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Evaluating the Green Premium: Consumer Willingness to Pay for Eco-Friendly Products

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Chapter 1: Introduction

1.1 Introduction

The entire world is moving towards a more sustainable lifestyle, which has influenced corporate and consumer behavior, resulting in a significant increase in demand for environmentally friendly and sustainable products. This trend is being driven by increased awareness and concerns about environmental issues such as global warming, deforestation, and pollution. Consumer preference for sustainability in terms of environmental attitudes toward a better tomorrow can be found across various domains, including food, fashion, and technology (Park & Lin, 2020; Deloitte, 2021). The need for green options here is indicative of an attempt to counteract environmental problems collectively and exploit the long-term advantages of eco-friendly behavior.

However, switching to sustainable goods usually comes with increased costs. Price premiums are associated with sustainable products due to their use of organic or recycled materials and compliance with fair trade norms, leading to higher prices. Such price differences beg the question of whether customers will be ready to pay extra money for environmentally friendlier products (Krosofsky, 2021; Gerhardt, 2022). Businesses often use product differentiation as a strategy to justify these higher prices. By highlighting the unique attributes of sustainable products—such as higher quality, ethical production, and environmental benefits—companies can distinguish their offerings from conventional products and appeal to a specific segment of environmentally conscious consumers (Porter, 1985; Ottman, 2017). This differentiation not only helps in creating a competitive edge but also plays a crucial role in influencing consumer willingness to pay a premium for green products.

1.2Background and Significance of the Study

This research aims to examine customers' willingness to pay a premium for eco-friendly products and what mainly drives that. As the world goes green, understanding what drives consumer behaviour to support eco products is crucial for businesses to integrate environmental considerations into their strategy without losing profit.

This study looks at how consumer attitudes and knowledge of environmental issues affect willingness to pay more for eco-friendly products . By looking at these factors this research will provide insight into consumer behavior so companies can better match product development, pricing and marketing to environmental goals and customer needs. This is key to a green economy and green product adoption. Because, it will enable businesses to create marketing campaigns, education programs, and policies to support sustainable consumption. By knowing what drives consumer willingness to pay a premium for green products businesses can overcome the barriers to green buying and access the green market. This research will try to close the gap between environmental awareness and consumer behaviour to get to a green economy. (Li & Kallas, 2021; van Gelder, 2021)

1.3 Statement of the Problem

The environmental crises' urgency has greatly affected consumer choices leading to an increasing demand for eco-friendly products. (Park & Lin, 2020; Deloitte, 2021). This inclination towards sustainable consumerism indicates a higher level of awareness concerning the environmental footprint of consumer goods. However, despite the significance of sustainable consumption, there is still a significant gap in understanding the economics behind consumers' willingness to pay a premium for sustainable characteristics (Li & Kallas, 2021; van Gelder, 2021). This research aims to examine "customers willingness to pay a premium" for eco-friendly products and the factors that impact customers' behavior.

1.4 Objectives of the Study

The objectives of the study are:

1. To explore if there is a significant relationship between attitude towards green products and willingness to pay a premium for green products.

2. To explore if there is a significant relationship between subjective norm and willingness to pay a premium for green products.
3. To explore if there is a significant relationship between perceived behavioural control and willingness to pay a premium for green products.

4. To explore if there is a significant relationship between environmental concern and willingness to pay a premium for green products.

5. To explore if there is a significant relationship between environmental knowledge and willingness to pay a premium for green products.

1.5 Structure of the Thesis

This thesis will have five chapters. In the first chapter, the introduction and thesis objectives will be discussed. The second chapter will contain the literature review. The third chapter will cover the methodology used in this thesis. Chapter four will present the results and analysis, and chapter five will be dedicated to discussion and conclusion.

CHAPTER 2: LITERATURE REVIEW

2.1 Explanation of terms

2.1.1 Understanding Sustainability

Since it was first thought of, the idea of sustainability has changed a lot. It used to just mean protecting the environment, but now it includes a lot of different things, like economic security and social justice. This change shows that people are becoming more aware of the complex interdependencies that define our world. A big step forward was made in 1987 with the Brundtland Report, which explained sustainable development as a process that meets the needs of the present without making it harder for future generations to meet their own needs (World Commission on Environment and Development, 1987). This description made it clear how important it is to find a balance between people's current wants and the planet's natural limits. It also set a global goal for incorporating sustainability into policy and practice.

