot study was conducted. The study's validity was ensured by verifying that the measuring instrument's content matched the specified research hypotheses and measured what the survey meant to measure. Cronbach's alpha for the entire construct was found to be 0.937, which is considered acceptable for exploratory research (Hair et al., 2010). This refers to the high reliability of the questionnaire.

However, despite of performing a single reliability test on the entire instrument, some researchers recommend examining the reliabilities of each construct independently. As a result, each element was subjected to reliability testing. SPSS 26 is used to conduct reliability tests and the results from the pilot study of 60 samples revealed that the value of Cronbach's alpha vary from 0.732 to 0.901. This result indicates that the factors are very reliable, since a Cronbach's alpha of 0 to 1 with r = 0.7 or above is deemed satisfactory (Nunnally, 1994). Hence, the results of the pilot study confirmed that the questionnaire's design would aid in meeting the study's research assumptions. The Cronbach alpha of each construct is given in Table 6.

Table 6. Cronbach alpha and KMO values

Construct	No. of items	Cronbach alpha	KMO
Environmental sustainability awareness	7	0.863	0.847
Social sustainability awareness	7	0.872	0.836
Attitude towards green products	3	0.897	0.747
Subjective Norms	4	0.883	0.786
Perceived Behavioural Control	3	0.732	0.641
Willingness to pay	3	0.901	0.749
Green Purchase Intention	5	0.884	0.823
Green Purchase Behavior	4	0.822	0.704

Source: Author's own work based on SPSS 26.

Furthermore, to assess the dataset's appropriateness and eligibility for factor analysis, the Kaiser–Meyer–Olkin (KMO) test and Bartlett's test of sphericity were used. The high KMO value (between 0.5 to 1.0) suggested that the sample was suitable for EFA (Hair et al., 2010). The resulting values of KMO is presented in table 6, which indicates that all values are above 0.5 and confirms the adequacy of the sample. The hypothesis that the variables are uncorrelated was tested using Barlett's test of sphericity (BTS). The low correlation between the research variables was revealed by the significant values of BTS (<0.05). The BTS values of each construct is below 0.05, hence determined that the dataset under investigation is not an identity matrix, indicating that the variables were connected and suitable for future investigation.

Furthermore, the communalities were analyzed to minimize elements that might cause findings to be skewed. The importance of communalities was investigated, as it should be noted that variables with low communalities may cause significant results distortion (Fabrigar et al., 1999). The items with low communality should be omitted from the study since factor analysis will not be able to explain the variation by common factors, which means that each item must have some common variance with other items (Child, 2006). Some researchers believe that a communality of more than 0.2 should be accepted (Child, 2006; Boran et al., 2020), while others believe that a communality of more than 0.40 should be accepted (Williams et al., 2010), because differences in results are more likely when communality is less than 0.40. (Fabrigar et al., 1999). Table 7 shows the communalities of all the objects under investigation, and each item has a value greater than 0.40, therefore no item was removed at this stage.

Table 7. Item communalities

Construct items	Communalities	Construct items	Communalities
ESA1	0.545	SN2	0.893
ESA2	0.612	SN3	0.760
ESA3	0.619	SN4	0.813
ESA4	0.673	PBC1	0.630
ESA5	0.709	PBC2	0.763
ESA6	0.773	PBC3	0.656
ESA7	0.711	WTP1	0.865

SSA1	0.728	WTP2	0.820
SSA2	0.635	WTP3	0.794
SSA3	0.777	GPI1	0.636
SSA4	0.829	GPI2	0.707
SSA5	0.800	GPI3	0.757
SSA6	0.741	GPI4	0.885
SSA7	0.789	GPI5	0.878
ATT1	0.883	GPB1	0.707
ATT2	0.845	GPB2	0.915
ATT3	0.873	GPB3	0.879
SN1	0.824	GPB4	0.626

Source: Author's own calculation using SPSS 26

IV. Results and Discussion

4.1 Respondent's demographic profile

This descriptive statistics for the respondents' various socio-demographic traits is described in this section. At the start of the survey, respondents were asked to define their gender, age, education qualification, and income in order to acquire socio-demographic data. These characteristics will be briefly detailed further on. As previously stated, 983 respondents' data was acquired via distributing the questionnaire during the research period. Table 8 shows that women made up the majority of the responders. Females accounted for 613 of the 983 respondents, or about 62 percent, while males accounted for 38 percent of the total respondents.

Table 8. Gender profile of respondents

Gender	Frequency	Percent
Male	370	37.6
Female	613	62.4

Source: Author's own work based on collected data

Table 9 shows the distribution of respondents based on their age. Respondents between the ages of 18 and 25 have the highest frequency with 46%. Then, around 36% of respondents come under the category of 26-35 years and around 7% under 36-45 years. The least percentage of respondents are from the category of under 18 and above 45 with 5% and 5.4%, respectively.

Table 9. Age profile of respondents

Age	Frequency	Percent
Under 18	50	5.08
18-25	455	46.2
26-35	355	36.1
36-45	70	7.16
Above 45	53	5.46

Source: Author's own work based on collected data

Table 10 contains information on how the respondents are allocated according to their educational qualifications. The majority of those who responded are pursuing or hold a master's degree (48%).

Then, 37% of the respondents belong to the category of bachelor education and 14% belong to higher education category.

Table 10. Educational qualification of respondents

Education	Frequency	Percent
Bachelor	365	37.1
Master	475	48.3
PhD	143	14.5

Source: Author's own work based on collected data

Table 11 shows how the respondents' monthly income is divided into four groups. As the study was conducted in India, therefore, the category of income was based on Indian Rupee (INR). Currently 1 USD = 75.9 INR. According to the data collected, around 17% of the respondents earn less than 20,000 INR. The results show that majority of respondents around 48% earn between 20,000-40,000 INR per month. Lastly, 21% of respondents earn between 40,000-60,000 INR per month and 12% of respondents earn above 60,000 INR per month.

Table 11. Income of the respondents

Income	Frequency	Percentage
Less than 20,000 INR	173	17.5
20,000-40,000 INR	480	48.8
40,000-60,000 INR	210	21.3
Above 60,000 INR	120	12.4

Source: Author's own work based on collected data (1 USD = 75.9 INR).

4.2 Sustainable habits of the respondents

To analyze the degree of sustainable habits adopted by the consumers, they have been asked how often they follow sustainable habits in their everyday life. For instance, ten sustainable habits questions were asked from them like how often they carry their own bag while shopping, purchase less harmful detergents, compost their kitchen or garden waste, etc. These questions were based on five-point likert scale ranging never to always as 1-5 and adapted from the study conducted by Gilg et al. (2005). Through these questions researcher wanted to examine the habits of respondents and how

environmentally friendly they act in their day-to-day tasks. The respondent's habits will tell a lot about their behavior and attitude as how much they care about the environment. According to the responses presented in figure 13, around 64% respondents use plants that need less water. This is the topmost habit which maximum number of respondents follow always. After that, 63% respondents said that they carry their own bag when going for shopping. Around 62% and 61% purchase energy saving appliances and look for less packaging, respectively. If we go to the other side of the habits, then majority of the respondents around 58% do not or rarely buy organic food, which means that either the organic food is not accessible easily or have high price. In addition, around 58% do not or rarely compost their kitchen or garden waste and around 47% do not or rarely purchase less harmful detergents. The reason behind this could be the unavailability of resources and time to compost the waste. Also, unawareness or high price could be the reason behind not purchasing less harmful detergents. Figure 13 shows the percentage of responses for each sustainable habit, where the right side shows positive responses like usually and always, while left side shows negative responses like never and rarely.

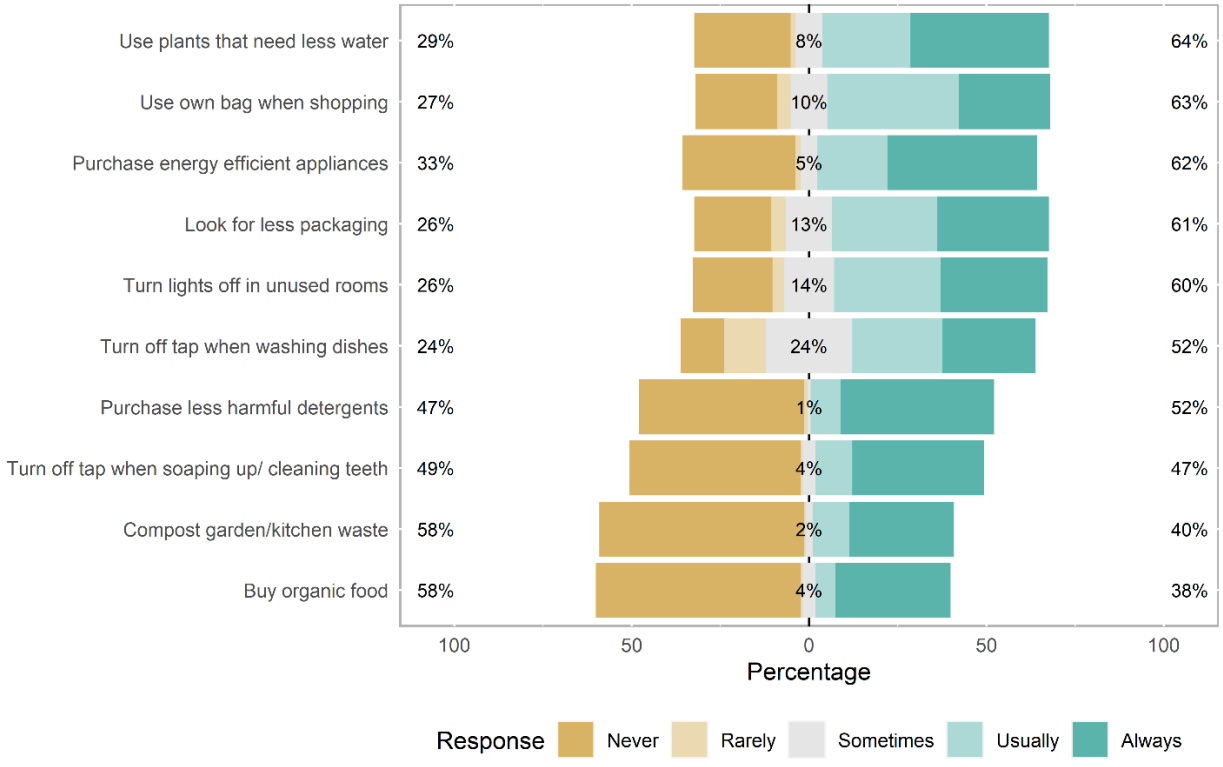

Figure 13. Frequency of Sustainable habits of respondents
Source: Author's own construction based on collected data

It is apparent from figure 13 that top seven sustainable habits are followed by more than 50% of the respondents and only three habits showed less than 50% positive responses. Hence, based on the above data it can be concluded that majority of the respondents are engaged in creating sustainable lifestyle by following above mentioned habits. The researcher termed these respondents as environmentalists as they are aware of their personal responsibility towards environment and working towards creating less damage to the ecosystem. Furthermore, the effect of gender, age, education, and income on following sustainable habits was assessed by using different analytical approaches. For gender wise assessment of habits, the researcher used independent sample t-test, as it compares the group means and require two groups to be compared.

4.2.1 Sustainable habits based on gender using T test

To examine the gender wise differences among consumers in their sustainable habits, independent sample t-test to compare group means was used. As there were unequal sample size in both groups, therefore two sample tests with unequal variances using Welch approximation was applied. The results showed that the means of the two groups are significantly different as compared to each other (p value <0.05). Therefore, it rejects the null hypothesis that there is no significant difference between the two groups. The results (Table 12) revealed that the mean value for the female respondents is higher than male respondents therefore it can be concluded that female respondents are more inclined towards sustainable habits.

Table 12. T-test result of gender differences in sustainable habits

	Mean		T statistic	Sig.
	Male	Female		
Sustainable habits	2.85	3.34	2.933	**0.004**

Source: Author's own work based on SPSS 26

4.2.2 Sustainable habits based on age, education, and income using one way ANOVA

To identify the influence of demographic variables like age, education, and income on sustainable habits, one way ANOVA test was applied. The ANOVA test results are depicted in table 13. The findings showed that the age and education have significant positive influence on sustainable habits. It refers that young consumer are more inclined towards adopting sustainable habits as majority of the respondents are in the age group of 18-25 years. On the other hand, higher education like master's degree holder respondents showed more sustainable habits in their everyday life. However, the findings revealed that there is no influence of income on the sustainable habits.

Table 13. One-way ANOVA results of impact of demographic profile on sustainable habits

	Mean Square		F	Sig.
	Between groups	**Within groups**		
Age	1.644	0.680	2.419	**0.050**
Education	3.900	0.667	5.844	**0.003**
Income	1.384	0.688	2.012	0.113

Source: Author's own work based on SPSS 26

4.3 Assessment of studied constructs

In this section, the assessment of various studied constructs was done based on the responses of the target population. To examine the awareness, attitude, intention, and behavior of consumers these constructs were developed, and their responses were calculated. To visualize the likert scale-based questions, as used in this study, one of the best tools are stacked charts. These stacked charts diverge the responses into three categories as positive, neutral, and negative. In this way it is much easier for the readers to identify the inclination of the respondents towards positive of negative side of the question asked. The zero percentage at the center represent the neutral responses. The responses with "agree" and "strongly agree" are diverged to the right or positive side of the chart and the responses with "disagree" and "strongly disagree" are diverged to the left or negative side of the chart.

4.3.1 Social sustainability awareness

The construct of social sustainability awareness consists of seven items. All questions are based on five-point likert scale. Figure 14 shows the response of the consumers on each item. The literature has very less evidence of social sustainability awareness among consumers. Hence, through this data we can examine how much aware consumers are concerning the various aspects of social sustainability like safety, health, societal development, societal needs, and social practices. Majority of respondents said that they have significant awareness of social sustainability. For instance, around 75% of the respondents agreed that organizations must be vigilant about implementing social practices. Around 74% of respondents believe that there is social discrimination in the society and everyone does not have equivalent access to certain products and services.

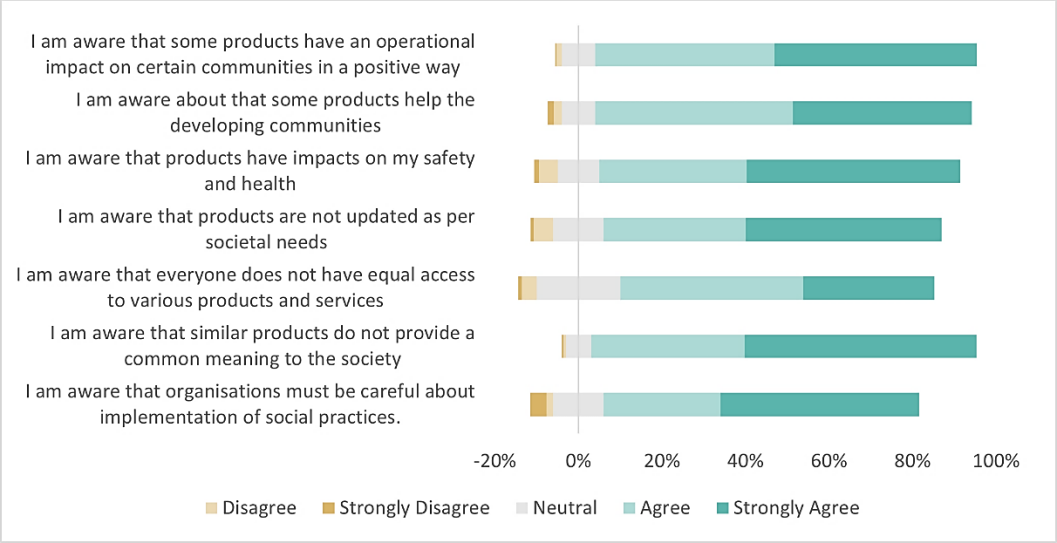

Figure 14. Social sustainability awareness assessment
Source: Author's own construction based on collected data

4.3.2 Environmental sustainability awareness

The construct of environmental sustainability awareness consists of seven likert scale-based questions. Figure 15 shows the response of consumers towards aspects of environmental sustainability. Around 81% of the respondents are aware of the environmental changes and 83% agree about their personal responsibility towards environmental changes.

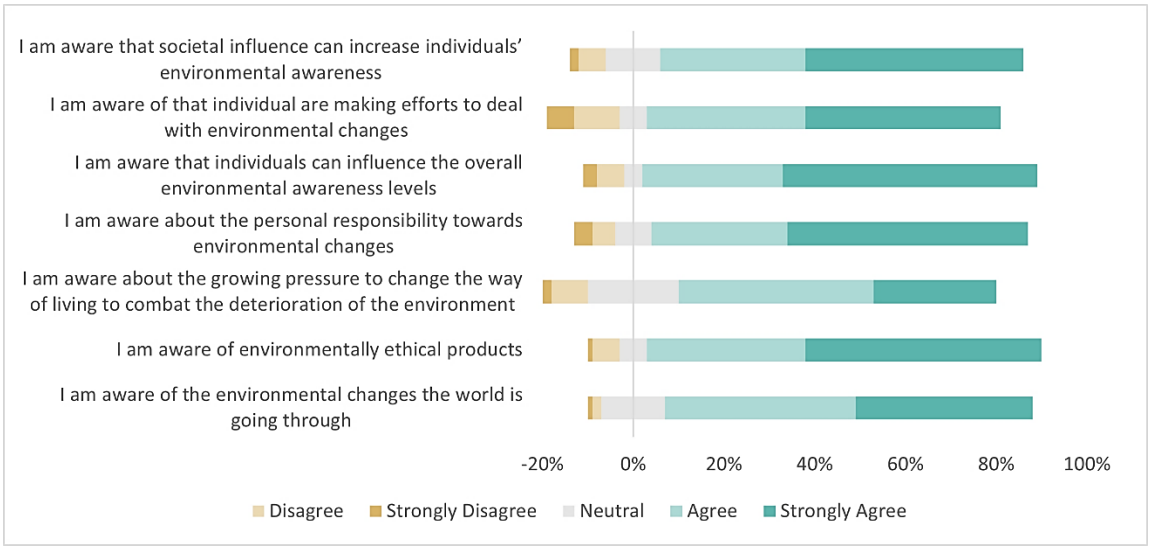

Figure 15. Environmental sustainability awareness assessment
Source: Author's own construction based on collected data

4.3.3 Attitude towards green products

The construct of attitude consists of three likert scale-based questions. The responses of the consumers are presented in figure 16. These questions refer to the attitude of the consumers towards green products. The data revealed that consumers possess certainly high attitude towards sustainable products. For instance, 91% of the respondents believe that green products cater to environmental needs and help in reducing pollution. Around 61% strongly agree that if they use green products then they can help in conserving natural resources.

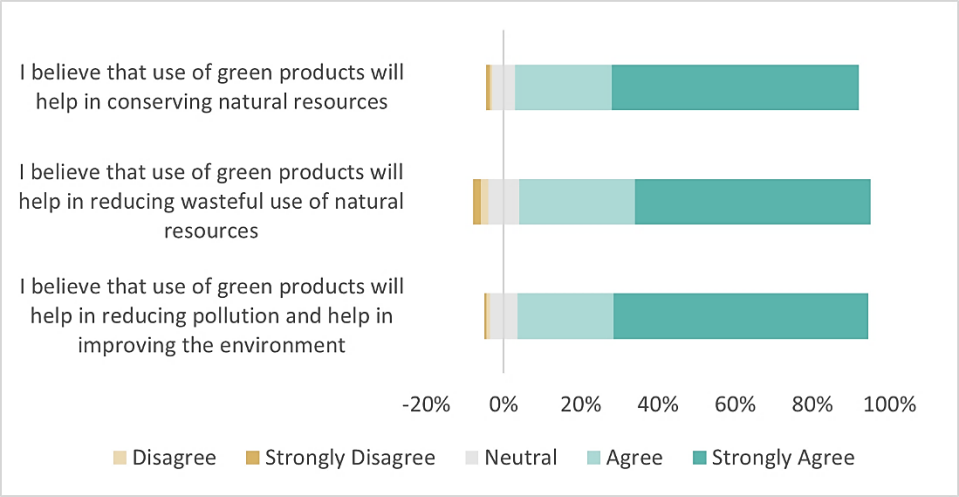

Figure 16. Attitude assessment
Source: Author's own construction based on collected data

4.3.4 Subjective Norms

The construct of subjective norms consists of four likert scale-based questions. These questions refer to the influence of friends and peers on purchasing green products. Figure 17 to the answers of respondents towards subjective norms. Around 85% of the consumers agreed that the positive opinion of their friends towards green products influence them to purchase such product. Around 79% say that people whose opinion they value expect them to buy green products.

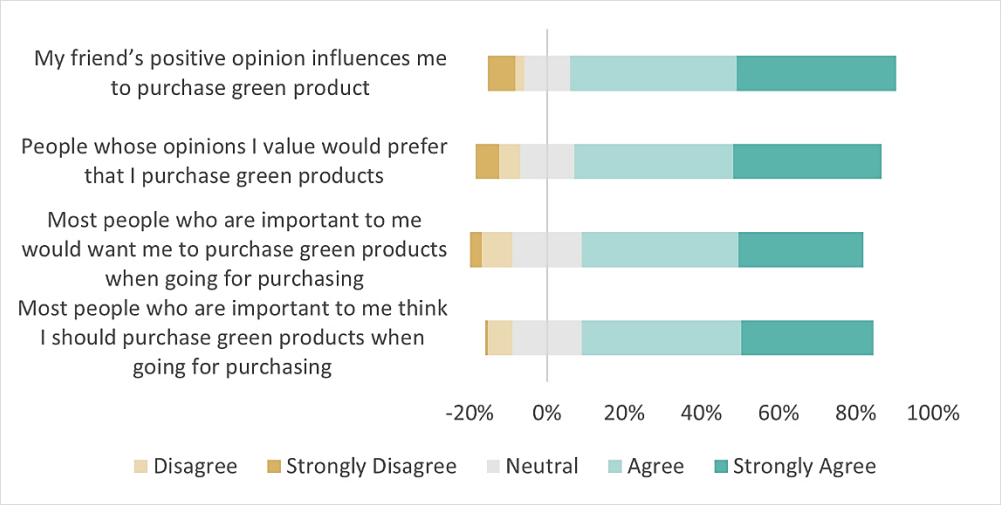

Figure 17. Subjective norms assessment
Source: Author's own construction based on collected data

4.3.5 Perceived Behavioral Control

The construct of perceived behavioral control consists of three questions presented in figure 18. Each question is based on the five-point likert scale-based question. These questions refer to the consumers behavioral control over themselves when purchasing green products. Around 84% of respondents agree that purchasing green product instead of conventional is totally dependent on themselves. Also, around 66% said that they significant time, resources, and opportunity to purchase sustainable products.