The idea of sustainability can be traced back to how forests are managed. The word "Nachhaltigkeit" was used in German writing as early as 1713 to talk about the idea of not cutting down more trees than the forest can grow back (Wiersum, 1995). This principle brought out a natural knowledge of the need to take care of natural resources, which is a theme that has been present throughout hundreds of years of human history.

But it was when the Brundtland Report's definition was accepted around the world that it made the idea more general. This made it clear that economic growth, social justice, and environmental protection are all important parts of sustainable development that need to be worked together.

2.1.2 The Evolutionary Path of Sustainability

The history of sustainability shows how people have become more aware of how their actions affect the world and the need for a more balanced way of developing. The idea started out as a way to handle natural resources (like forests) in a way that didn't harm them, but it has grown to include problems like industrialization, population growth, and inequality around the world. Since the word "sustainability" comes from forestry practices, it represents people's long-standing desire to protect resources (Wiersum, 1995). This issue became more well-known in the 20th century when the Club of Rome's Limits to Growth report came out in 1972. It predicted that key natural resources would run out within a few generations, which started a worldwide debate about how long human activities could last (Meadows et al., 1972).

A big change in the conversation happened when the Brundtland Report expanded the idea of sustainability to include economic and social aspects as well as environmental ones. This report successfully bridged the gap between environmental preservation and human development by promoting a growth model that is both comprehensive and environmentally conscious. After the report came out, many foreign and national groups made sustainability a policy goal. This shows how important it is as a guiding principle for the 21st century.

2.1.3 The Multidimensional Framework of Sustainability - Balancing Economic, Social, and Environmental Goals

Nowadays days, sustainability is understood as a multidimensional framework, including environmental integrity, economic viability, and social equity. This three-part framework, which is sometimes called the "three pillars" of sustainability, shows the need for holistic approaches to development that are socially inclusive, economically beneficial, and environmentally sustainable. But this broader definition has led to arguments among

researchers, policymakers, and practitioners about which of these aspects should be prioritised and what kinds of trade-offs might be involved in finding a balance between them.

Critics argue that adding economic and social aspects to the idea of sustainability could make it less focused on the environment, which could hurt efforts to protect natural resources for future generations (Kuhlman & Farrington, 2010). Even with these worries, the integrated approaches to sustainability helps us see the problems and chances that come with achieving sustainable development in a more complete way. This framework helps find synergies and trade-offs by showing how economic growth, social well-being, and environmental health are all connected. This makes policy choices that are better informed and more effective.

Many people disagree on how to define and apply sustainability, which shows how hard it is to balance the needs for economic growth, social inclusion, and environmental protection. To achieve sustainability, we need to keep talking, thinking deeply, and coming up with new ways to deal with changing social and natural situations.

2.1.4 Green Products

Reusability, and biodegradability are often highlighted in green products and manufacturing, along with production with recycled content that produces little harmful waste and does not endanger natural ecosystems (such as animal experimentation in cosmetic testing).

Products that are environmentally friendly are those that are energy-efficient, have recyclable packaging, are made of non-hazardous materials, and degrade. Eco-friendly products are expected to be created and produced over their lifetime using fewer resources and energy-saving techniques (Janssen & Jagger, 2002). Elkington and Makower (1988) mentions that these products also use environmentally friendly materials and packaging. Different academics describe green products differently. Sustainable packaging, non-toxic, and biodegradable characterize green products (Lin and Chang 2012). According to Chen and Chang (2013), green products shouldn't be harmful to either people or the

ecology. On ecological criteria, researchers think green products should perform better than conventional ones (Ottman et al., 2006; Schiederig, 2012).