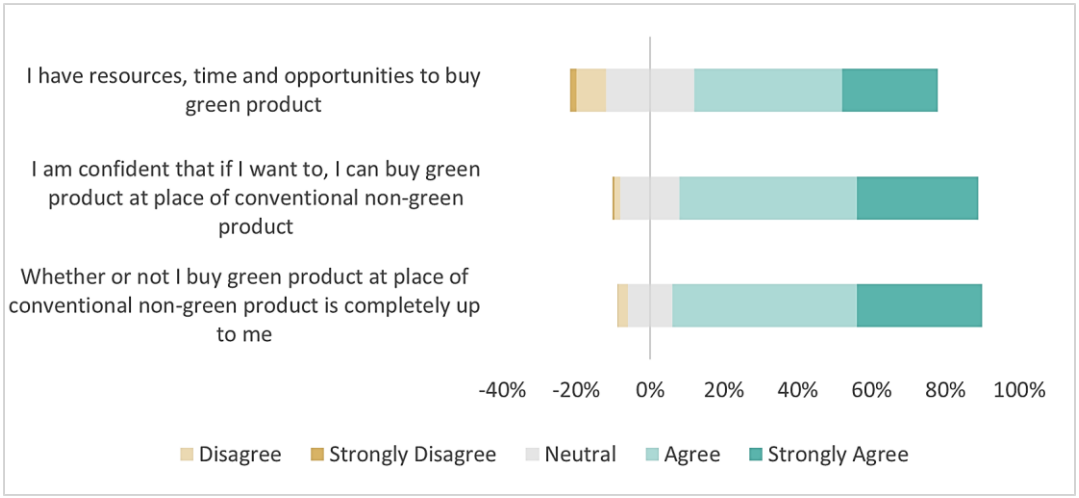

Figure 18. Perceived behavioral control assessment
Source: Author's own construction based on collected data

4.3.6 Willingness to Pay

The construct of willingness to pay consists of three five-point likert scale-based questions. These questions represent the how much consumers are willing to pay for green products. The responses are shown in figure 19. According to the data, 70% of the consumers are willing to pay extra for a green product that is derived to be environmentally friendly. Around 68% says that they will pay extra for the product to support the organization or product which is making efforts to be safe for the environment.

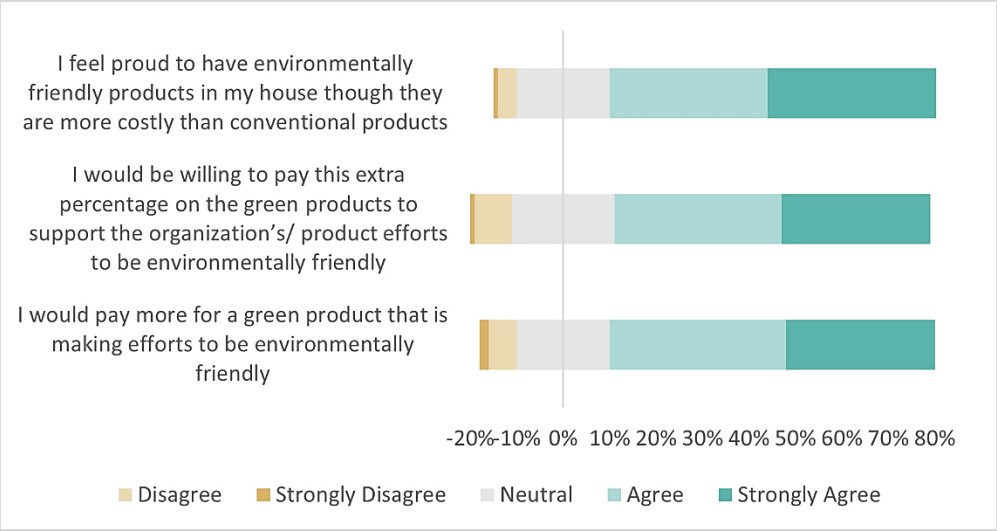

Figure 19. Willingness to pay assessment
Source: Author's own construction based on collected data

4.3.7 Green Purchase Intention

The construct of green purchase intention involves five items. Each item is based on five-point likert scale-based question. Figure 20 shows the responses of consumers based on their green purchase intention. According to the data, 93% consumers intend to buy green products in near future as they are less polluting and environmentally safe. Around 85% consumers planning to spend more on green products than its conventional counterparts. Majority of consumers definitely want to purchase green products if it is easily accessible and have positive environmental contribution.

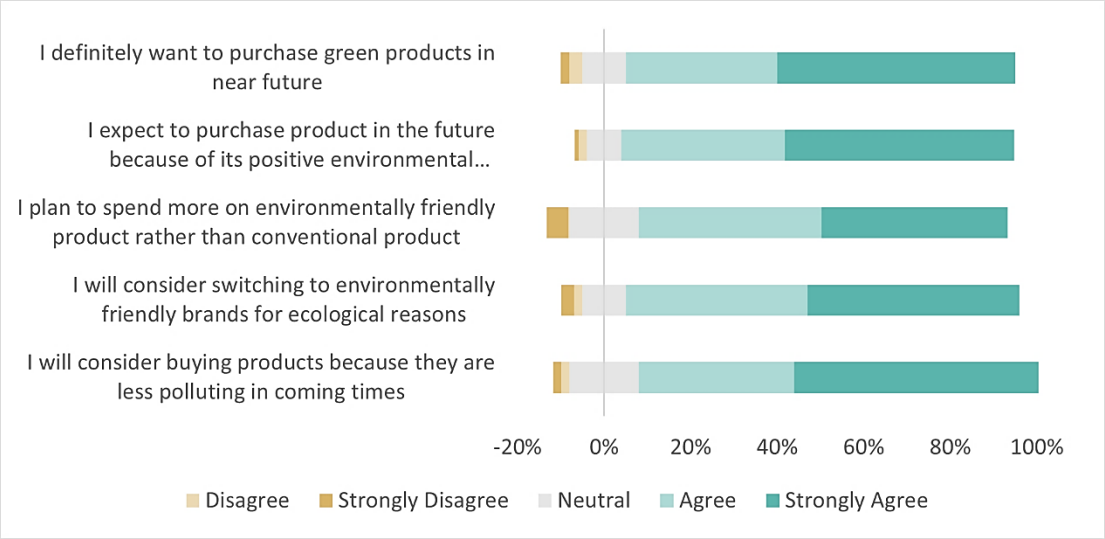

Figure 20. Green purchase intention assessment
Source: Author's own construction based on collected data

4.3.8 Green Purchase Behavior

The construct of green purchase behavior includes four items. These items are based on five-point likert scale-based questions and intend to capture the responses based on consumer's green buying behavior. Figure 21 shows responses based on green purchase behavior of consumers. The data revealed that 75% of consumers look for the ingredients when buying any product and analyze the ingredients whether they are environmentally friendly or not. Around 72% of respondents said that they buy green products even if they are of higher prices than the other non-green products. Also, around 67% of consumers prefer environmentally friendly products if their product quality is same as non-green products.

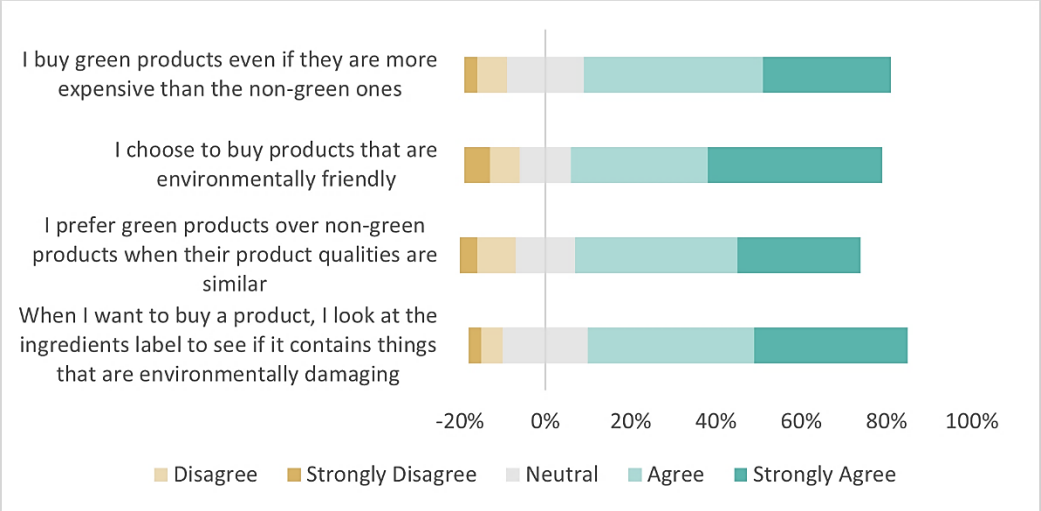

Figure 21. Green purchase behavior assessment
Source: Author's own construction based on collected data

4.4 Impact of Socio-demographic factors

To examine the influence of socio-demographic factors such as gender, age, education, and income on the studied constructs various tests were employed. For instance, to examine the gender wise differences independent sample t test was used and to identify the influence of age, education, and income, one-way ANOVA test was used.

4.4.1 Assessment of gender wise differences on studied constructs using T test

To examine the gender wise differences among consumers on studied constructs, independent sample t-test to compare group means was used. As there were unequal sample size in both groups, therefore two sample test with unequal variances using Welch approximation was applied. The results showed that the means of the two groups are significantly different as compared to each other (p value <0.05) only in the case of ESA. Therefore, it rejects the null hypothesis that there is no significant difference between the two groups. The results revealed (Table 14) that the mean value for the female respondents is higher than male respondents therefore it can be concluded that female respondents are more aware of environmental sustainability. However, for other constructs there is no significant difference among the means.

Table 14. T-test result of gender differences assessment of studied constructs

Constructs	Mean		T statistic	Sig.
	Male	Female		
Environmental sustainability awareness	4.44	4.57	2.039	**0.043**
Social sustainability awareness	4.42	4.42	0.074	0.941

Attitude	4.48	4.62	-1.631	0.104
Subjective Norm	3.90	4.01	1.025	0.306
Perceived Behavioral Control	4.06	4.12	-0.674	0.501
Willingness to Pay	3.96	3.98	0.136	0.892
Green Purchase Intention	4.38	4.45	-0.771	0.442
Green Purchase Behavior	4.25	4.23	0.232	0.817

Source: Author's own work based on SPSS 26

4.4.2 Assessment of income group impact on studied constructs using one-way ANOVA

To identify the influence of income on studied constructs, one way ANOVA test was applied. The ANOVA test results are depicted in table 15. The findings showed that income has significant positive influence on ESA, SSA, GPI and GPB. It refers that income play a significant role in transforming consumers intentions and purchase behavior towards green products.

Table 15. One-way ANOVA result showing impact of income on studied constructs

Constructs	Mean Square		F	Sig.
	Between groups	Within groups		
Environmental sustainability awareness	0.622	0.196	3.17	**0.025**
Social sustainability awareness	0.751	0.214	3.51	**0.016**
Attitude	0.757	0.322	2.34	0.074
Subjective Norm	1.164	0.595	1.95	0.122
Perceived Behavioral Control	0.820	0.383	2.14	0.096
Willingness to Pay	1.423	0.746	1.90	0.129
Green Purchase Intention	0.790	0.299	2.64	**0.050**
Green Purchase Behavior	1.320	0.337	3.92	**0.009**

Source: Author's own work based on SPSS 26

4.4.3 Assessment of age group impact on studied constructs using one-way ANOVA

To identify the influence of age on studied constructs, one way ANOVA test was applied. The ANOVA test results are depicted in table 16. The findings showed that age has significant positive influence on ESA. It refers that age play a significant role as far as environmental sustainability awareness is concerned. However, age of the respondents does not have any significant impact on other studied variables.

Table 16. One-way ANOVA result showing impact of age on studied constructs

Constructs	Mean Square		F	Sig.
	Between groups	Within groups		
Environmental sustainability awareness	0.472	0.197	2.39	**0.050**
Social sustainability awareness	0.324	0.219	1.47	0.214
Attitude	0.599	0.323	1.85	0.120
Subjective Norm	0.994	0.596	1.66	0.158
Perceived Behavioral Control	0.775	0.382	2.02	0.092
Willingness to Pay	0.973	0.751	1.29	0.273
Green Purchase Intention	0.430	0.304	1.41	0.230
Green Purchase Behavior	0.647	0.345	1.87	0.116

Source: Author's own work based on SPSS 26

4.4.4 Assessment of educational qualification impact on studied constructs using one-way ANOVA

To identify the influence of education on studied constructs, one way ANOVA test was applied. The ANOVA test results are depicted in table 17. The findings showed that education has significant positive influence on GPB. It refers that education play a significant role as far as green purchase behaviour is concerned. However, education of the respondents does not have any significant impact on other studied variables.

Table 17. One-way ANOVA result showing impact of education on studied constructs

Constructs	Mean Square		F	Sig.
	Between groups	Within groups		
Environmental sustainability awareness	0.095	0.203	0.469	0.626
Social sustainability awareness	0.071	0.223	0.321	0.726
Attitude	0.052	0.331	0.158	0.854
Subjective Norm	0.784	0.602	1.303	0.274
Perceived Behavioral Control	0.550	0.388	1.417	0.245
Willingness to Pay	0.700	0.756	0.926	0.398
Green Purchase Intention	0.416	0.305	1.363	0.258
Green Purchase Behavior	1.882	0.336	5.599	**0.004**

Source: Author's own work based on SPSS 26

4.5 Item statistics

The inputs used to frame the model for GPB are based on empirical research. The model for GPI and GPB was created using structural and analytical modeling approaches. Confirmatory Factor Analysis and Structural Equation Modeling (SEM) were employed specifically in this research. SEM is a method that allows researchers to assess and determine the connection among a model's latent constructs. PLS-SEM was utilized in this work for statistical analysis of the items and model.

To analyze data, a four-step procedure is followed. A preliminary test is performed first to eliminate measures of each construct that do not adequately explain variance in the construct. Second, Confirmatory Factor Analysis is used to verify model fit, common method bias, as well as the model's reliability and validity. Third, hypotheses were investigated using structural equation modeling (SEM). Finally, the mediating effect of GPI was investigated.

PLS-SEM is used for a variety of reasons, the most important of which is the method's superiority for small dataset. Furthermore, it doesn't necessitate a normal data distribution (Hair et al., 2014). According to Fornell & Bookstein (1982) PLS-SEM is employed for applicability to the development of the theory; small sample demand; suitability for prediction; avoidance of inadmissible solutions and factor indeterminacy. Therefore, analyses were performed by employing PLS-SEM and using SmartPLS V 3.0 developed by Ringle (2005).

4.6 Measurement model evaluation

In a research framework, the measurement model attempts to examine the links among the acquired data and latent constructs, and referred as outer model. Using a PLS analysis, the measurement model was evaluated for reliability and construct validity (Hair et al., 2021). Four evaluations should be carried out in order to examine the measurement model (Hair et al., 2014), including convergent validity, discriminant validity, indicator reliability, and internal consistency.

In addition, Harmans' one-factor test was used to see if there was any common method bias using SPSS 26.0. Harman's one factor test is a non-rotated exploratory factor analysis performed using a questionnaire or instrument. Because the data for both the predictor variables and the dependent variable was obtained from the same respondent using the same instrument/questionnaire and the same method (online survey), there could be a problem known as common method bias. The studies revealed that there is no common method bias problem if a single factor cannot explain majority (0.50) of the variation in this test (Podsakoff et al., 2003). The results revealed that there was no common

method bias in this study because the single factor could only explain 36% of the variation of the total instrument.

4.6.1 Convergent validity and internal consistency reliability

Composite Reliability (CR) was used to determine convergent validity, as well as Average Variance Extracted (AVE) and internal consistency reliability (Fornell and Larcker, 1981). In other words, Average Variance Explained (AVE) is used to assess convergent validity. Variables that measure AVE >0.5 are known to be legitimate and convergent. Table 18 shows that the AVE for all factors/constructs is greater than 0.5 (Petljak et al., 2018). It demonstrates the suggested model's convergent validity. The results for average variance explained ranged from 0.566 to 0.817, exceeding the suggested standard of 0.50. (Fornell and Larcker, 1981).

Furthermore, the construct validity is tested using composite reliability scores. The data is reliable for each construct, with composite reliability ratings ranging from 0.721 to 0.910 (given in Table 18), which are greater than the required standard of 0.70. (Fornell and Larcker, 1981). As a result, the model indicated above is a good fit, dependable, and valid model.

In addition, Cronbach's alpha was also to test the internal consistency reliability of the constructs for our study. Cronbach's alpha is a correlation coefficient between the questions used to measure a given construct or variable, and it is one of the widely used analyses for determining internal consistency reliability. Only if the Cronbach alpha value of a construct is >0.5 can it be regarded credible (Hair et al., 2010; Malhotra and Dash, 2011). All of the constructs utilized in this study had a Cronbach alpha value greater than 0.5, as shown in Table 18. As a result, the reliability of all constructs has been established.

Table 18. Measurement model assessment results

Constructs	Cronbach's Alpha	Rho_A	CR	AVE
Environmental Sustainability Awareness	0.867	0.883	0.897	**0.556**
Social Sustainability Awareness	0.870	0.875	0.900	**0.564**
Attitude	0.867	0.867	0.918	0.789
Subjective Norms	0.884	0.884	0.921	0.745
Perceived Behavioral Control	0.721	0.732	0.843	0.642
Willingness to Pay	0.887	0.888	0.93	0.817

Green Purchase Intention	0.910	0.911	0.933	0.735
Green Purchase Behavior	0.841	0.842	0.893	0.677

Source: Author's own work based on SmartPLS

4.6.2 Construct and indicator reliability

The indicator's reliability was tested using data from the outer loadings. The correlation among latent constructs and their respective items is described using this method (measures). Factor loading scores are derived for each measure of each construct to predict indicator reliability. The outer loading cut-off value is 0.7, which means that any item that received less than 0.7 value should be deleted.

However, there is exemption when Average Variance Extracted (AVE) and composite reliability altered significantly and got a decreased value after eliminating the items with low loadings, the item must not be removed (Hair et al., 2014). The findings of Confirmatory Composite Analysis (CCA), which is employed in SmartPLS software to calculate outer loadings, are projected in Table 19.

Table 19. Outer loadings of the items using Confirmatory Composite Analysis

	ESA	SSA	ATT	SN	PBC	WTP	GPI	GPB
ESA1	**0.684**							
ESA2	0.808							
ESA3	0.707							
ESA4	**0.677**							
ESA5	0.807							
ESA6	0.772							
ESA7	0.751							
SSA1		0.749						
SSA2		**0.654**						
SSA3		0.752						
SSA4		0.852						
SSA5		0.808						
SSA6		0.707						
SSA7		0.719						
AT1			0.884					
AT2			0.890					
AT3			0.892					
SN1				0.886				
SN2				0.894				
SN3				0.895				
SN4				0.770				
PBC1					0.816			
PBC2					0.847			
PBC3					0.737			
WTP1						0.912		

WTP2	0.936		
WTP3	0.862		
GPI1		0.842	
GPI2		0.843	
GPI3		0.833	
GPI4		0.903	
GPI5		0.865	
GPB1			0.797
GPB2			0.847
GPB3			0.859
GPB4			0.787

Source: Author's own work based on SmartPLS

After removing the items that have factor loadings less than 0.7, the convergent validity was again assessed. If the value of composite reliability and average variance extracted reduce significantly then the items must not be removed. However, in this study, after removing three items viz., ESA1, ESA4, and SSA2, the composite reliability and average variance extracted increases. So, these items were removed before hypotheses testing. The new values of convergent reliability are given in table 20.

Table 20. Results of measurement model assessment after removing items ESA1, ESA4, SSA2

Constructs	Cronbach's Alpha	Rho_A	CR	AVE
Environmental Sustainability Awareness	0.846	0.868	0.889	**0.617**
Social Sustainability Awareness	0.866	0.875	0.900	**0.602**
Attitude	0.867	0.867	0.918	0.789
Subjective Norms	0.884	0.884	0.921	0.745
Perceived Behavioral Control	0.721	0.732	0.843	0.642
Willingness to Pay	0.887	0.888	0.930	0.817
Green Purchase Intention	0.910	0.911	0.933	0.735
Green Purchase Behavior	0.841	0.842	0.893	0.677

Source: Author's own work based on SmartPLS

Figure 22 shows the research model with final number of items after extraction and the final outer loadings of retained items.