After the codification of 35 academic definitions of a green product Fabien Durif, Caroline Boivin, and Charles Julien (2010) defined green products as "a product whose design and/or attributes (and/or production and/or strategy) uses recycling (renewable/toxic-free/biodegradable) resources and which improves environmental impact or reduces environmental toxic damage throughout its entire life cycle". Based on their findings certification does not seem to be important in the academic literature as the word "certification" only appears in one of the 35 compiled definitions. From an industrial perspective “a green product is a product that must respect the "3 R": "reduce", "reuse" and "recycle"; that is certified by an official entity; and that is not tested on animals. Biodegradability is also a main component of a green product.” From a consumer point of view, “a green household cleaning product is (1) non-toxic for nature; (2) good for health; (3) socially responsible; and (4) good for the planet.” (Fabien Durif, Caroline Boivin, and Charles Julien 2010)

Overall, low water use, less packaging, materials supplied locally or organically, energy efficiency, biodegradability, ease of soil, air, and water breakdown, low hazardous chemicals, and recyclability are characteristics of green products. Green and non-green products differ mostly in that green products get increasingly environmentally friendly with time (Schiederig et al., 2012).

Companies that want to green their supply chains must consider all the mentioned points and synchronize their ethical, social, and environmental procedures throughout every step of the process. This requires involvement in environmentally friendly purchasing, which is essential for big, international companies depending on a wide range of supply chain ties. Actually, there is an environmental effect of every product. Still, eco-friendly manufacturing wants to reduce this impact. An environmentally friendly product reduces waste, energy, resources, and dangerous materials to better the environment (Ottman et al., 2006).

In today's world of production and consumption, switching to green or environmentally sustainable goods is seen as an important way to protect the environment and make sure that people's needs are met while also protecting the environment. This change, which is

caused by by growing environmental and social awareness, shows how important it is to include sustainability in all parts of the business, from managing the supply chain to making products and getting people involved. The growth of eco-friendly products is a real sign of this globally occurring shift towards sustainability.

2.1.4.1 Socially Sustainable Products

Including ethical, social, and health-related factors in the design and marketing of goods is part of the idea of social sustainability in product development, which goes beyond environmental concerns. People's awareness of social and environmental problems has changed a lot since the mid-1990s. This has affected consumption patterns across cultures and changed social norms (Strong, 1996; Wright et al., 2006). This change shows that more and more people want products that are friendly to the earth, fair to people, and follow moral standards.

When making socially sustainable products, their social effect is thought about. This includes things like fair labour practices, community involvement, and contributions to social equity. Many of these items have certifications like "fair trade," which makes sure that workers in developing countries are paid fairly for their goods. This raises their living standards and promotes social justice (Hanusch and Birkhofer, 2010). Businesses are becoming more committed to corporate social responsibility (CSR), which means they see it as their job to solve problems in society through ethical and sustainable business practices. Including social sustainability in product design and marketing is a sign of this.

The rise of green marketing which will be discussed in details the next page, as a way to sell products that are good for the environment and society shows how sustainability and customer satisfaction are linked (Vandermerwe and Oliff, 1990; Lee, 2008). Businesses can gain a competitive edge, build brand loyalty, and help create a sustainable future by making sure their products are in line with what customers value and what they care about in terms of the environment and society.

To sum up, creating and promoting products that are good for both the earth and people are important parts of the larger movement towards sustainability. Businesses can meet the changing needs of customers and contribute to the global sustainability goal by putting environmental integrity, social fairness, and ethical practices at the top of their list of

priorities. More and more people are becoming aware of and wanting green goods. This shows how important it is to include sustainability in all parts of production and consumption, making the future more sustainable and fair.

2.1.4.2 Environmentally Sustainable Products

Environmental sustainability is becoming more important to consumers, which has a big effect on what they buy and creates a demand for goods that protect the environment and use resources efficiently. According to Laroche et al. (2001), consumers are becoming more environmentally conscious, which directly affects their choice of goods. This trend shows a major shift in consumer values, where environmental sustainability is now a very important factor in buying choices. People are becoming more concerned about environmental problems and how their choices can affect the health of the planet, as shown by their willingness to pay more for eco-friendly products instead of regular ones (Awad, 2011).