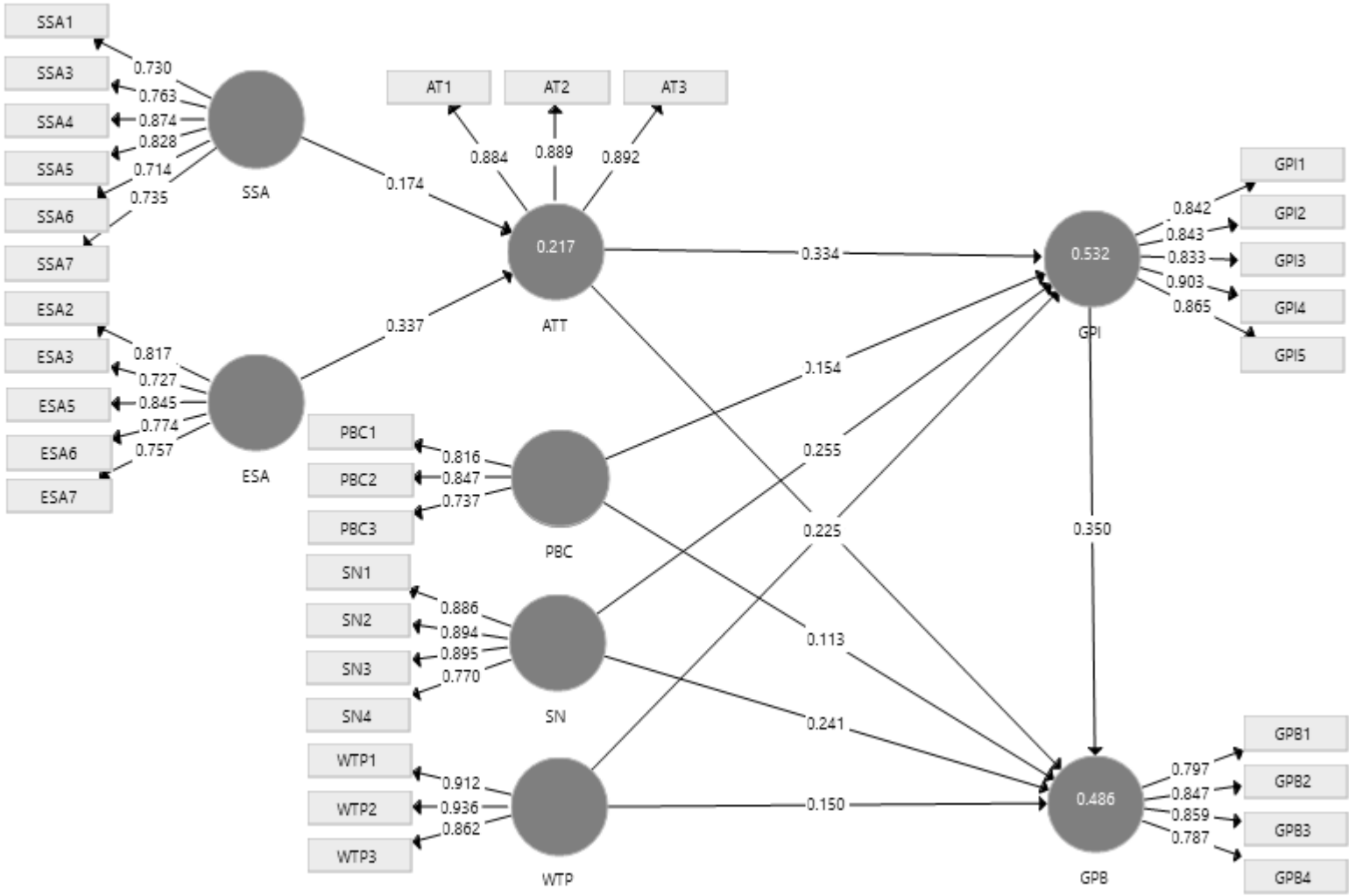

Figure 22. Research model with outer loadings and R square values
Source: Author's own work using SmartPLS

4.6.3 Discriminant validity

Discriminant validity indicates the degree of differences between the factors/constructs as factors/constructs are bound to differ from one another. Discriminant validity is checked through two methods, Fornell-Larcker criterion and Heterotrait-Monotrait ratio of correlations (HTMT) proposed by Fornell and Larcker, (1981) and Henseler et al. (2015), respectively. In Fornell-Larcker criterion a researcher uses this method to compare the square root of each construct's Average Variance Explained (AVE) to the shared variance between constructs, and if the square root of AVE is greater than the shared variance between constructs, the researcher can claim discriminant validity between constructs.

If the square root of the AVE is greater than the correlation value between the reflective constructs, the model is considered to satisfy all discriminant validity conditions (Petljak et al., 2018). Because the square root of each construct's AVE is greater than the common variance between the components, Table 21 reveals that discriminant validity exists in the model. It is also deemed reliable and legitimate because the factors/constructs have a strong connection with their own variables rather than the variables of other constructs, as seen in Table 21.

According to the Fornell-Larcker criterion, the square root of the AVE for each construct must be more than the inter-construct linkages, and for the HTMT criterion, the HTMT value between two constructs must be less than 0.85 (Henseler et al., 2015). As a result, this study fulfilled both criteria for discriminant validity, as demonstrated in Table 21 and 22.

Table 21. Discriminant validity: Fornell-Larcker criterion

	ESA	**SSA**	**ATT**	**SN**	**PBC**	**WTP**	**GPI**	**GPB**
ESA	**0.746**							
SSA	0.671	**0.751**						
ATT	0.449	0.397	**0.889**					
SN	0.343	0.374	0.423	**0.863**				
PBC	0.426	0.397	0.323	0.521	**0.801**			
WTP	0.195	0.279	0.312	0.518	0.417	**0.904**		
GPI	0.444	0.387	0.562	0.593	0.489	0.525	**0.858**	
GPB	0.506	0.417	0.377	0.583	0.470	0.504	0.624	**0.823**

Source: Author's own work based on SmartPLS

Table 22. Discriminant validity: HTMT criterion

	ESA	SSA	ATT	SN	PBC	WTP	GPI	GPB
ESA								
SSA	0.772							
ATT	0.501	0.455						
SN	0.381	0.425	0.483					
PBC	0.524	0.502	0.403	0.659				
WTP	0.216	0.319	0.356	0.584	0.527			
GPI	0.487	0.428	0.631	0.660	0.602	0.584		
GPB	0.584	0.489	0.444	0.671	0.599	0.583	0.711	

Source: Author's own work based on SmartPLS

4.7 Structural Model evaluation

The structural model was analyzed based on a collinearity diagnostic by VIF values, examining predictive relevance of the model by Q^2 values, assessing effect sizes on endogenous variables through F^2 values, and the coefficient of determination (R^2), and the significance of the path coefficients (β).

4.7.1 Coefficient of determination (R^2)

Partial least square analysis was used to analyze the selected conceptual model's coefficient of determination, or R^2, as well as its goodness of fit. The percentage of changes in the dependent variable that can be explained by the independent variable is represented by this index. It also assesses the model's prediction accuracy. In other words, it uses current data to construct a mathematical model that forecasts the approximate future values of the specified parameter. For a structural model to be valid, R^2 and goodness of fit must be more than 0.1 (Hair et al., 2010). The R^2 value of 0.217, 0.532, and 0.486 for attitude, green purchase intention and green purchase behavior, respectively, suggests that the causal links with the other components in the model can explain 21.7%, 53.2%, and 48.6% of the variance in attitude, purchase intention, and purchase behavior, thus, construct validity was validated. The results are given in Table 23.

It is important to note that the R^2 value is only shown for the model's endogenous variables. Furthermore, R^2 values of "0.15, 0.33, and 0.67" imply "low, medium, and high" model prediction accuracy, respectively (Bound et al., 1995). Because human behavior is not as predictable as other processes, R^2 is normally less than 50% in behavioral sciences.

Table 23. R Square values of endogenous variables

Constructs	R^2 Values	Adjusted R^2 Values
Attitude	0.217	0.211
Green Purchase Intention	0.532	0.523
Green Purchase Behavior	0.486	0.473

Source: Author's own work based on SmartPLS

4.7.2 Collinearity diagnostics

The full collinearity variance inflation factors (VIFs) are assessed as a viable alternative for detecting multicollinearity issues (Solomon, 1975; Ting et al., 2019). Outer and inner VIF values are used to check for multicollinearity. The values of Inner VIF look for multicollinearity among constructs, while outer VIF values look for multicollinearity among the items. A VIF value of less than five suggests that multicollinearity is not a problem (Rogerson, 2001). According to earlier studies, the accepted VIF value can be deemed ten or less (e.g., Hair et al., 1995; Solomon, 1975). The model's range of outer and inner VIF values was substantially smaller than the specified tolerance limits for VIF values, indicating that the model does not suffer from multicollinearity. The VIF readings were below the threshold value of 5, indicating that collinearity was not an issue. The results of the VIFs are shown in Table 24.

Table 24. Inner VIF values

	ATT	GPI	GPB
ESA	1.820		
SSA	1.834		
ATT		1.252	1.491
SN		1.734	1.873
PBC		1.449	1.500
WTP		1.437	1.545
GPI			2.138

Source: Author's own work based on SmartPLS

4.7.3 F^2 Values (Effect size)

The inclusion or absence of a predictive construct has a significant impact on the endogenous construct's R^2 values. As a result, researchers calculate the F^2 to assess the change in R^2 values in order to estimate the effect size. In the case of any connections, the strength of the association between

the model's latent variables is determined by the Cohen's F^2 index. This criterion is only applicable to models with endogenous factors that are influenced by at least two exogenous variables (Cohen, 1988). Table 25 shows the effect size for each association, with the F^2 interpreted as 0.02 (small), 0.15 (medium), and 0.35 (big) (large). Table 25 shows the F^2 values for the research model.

Table 25. F Square values (Effect size)

	ATT	GPI	GPB
ESA	0.088		
SSA	0.024		
ATT		0.191	0.000
SN		0.080	0.060
PBC		0.035	0.016
WTP		0.075	0.028
GPI			0.111

Source: Author's own work based on SmartPLS

From Table 25 it is apparent that two variables exert medium effect on their dependent variables namely attitude on green purchase intention and green purchase intention on green purchase behavior. All other variables pose a small effect on their dependent variables except attitude on green purchase behavior, which has no effect at all.

4.7.4 Q^2 Values (Predictive Relevance of Model)

The Stone–Geisser's Q^2 is used to verify the model's predictive direction (Hair et al., 2011, 2014). Q^2 presents predictive relevance utilizing the sample reuse approach, in which a portion of the data matrix is omitted, and the findings are used to predict the omitted section. As a result, the model's predicted accuracy is assessed using this blindfolding technique. The larger the value of Q^2, the lower the difference between the estimated and original values. As a result, Q^2 should be greater than zero.

To achieve the Stone- Geisser's Q^2 value, a blindfolding process was used with an omission distance of 7 (Hair et al., 2017). Hair et al. (2016) suggested that the predictive indices 0.02, 0.15, and 0.35 be evaluated as small, medium, and large effects, respectively. The Q^2 values for ATT, GPI, and GPB are 0.160, 0.386, and 0.317, respectively, according to the findings. It infers that all three variables have medium to large effects in predicting the variance. Because both numbers are greater than zero, the study model is thought to be predictive. The Q^2 values of the model is given in Table 26.

Table 26. Q Square values

Constructs	SSO	SSE	Q2 = 1 – (SSE/SSO)
Environmental Sustainability Awareness	1065	1065	-
Social Sustainability Awareness	1278	1278	-
Attitude	639	536.91	0.160
Subjective Norms	852	852	-
Perceived Behavioral Control	639	639	-
Willingness to Pay	639	639	-
Green Purchase Intention	1065	654.4	0.386
Green Purchase Behavior	852	581.873	0.317

Source: Author's own work based on SmartPLS

4.8 Hypothesis testing and Result of Bootstrapping test

After analyzing the measurement model, the proposed theoretical model's reliability and validity were confirmed, and the structural model's predictive significance was determined. The information was then utilized to examine the structural model as well as all hypotheses. Path coefficient analyses were used to evaluate all hypotheses, which include the primary and mediating hypotheses. It's worth remembering that the hypothesis may be supported if the t-statistic value is greater than 1.96 at the 5% confidence level (Sekaran and Bougie, 2016). For this purpose, PLS SEM and bootstrapping method was utilized. Bootstrapping is a non-parametric method for estimating the significance of PLS coefficients that employs resampling strategies. Bootstrapping works by generating a large number of subsamples by replacing the original sample and estimating the model parameters for each resample. It is based on the premise that the sample distribution offers accurate information about the population under investigation. These resamples are then used to test the path model that was developed after subsamples were randomly selected from the original dataset. This procedure is repeated until 5000 random samples have been generated (Henseler et al., 2015).

The significance of the path coefficients can be assessed using the bootstrapping approach and p values and t statistics. The many paths offered in the research model are the hypotheses made for the investigation. As a result, the associated hypothesis can be accepted or denied by determining the statistical significance of each path coefficient

Table 27 reveals the t statistics, beta weights, and p values of each path coefficient.

Table 27. Bootstrapping results (Hypotheses testing)

Path	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
ESA -> ATT	0.337	0.334	0.092	3.679	0.000
SSA -> ATT	0.174	0.184	0.087	1.999	0.046
ATT -> GPI	0.334	0.334	0.055	6.125	0.000
SN -> GPI	0.255	0.257	0.074	3.458	0.001
PBC -> GPI	0.154	0.153	0.059	2.605	0.009
WTP -> GPI	0.225	0.225	0.066	3.397	0.001
ATT -> GPB	-0.005	-0.011	0.072	0.071	**0.943**
SN -> GPB	0.241	0.243	0.078	3.101	0.002
PBC -> GPB	0.113	0.117	0.066	1.698	**0.090**
WTP -> GPB	0.150	0.15	0.071	2.110	0.035
GPI -> GPB	0.225	0.225	0.066	4.480	0.001

Source: Author's own work based on SmartPLS

The bootstrapping results revealed that environmental sustainability awareness and social sustainability awareness pose significant positive influence on attitude of the consumers with ((β = 0.337, T = 3.679, $p < 0.05$) and (β = 0.174, T = 1.999, $p < 0.05$), respectively. Similarly, the impact of four variables namely attitude, subjective norms, perceived behavioral control, and willingness to pay was assessed on green purchase intention. The results revealed that all these variables significantly and positively influence green purchase intention with following statistics: attitude (β = 0.334, T = 6.145, $p < 0.05$), subjective norms (β = 0.255, T = 3.458, $p < 0.05$), perceived behavioral control (β = 0.154, T = 2.605, $p < 0.05$), and willingness to pay (β = 0.225, T = 3.397, $p < 0.05$). The impact of attitude on green purchase behavior was came out to be insignificant with values (β = -0.005, T = 0.071, $p > 0.05$), which means that attitude do not positively or negatively influence consumers green purchase behavior. Similarly, perceived behavioral control revealed insignificant influence on green purchase behavior with values (β = 0.113, T = 1.698, $p > 0.05$). On the other hand, subjective norms (β = 0.241, T = 3.101, $p < 0.05$) and willingness to pay (β = 0.150, T = 2.110, $p < 0.05$) showed significant positive influence on green purchase behavior. Lastly, the influence of green purchase

intention on green purchase behavior is significantly positive with values ($\beta = 0.225$, $T = 4.480$, $p < 0.05$).

4.9 Mediation Analysis

The bootstrapping method was used to test the significance of the indirect effect (mediation effect) (Preacher and Hayes, 2008). In SmartPLS, bootstrapping is used to calculate the specific indirect effects. A mediation effect exists when the third variable interferes with the link between the independent and dependent variables (Hair et al., 2021). Based on Table 28, the results demonstrated that the mediation effect of GPI has a positive significant impact on the relationships between dependent and independent variables. The mediating effect of the mediating variable is necessary to assess separately for each independent variable as it gives a clear interpretation that in which relationship the variable is acting as a positive mediator or negative mediator.

Table 28. Mediation Analysis (Specific indirect effects)

Path	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
ATT -> GPI -> GPB	0.117	0.118	0.034	3.456	0.001
SN -> GPI -> GPB	0.089	0.09	0.032	2.830	0.005
PBC -> GPI -> GPB	0.054	0.054	0.024	2.243	0.025
WTP -> GPI -> GPB	0.079	0.08	0.031	2.555	0.011

Source: Author's own work based on SmartPLS

The summary of the hypotheses test results is provided in Table 29.

Table 29. Summary of Hypotheses test results

	Hypotheses	Results
Hypothesis H1a	Social sustainability awareness has a significant positive relationship with Attitude.	Accepted
Hypothesis H1b	Environmental sustainability awareness has a significant positive relationship with Attitude.	Accepted
Hypothesis H2a	Attitude has a significant positive relationship with green purchase intention.	Accepted
Hypothesis H2b	Subjective Norms have a significant positive relationship with green purchase intention.	Accepted
Hypothesis H2c	Perceived behavioral control has a significant positive relationship with green purchase intention.	Accepted

Hypothesis H2d	Willingness to pay has a significant positive relationship with green purchase intention.	Accepted
Hypothesis H3a	Attitude has a significant positive relationship with green purchase behavior.	**Rejected**
Hypothesis H3b	Subjective Norms have a significant positive relationship with green purchase behavior.	Accepted
Hypothesis H3c	Perceived behavioral control has a significant positive relationship with green purchase behavior.	**Rejected**
Hypothesis H3d	Willingness to pay has a significant positive relationship with green purchase behavior.	Accepted
Hypothesis H4	Green purchase intention has a significant positive relationship with green purchase behavior.	Accepted
Hypothesis H5	The relationship between attitude and green purchase behavior is mediated by green purchase intention.	Accepted
Hypothesis H6	The relationship between subjective norms and green purchase behavior is mediated by green purchase intention.	Accepted
Hypothesis H7	The relationship between perceived behavioral control and green purchase behavior is mediated by green purchase intention.	Accepted
Hypothesis H8	The relationship between willingness to pay and green purchase behavior is mediated by green purchase intention.	Accepted

Source: Author's own work based on SmartPLS

Figure 23 depicts the final research model with t statistics and bootstrapping results.

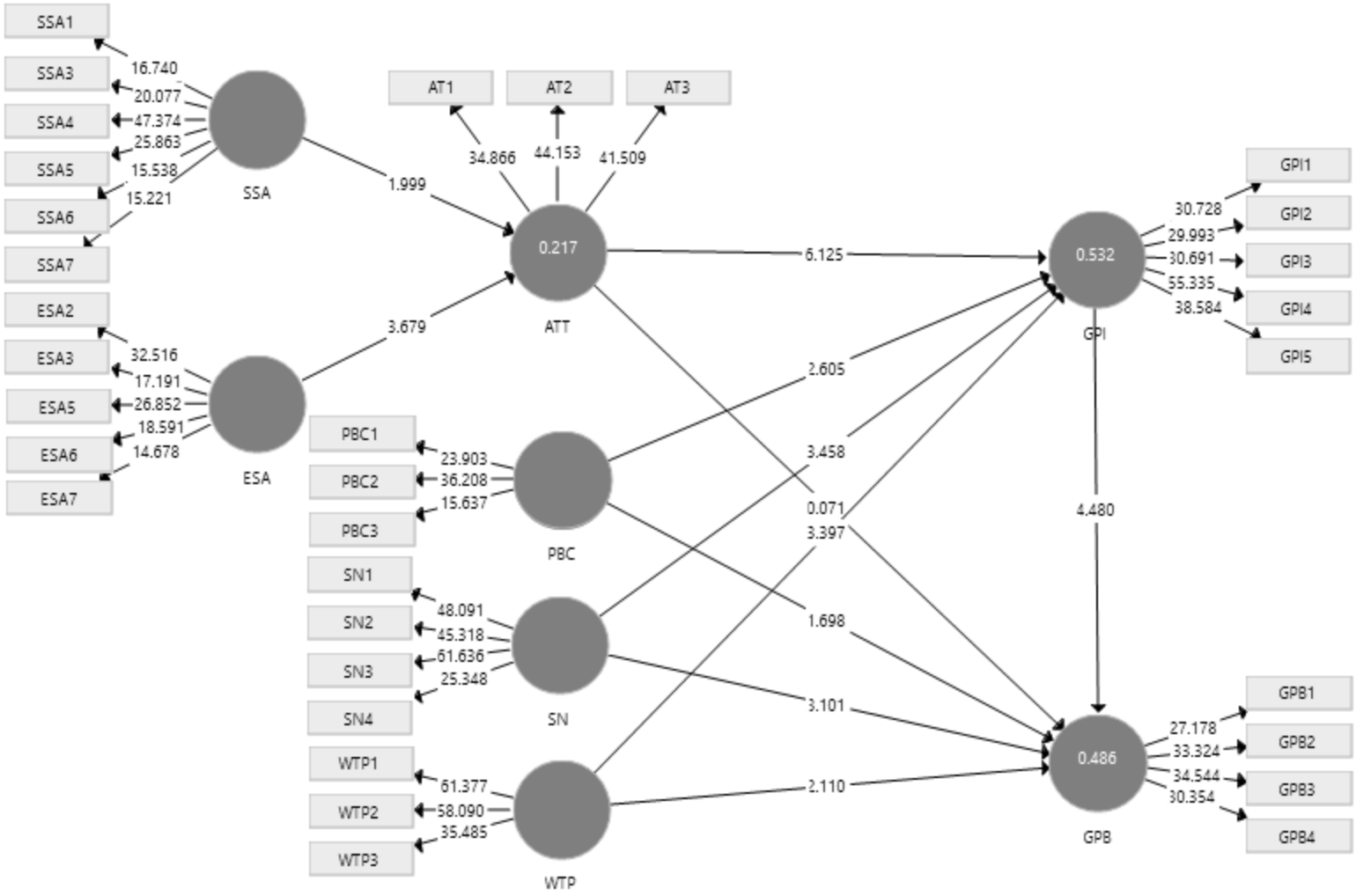

Figure 23. Bootstrapping results for hypotheses testing with 5000 iterations
Source: Author's own work using SmartPLS

4.10 Model Fit Assessment

The standardized root mean square residual (SRMR) was then used to evaluate the model fit (Henseler et al., 2015). The SRMR score for this research model was 0.066, which is less than the threshold value of 0.08, indicating that the model is an acceptable match (Table 30).

Table 30. Model Fit

	Saturated Model	Estimated Model
SRMR	**0.066**	0.086
d_ULS	2.467	4.169
d_G	0.943	1.003

Source: Author's own work based on SmartPLS

4.11 Discussion

This study investigated the relationship of various latent variables with green purchase intention and green purchase behavior of Indian consumers. Furthermore, another major aim of this study is to extend the theory of planned behavior. As many researchers have proven the predicting behavior of this theory in consumers' pro-environmental behavior (Maksan et al., 2019; Xu et al., 2020), however, despite its widespread use, the TPB has been subjected to a number of criticisms over the years, primarily for its alleged poor predictive efficacy, which is attributed to the use of an insufficient number of variables to explain the factors that drive people to engage in certain behaviors in specific situations (Teo et al., 2016; Wang et al., 2016; Tommasetti et al., 2018). Therefore, this study attempted to extend the theory of planned behavior with the addition of variables like social sustainability awareness, environmental sustainability awareness, willingness to pay, attitude, subjective norms, perceived behavioral control, green purchase intention, and green purchase behavior. Based on responses from Indian consumers, the developed model was tested and validated with confirmatory factor analysis and model fit indices. Both the model and the measurement instrument were validated using various approaches and analyses. Finally, hypotheses were tested, including primary and mediating hypotheses.