Environmentally sustainable goods have smaller effects on the environment over their whole life. They do this by using less energy, recycled materials, and less packaging, and by not being harmful to people (Mangun and Thurston, 2002; Massawe and Geiser, 2012). These goods not only fix short-term environmental problems, but they also help keep the environment in balance over time by encouraging the smart use of natural resources and cutting down on waste and pollution. To make the switch to environmentally friendly products, we need to look at not only the finished goods but also the steps that go into making them. This shows how important green supply chain management (GSCM) is for encouraging environmentally friendly production methods. The supply chain for these products should prioritize the use of environmentally friendly materials and processes, as well as the reduction of waste and emissions (Fung 2000). This is crucial because the supply chain plays a key role in determining the overall environmental impact of a product (Young 2012). The integration of environmental considerations into supply chain management can lead to significant cost savings and other benefits (Chakravarty 2014). Therefore, a sustainable supply chain is essential for the production and distribution of environmentally sustainable products.

2.1.5 Green Marketing

The increasing environmental concerns, particularly the consequences of global warming, have led to a greater recognition of ecological difficulties. Therefore, the concept of sustainable development, as defined by the World Commission on Environment and Development (WCED, 1987), became a crucial framework. The growing focus on sustainability has led to significant changes in multiple scientific fields and has also had an impact on the field of marketing.

Green marketing is a complex field that has introduced new ideas and flexible ways to address emerging environmental needs. Academics have defined different terms such as ecological marketing (Fisk, 1974; Henion, Kinnear, 1976) which focuses more on marketing strategies that reduce environmental harm, social marketing (Kotler, Zaltman, 1971); a broader term which covers marketing principles to promote social good as well as environmental sustainability and environmental marketing (Coddington, 1993) which is often used interchangeably with green marketing.

Each of these terms represents specific aspects of marketing efforts that are focused on environmental awareness. Although they have slight differences in meaning, these concepts essentially come together under the concept of green marketing, which represents a shared commitment to environmental responsibility.

According to Ward (2017), green marketing involves promoting products and services that are focused on environmental preservation or are produced using organic and environmentally sustainable processes. However, Polonsky (1994) modifies this viewpoint by claiming that marketing goes beyond simple commercial transactions and encompasses wider societal implications. According to Henion and Kinnear (1976), ecological marketing refers to all marketing efforts that try to address and reduce environmental concerns.

In order to fully understand green marketing, it is crucial to recognise its broad scope, which goes beyond traditional marketing paradigms. This comprehensive strategy, as described by Peattie (1995), involves a management process that effectively addresses the needs of both consumers and society in a way that is lucrative and sustainable.

In this part, it is important to closely examine the distinction between traditional marketing and green marketing. Although the American Marketing Association (AMA) defines marketing as the process of devising and executing strategies to enable exchanges, the development of green marketing requires a more subtle comprehension. Significantly, the marketing mix, represented by the 4Ps - product, pricing, promotion, and place - experiences an important shift within the area of green marketing.

Tolusic et al. (2014) define the components of the green marketing approach as green product, green price, green distribution, and green promotion. Green products as we discussed earlier demonstrate a dedication to sustainability, encompassing characteristics such as the ability to be recycled, the lack of harmful ingredients, and little use of packaging. Pricing strategies in green marketing include the whole expenses of manufacturing, which include environmental factors, however, they often contribute to higher consumer prices.

In addition, the marketing of green products highlights packaging that is environmentally friendly, with a focus on recyclability and minimalism. However, there are still difficulties, especially in the area of advertising, where dishonest claims regarding the environment confuse consumers and make it difficult for them to make informed decisions. Corporate commitment to environmental protection is highlighted by its commitment to standards such as ISO 14000 and Eco-labeling programmes.

Green marketing is a mutually beneficial connection between company goals and the preservation of the environment, emphasizing a dedication to both long-term profitability and ecological well-being.

2.1.5.1 History of Green Marketing

Green marketing has its roots in the growing environmental movement of the 1960s, which showed that people were becoming more concerned about the health of the world (Feldman, 1971). The first workshop on "ecological marketing," which took place in Texas in 1975, gave the idea official recognition. This set the stage for the growth of green marketing techniques (Indoria, 2012). Peattie (2001) divides the history of green marketing into three separate stages. The first stage was "ecological green marketing,"

which aimed to solve specific environmental issues. In this era, environmental problems were dealt with on a local level, and both marketers and customers showed a growing but still early concern for these issues.