The empirical results obtained from partial least square structural equation modeling revealed that social sustainability awareness and environmental sustainability awareness positively influence the attitude of the consumers towards green products. To the best of the author's knowledge, none of the studies has found the impact of these two variables on transforming the attitude of Indian consumers.

However, Panda et al. (2020) investigated the role of social sustainability awareness and environmental sustainability awareness on altruism, which further influenced the attitudinal green purchase intention of Indian consumers. The results of their study have proven a significant positive impact of these variables on attitude through altruism. Therefore, the current study has provided novel evidence of the positive relationship between social sustainability awareness and environmental sustainability awareness with an attitude toward transforming the green purchase intention. This result indicates that awareness of social and environmental issues directly influences the attitude of the consumers toward green products. According to the findings, customers who are ecologically and socially conscious are more likely to acquire attitudes toward green items while making purchase decisions. This study demonstrates that environmental and social education has a positive influence on the younger generation, and it also suggests that eco-education programs should be undertaken to promote understanding.

Furthermore, the study revealed that attitude and perceived behavioral control do not have a direct positive impact on green purchase behavior. This result is in line with the previous results obtained by Naz et al. (2020) and Moser (2015). This result suggests that attitude can be modified by social sustainability awareness and environmental sustainability awareness, but it will not immediately inspire consumers to buy green items. In other words, young and educated consumers' attitudes toward environmentally friendly items do not necessarily influence their green purchasing behavior. Therefore, the mediating role of green purchase intention between attitude and green purchase behavior was investigated. The findings revealed that green purchase intention fully mediates the relationship between attitude and green purchase behavior, also between perceived behavioral control and green purchase behavior. The mediating role of green purchase intention is supported by Yu et al. (2021).

The results showed that subjective norms and willingness to pay positively influence the green purchase behavior of Indian consumers and their relationship is positively mediated by green purchase intention as well. The cost of products and services is one of the most important elements influencing customer behavior. Subjective norms and willingness to pay were shown to be the most powerful factors influencing consumer green buying behavior in this study. Furthermore, 70 percent of respondents indicated that they would be willing to pay more if the products' environmental benefits were assured. Moser (2015) found similar results, stating that willingness to pay is the best predictor of consumer green purchase behavior. Our findings are consistent with earlier research undertaken in both developing and industrialized countries (Bilan et al., 2020; Nekmahmud et al., 2020).

The findings of this study imply that when purchasing specific goods and services, price matters a lot. Consumers are willing to pay a higher premium if the product is guaranteed to be environmentally friendly. This survey demonstrates that these consumers are willing to modify their shopping habits and will prefer green items to standard products. They said they feel good when they buy green products, but they aren't driven when the green product's price is excessively high in comparison to its non-green counterpart. These customers are willing to pay a premium for businesses and organizations that are committed to environmental sustainability.

Furthermore, the results of this study depicted that attitude, subjective norms, perceived behavioral control, and willingness to pay positively influence the green purchase intention of consumers. However, attitude and willingness to pay are the strongest predictors of green purchase intention than perceived behavioral control and subjective norms. Hence, it strongly supports the addition of willingness to pay to constructs in the previous TPB framework to examine the purchase intention and purchase behavior of the consumers towards sustainable products. The findings of Jaiswal and Kant (2018) were validated, and they also stated that green purchase intention is a fundamental and powerful predictor of green purchasing behavior. As a result, customers' intentions to buy green items are more significant than their stated attitudes. In other words, if customers plan to behave in a certain way, their intentions will be reflected in their purchasing decisions. Also, to transform attitude into actual purchasing behavior, green purchase intention can play a significant mediating role.

Based on the results obtained and discussion, it is concluded that the additional constructs in the theory of planned behavior successfully analyzed and validated. Hence, the model suggested in this study explains the attitude, green purchase intention, and green purchase behavior in the light of environmental sustainability awareness, social sustainability awareness, willingness to pay, subjective norms and perceived behavioral control.

4.12 New Scientific Results

Based on the research data, results, and discussion, this study provides the new scientific results. These results can be used as a framework for future studies and to develop the research based on used analytical approach and additional constructs in the model.

1. Major theoretical contribution of this study is developing a validated research model which extended the theory of planned behavior by including additional constructs in the original model of the theory. As it was discussed above that many scholars reported criticism against the theory of planned behavior that it is not sufficient to analyze the behavior of a consumer

and require more variables to examine the actual behavior. Also, the founder of the theory reported that extension of the theory and adding variables should be done vigilantly and the final model must be validated through various analytical approaches used in this study. Hence, this study provided a successful extension of the theory of planned behavior.

2. This study analyzed examined the environmentally friendly behavior of the respondents by examining the degree of sustainable habits they follow in their day-to-day tasks. The majority of the respondents showed that they are engaged in creating sustainable lifestyle by following sustainable habits and are regarded as environmentalists. This contribution showed how much percentage of Indian consumers are aware of their personal responsibility towards environment and can be termed as environmentalists.
3. The impact of socio-demographic variables on sustainable habits was assessed, and the results showed that female consumers are more engaged in sustainable habits than male respondents. It can be concluded that female consumers are more environmentally aware and act accordingly in a more sustainable way. In addition, the findings showed that age and education had a significant positive influence on sustainable habits, but income level do not influence habits of the consumers. This means that higher education level and young consumers are more likely to follow sustainable habits in their life. This is the major contribution of this study, as none of the study analyzed the environmentalist behavior of the consumers on the basis of socio-demographic variables in Indian context.
4. Another most important and new scientific result drawn from this study is the addition of the variables like social sustainability awareness and environmental sustainability awareness. This is the first study which added these two variables to assess its impact on the attitude of the consumers towards green products. The literature showed that there is a dearth of studies which focused on social dimension of sustainability and yet to analyze its impact in transforming the attitude of the consumers which will further enhance the purchase intention. The findings of this study revealed that social sustainability awareness and environmental sustainability awareness positively influence the attitude of the consumers towards green products. Previous studies had provided evidence that attitude pose significant influence on the green purchase intention of the consumers but there is a dearth of literature which focused on transforming attitude and how it could be done. Hence, it is proven from this study that sustainability awareness can transform the attitude of the consumer in a positive way which will further reflect in their purchase intention and purchase behavior.

5. Furthermore, the addition of the construct willingness to pay in the original TPB model provided evidence that to analyze the purchase behavior of the consumers assessing the price sensitivity is crucial. According to this study, around 70% of the consumers are ready to pay extra for the green products, however, 30% of the respondents denied that they will not pay extra amount for the green product. This means that consumers are price sensitive and their willingness to pay extra could be dependent on various factors like availability of products, products with additional value etc. In addition, willingness to pay came out to be the strongest factor in influencing green purchase intention and green purchase behavior of the consumers. Hence, companies or organizations must be vigilant towards establishing their prices for products and services which could be termed as environmentally friendly.
6. Another major contribution of this study was to test the variables of theory of planned behavior. The results showed that attitude and perceived behavioral control do not have direct positive influence on green purchase behavior. It refers that even if there is positive attitude or self-control of consumers towards green products, it does not reflect in their purchasing behavior. However, these relationships are fully mediated by green purchase intention. This full mediation of green purchase intention between attitude and green purchase behavior, and perceived behavior control and green purchase behavior is a distinctive result of this study.
7. Furthermore, the study also reflected the influence of socio-demographic variables on studied constructs. For instance, the results revealed that female respondents are more aware about environmental sustainability and display more green purchase behavior than their male counterparts. Additionally, educational qualification influences the green purchase behavior which refer that more educated consumers display more environmentally friendly purchase behavior. Similarly, income level also influences green purchase intention and green purchase behavior of the consumers.

V. Conclusion and Recommendations

5.1 Conclusion

Environmental issues have been discussed for a while, and governments and policymakers have implemented a number of steps to preserve the environmental system. Furthermore, initiatives i.e., as trash reducing plans and energy-preserving techniques are raising public awareness of the need to alter patterns of the consumption. The goal of this research was to learn more about the sustainability awareness, attitude and intention of consumers, consumption patterns and purchasing habits of Indian consumers. The impact of these factors on consumers' purchasing decisions was examined using the developing constructs and employing partial least square structural equation modelling. Another aim of this study was to extend the theory of planned behavior as it failed several times to examine the actual behavior of the consumers and addition of more variables in original TPB model is required to predict and examine the purchase intention and purchase behavior.

The study added several constructs to identify the green purchase behavior of the consumers such as social sustainability awareness, environmental sustainability awareness, willingness to pay, attitude, subjective norms, perceived behavioral control, green purchase intention. The findings of the study imply that social sustainability awareness and environmental sustainability awareness positively influence attitude of the consumers, which further impact on their purchase intention. Furthermore, it was found that attitude and perceived behavioral control do not directly influence green purchase behavior. These findings refer that degree of attitude towards certain product and self-control over purchasing actions doesn’t necessarily transform into actual behavior. However, this relationship is positively mediated by green purchase intention. In this regard, attitude, and perceived behavioral control along with green purchase intention can positively influence the green purchase behavior of the consumers. It refers that only altering attitude and self-control is not sufficient but developing intention with positive attitude will actually transform into certain behavior.

In addition, willingness to pay and subjective norms have a substantial and positive effect on the intent of buying green products and green purchase behavior. The willingness to pay and subjective norms came out to be the strongest factor in this study that influence green purchase behavior. These considerations encourage them to purchase green items, but general consumption habits must be altered to achieve a more sustainable future. Young generation is curious to change their habits based on the available choices between green and conventional products, according to the current study. These consumers have expressed strong and positive attitudes toward environmentally friendly items, with the majority stating that they would be willing to buy green equivalents for a product. Most

customers indicated they would be proud of themselves if they acted in an environmentally sustainable manner.

In consideration of the novelty of the study, this research will be one of the pioneering works which will be considered as a framework for future research works. Moreover, the extended and developed model based on theory of planned behavior will provide insights into several variables which facilitate in examining green purchase intention and green purchase behavior. The findings will assist future researchers to develop their scientific research and help policymakers to alter their strategies for promoting and selling green products.

5.2 Recommendations and implications

Our research findings can be utilized to develop green marketing policies. The outcomes of this research show the effective information regarding the companies/firms and products that are guaranteed to be ecologically friendly motivates young university students to modify their lifestyle. Around 80 percent of respondents said they have significant social and environmental awareness that influences their attitude and shopping decisions when it comes to environmentally friendly products. As a result, officials and the government should take steps to reach out to a greater populace with environmental messages. Governments should develop communication strategies that will aid in the dissemination of related information on social and ecological issues, as well as direct messages to the audience about the benefits of their products in addressing these issues. Indian consumers can become environmentally conscious consumers if they are made aware of the eco-friendly alternatives to traditional products.

Furthermore, the willingness to pay was identified as the most powerful element influencing green purchase behavior, with 70 percent of consumers ready to pay more for green items. This discovery will aid green product manufacturers in evaluating their pricing plans in light of the actions of customers. Furthermore, several customers are sensitive to the prices and will not pay more for eco-friendly alternatives; this should be considered by dealers and producers. However, they are ready to spend a higher price for environmentally friendly goods and to back the organizations or industries that profess to be environmentally responsible. In this situation, dealers or policymakers should highlight the product's pricing in order to encourage consumers to buy green. Furthermore, organizations and firms should think about the cost and availability of green products to ensure that they are reasonable and accessible to the target market.

The study's practical outcomes suggest that enterprises and firms striving toward social and ecological sustainability can aim clients, giving them a better response related to their products, providing social and environmental benefits, and assuring them of their accessibility. Green buying intentions, willingness to pay and subjective norms have all been identified as significant determinants of green purchase behavior. As a result, businesses should make substantial efforts to ensure that such products are readily available and distributed to consumers. Because social and environmental awareness influences green purchasing decisions, marketing plans and advertisements should include ecological problems and product benefits.

The findings of this research can be used to design a green marketing strategy. This study's findings may prompt environmentally conscious marketing and advertising tactics to raise consumer awareness. They can assist policymakers in the establishment of marketing campaigns to encourage green purchasing behavior. Because of their concern about environmental damage, consumers will buy more green items with the support of such programs. Green brand positioning has a big impact on green buying behavior since it can increase a consumer's desire to acquire green products. Governments could raise consumer knowledge of environmental issues by producing films about real-world challenges and providing suggestions for decreasing environmental damage.

Furthermore, intentions and attitudes do not necessarily correspond to actual purchases, and when it comes to pricing considerations, consumers typically choose low-cost products. This study shed light on young people's attitudes regarding green products and their willingness to change their purchase habits. The research will assist green enterprises and companies in India in revising their marketing strategy when targeting youthful consumers. Similarly, the study advises that marketing tactics should be developed in such a way that they will increase customer education and awareness, as well as present all relevant information about the products' benefits and pricing, as well as how they will help to solve environmental concerns.

Researchers and academicians would be able to use the findings of this study to advance their research on the GPB of Indian consumers. Because this study solely focuses on young consumers, more research can be done to assess the GPB of the older population. This project will develop a theoretical model that may be applied to future research using various approaches. In the future, our findings will prompt comparison studies between India and other Asian or European countries.

Future research in this subject will be aided by this study, which will focus on construct construction, communicative application of factors, and cross-country research. It will contribute to closing the

study gap in this field, as there have been few studies undertaken in India. It will also encourage researchers to do study to better understand consumer eco-friendly habits. The model of research used in this research will offer a theoretical background to plant the future research accordingly to add new communicative concepts and to extend the theory by providing novel results of additional variables. In addition, it will deliver better awareness into customers' behavior by the addition of constructs like social and environmental sustainability awareness, green purchase intention and willingness to pay to understand the green purchase behavior. This research will lead to the better consideration of these customers among academicians and marketers.

5.3 Limitations and future research directions

As every study or research is bound to have some limitations, so this study also realized some limitations. For instance, the study sample might not be a best representative of the total population of the country under study as India is a big country. So, future studies can be conducted by taking into consideration other parts of the country as well. Apart from this, a comparative study could be conducted for instance, between Asian or European countries. Due to lack of resources and time, and restrictions faced by the researcher because of covid-19 pandemic, this study could not involve comparative study between the countries. Hence, comparative studies between countries can be done using different statistical approach for instance multi group analysis. In addition, other constructs or factors like cultural adaptation, religious inclination, or political pressure could be added in the future studies to identify its role in sustainable consumption behavior of consumers. Furthermore, several other theories like theory of reasoned action, attitude-intention-behavior model can be employed to reach the desired objectives.

VI. Summary

The continual expansion of economies with a rising number of businesses, enterprises, and corporations has resulted in environmental degradation, which has been the cause of climate change and global warming in recent decades. Subsequently, humans have acted in ways that have had a harmful influence on the environment and ecology. The earth's temperature and climate have been impacted by growing levels of production and consumption, the burning of fossil fuels, greater industrialization, deforestation, and the increase in the number of automobiles.

Businesses are being established all over the world in order to protect natural resources to satisfy the demands of future generations. The realization of human thought towards nature was brought about by the constant fluctuation in natural resources and their abuse. This awareness leads to the development of certain consumption habits among humans, as well as a rise in green purchasing behavior. Green purchasing behavior refers to the consumption and usage of items that have a low environmental impact. To lessen the direct or indirect influence on environmental deterioration, it is vital to create environmentally conscious behavior among individuals, such as purchasing green items.

Therefore, this study was conducted to examine the factors that affect the green purchasing behavior of consumers. Another major aim of this study was to extend the theory of planned behavior. Since long the theory of planned behavior has been used by various scholars in assessing the behavior and intention of the consumers. However, there is a crucial criticism towards this theory as some researchers proven its insufficient adaptability because of lesser number of constructs to analyze the behavior and recommended addition of validated constructs in the model.

Hence, this study added three new variables namely social sustainability awareness, environmental sustainability awareness, willingness to pay along with previous constructs of the theory such as attitude, subjective norms, perceived behavioral control, and green purchase intention to assess the purchase behavior of consumers towards green products.

The data was collected from Indian consumers and analyzed by adopting PLS-SEM using SmartPLS. The model was tested and validated. The findings showed that social sustainability awareness and environmental sustainability awareness positively influence the attitude of the consumers which further effects positively their purchase intention. It was proven that green purchase intention showed full mediation effect between attitude and green purchase behavior. Similarly, willingness to pay pose significant positive impact on green purchase intention and purchase behavior.

Furthermore, the adoption of sustainable habits among consumers were assessed and the impact of socio-demographic factors on sustainable habits was examined. The results revealed that female respondents are more inclined towards sustainable habits adoption in their day-to-day life.

VII. Appendices

Appendix 1: References

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Appendix 2: Questionnaire

1. **Gender**
   - ☐ Male
   - ☐ Female
2. **Age**
   - ☐ Under 18
   - ☐ 18-25
   - ☐ 26-35
   - ☐ 36-45
   - ☐ Above 45
3. **Education**
   - ☐ Bachelor
   - ☐ Master
   - ☐ PhD
4. **Income**
   - ☐ Less than 20000 INR
   - ☐ 20000-40000 INR
   - ☐ 40000-60000 INR
   - ☐ Above 60000 INR
5. **Sustainable habits (Please answer the following questions as how often you do it)**

Questions	Never	Rarely	Sometimes	Usually	Always
Purchase energy-efficient appliances					
Buy organic food					
Compost garden/kitchen waste					
Purchase less harmful detergents					
Use your own bag when shopping					
Look for less packaging					
Use plants that need less water					
Turn off the tap when soaping up/cleaning teeth					
Turn off the tap when washing dishes					
Turn lights off in unused rooms					

Please answer the questions as best suited to you from "Strongly Disagree (1)", "Disagree (2)", "Neutral (3)", "Agree (4)" "Strongly Agree (5)"

6. **Environmental sustainability awareness**

Items	1	2	3	4	5

EA1	I am aware of the environmental changes the world is going through.					
EA2	I am aware of environmentally ethical products.					
EA3	I am aware about the growing pressure to change the way of living to combat the deterioration of the environment.					
EA4	I am aware about the personal responsibility towards environmental changes.					
EA5	I am aware that individuals can influence the overall environmental awareness levels.					
EA6	I am aware of that individual are making efforts to deal with environmental changes.					
EA7	I am aware that societal influence can increase individuals' environmental awareness.					

7. Social sustainability awareness

Items		1	2	3	4	5
SA1	I am aware that organisations must be careful about implementation of social practices.					
SA2	I am aware that similar products do not provide a common meaning to the society.					
SA3	I am aware that everyone does not have equal access to various products and services.					
SA4	I am aware that products are not updated as per societal needs.					
SA5	I am aware that products have impacts on my safety and health.					
SA6	I am aware about that some products help the developing communities.					
SA7	I am aware that some products have an operational impact on certain communities in a positive way.					

8. Attitude towards green products

Items		1	2	3	4	5
AT1	I believe that use of green products will help in reducing pollution and help in improving the environment.					
AT2	I believe that use of green products will help in reducing wasteful use of natural resources.					
AT3	I believe that use of green products will help in conserving natural resources.					

9. Subjective norms

Items		1	2	3	4	5
SN1	Most people who are important to me think I should purchase green products when going for purchasing.					
SN2	Most people who are important to me would want me to purchase green products when going for purchasing.					

SN3	People whose opinions I value would prefer that I purchase green products.					
SN4	My friend's positive opinion influences me to purchase green product.					

10. Perceived Behavioural control

Items		1	2	3	4	5
PBC1	Whether or not I buy green product at place of conventional non-green product is completely up to me.					
PBC2	I am confident that if I want to, I can buy green product at place of conventional non-green product.					
PBC3	I have resources, time and opportunities to buy green product.					

11. Willingness to pay

Items		1	2	3	4	5
WTP1	I would pay more for a green product that is making efforts to be environmentally friendly.					
WTP2	I would be willing to pay this extra percentage on the green products to support the organization's/ product efforts to be environmentally friendly.					
WTP3	I feel proud to have environmentally friendly products in my house though they are more costly than conventional products.					

12. Intention to buy green Products

Items		1	2	3	4	5
GPI1	I will consider buying products because they are less polluting in coming times.					
GPI2	I will consider switching to environmentally friendly brands for ecological reasons.					
GPI3	I plan to spend more on environmentally friendly product rather than conventional product.					
GPI4	I expect to purchase product in the future because of its positive environmental contribution.					
GPI5	I definitely want to purchase green products in near future.					

13. Green purchase behavior

Items		1	2	3	4	5
GPB1	When I want to buy a product, I look at the ingredients label to see if it contains things that are environmentally damaging.					
GPB2	I prefer green products over non-green products when their product qualities are similar.					

GPB3	I choose to buy products that are environmentally friendly.					
GPB4	I buy green products even if they are more expensive than the non-green ones.					

Appendix 3: Cover Letter for the Questionnaire

HUNGARIAN UNIVERSITY OF AGRICULTURE AND LIFE SCIENCES

Dear Participants

Warm Greetings

I am Farheen Naz, a third year PhD student at Hungarian University of Agriculture and Life Sciences, Hungary. I am reaching out to you to request you to please participate in this survey by filling this questionnaire and providing answers that best suited to you. The purpose of this survey is to examine the consumer behavior towards green or sustainable products. Green or sustainable products are those products which are considered environmentally friendly. Your responses will be kept anonymous and will be used for research purposes only.

Thank you for your time in filling out this form. I would like to ensure again that your responses will be kept anonymous and will not be used for commercial purposes.

Here green products refer to environmentally friendly products such as eco-friendly cleaning products, eco-friendly bulbs, eco-friendly cosmetics, eco-friendly packaging etc.

Thanks and Regards

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