In the late 1980s, the shift to "environmental green marketing" showed a move towards using clean technologies that would cut down on waste and pollution. During this time, more people in the marketing field became aware of environmental problems, though they still mainly focused on technological answers. In the 1990s and early 2000s, the third phase, called "sustainable green marketing," began. It was the start of a more radical approach to sustainability. Businesses were pushed to rethink their operations from the ground up during this phase, which stressed the need for healthy business practices (Peattie, 2001). But during this time, green marketing blindness and doubts about green marketing claims started to appear. This showed how hard it is to keep green marketing efforts honest (Kumar et al., 2011; Ottman et al., 2006).

2.1.5.2 Practices for green marketing

Businesses that use green marketing are making a long-term commitment to running their businesses in a way that is good for the environment. This dedication goes beyond just making changes to the products; it also includes a full review of the production methods, packaging, advertising plans, and general business philosophy (Yazdanifard, 2011; Polonsky, 1994). Companies that use green marketing not only want to leave less of an impact on the earth, but they also want to connect more deeply with customers who care about sustainability.

This involves making green products that are good for the earth in real ways, like using less energy, making less waste, and using long-lasting materials. Additionally, green marketing practices include being honest with customers about how goods affect the environment and what companies are doing to fix these problems. For customers who care about the environment, this openness is essential for building trust and credibility (Ottman et al., 2006; Polonsky, 1994).

2.1.5.3 Traditional Marketing and Green Marketing

Green marketing is different from traditional marketing because it takes social and environmental issues into account as part of the main marketing plan. Traditional marketing is all about making as much money and market share as possible. Green marketing, on the other hand, is all about making things better for customers, the earth, and society as a whole. The standard marketing mix of product, price, promotion, and place needs to be rethought in light of this paradigm shift so that it fits with sustainability principles (Chamorro and Bañegil, 2006; Naz and Magda, 2020).

Green products are made to do as little damage as possible to the earth, and they usually come with labels or certifications that say so. Pricing tactics for green goods may reflect the extra value they add by being better for the environment, which could lead to them selling for more. But the reason for this extra needs to be clearly explained to customers, focusing on the product's long-term cost savings or environmental benefits (Drozdenko et al., 2011).

Promotional activities in green marketing focus on teaching people about the social and environmental benefits of green products. The green message is spread through a variety of channels. Lastly, the placement of green goods must make them easy for target customers to get. To reach eco-conscious markets, this often requires creative distribution strategies (Nguyen, 2022).

In its simplest form, green marketing is a way to balance economic goals with the responsibility of caring for the earth. People around the world are facing serious environmental problems. Green marketing helps businesses contribute to sustainable development while also meeting the changing needs of customers. This strategy alignment not only makes businesses more environmentally friendly, but it also gets people involved, which promotes responsible consumption that is good for the planet's long-term health.

2.1.6 Price

A price is the amount of money that the seller of a good or service sets so that the transaction can go through. This is because prices rely on how supply and demand work

together (Fernando, Boyle, & Beer, 2021), Monopolists can take advantage of customers by setting prices that are too high. Consumer surplus is the difference between what people are ready to pay and what they actually pay(McGuigan, Moyer, & Harris, 2017). Companies make no profit when there is full competition in the market because the prices they charge are similar to their marginal costs. The vast majority of markets are somewhere in the middle, where prices are set by things like competition, consumer desire, and business goals.

2.1.7 Price premium

The price premium is a quantitative metric that represents the extra amount of willingness to pay (WTP) for a product, either in terms of a precise monetary value or as a percentage increase relative to a comparable product. The price premium refers to the extra amount charged to offset any increase in production or service costs (Singh and Pandey, 2015).

2.1.8 Willingness to Pay

"Willingness to pay is the maximum amount that a buyer will pay for a good. It measures how much the buyer values the good or service" (Mankiw, 2018).

This concept is crucial in understanding consumer preferences and behaviors, particularly in contexts where pricing decisions influence purchasing decisions. Mankiw illustrates this with an example of auctioning a rare item:

"Imagine that you own a mint-condition recording of Elvis Presley's first album. Because you are not an Elvis Presley fan, you decide to sell it. One way to do so is to hold an auction. Four Elvis fans show up for your auction: Taylor, Carrie, Rihanna, and Gaga. They would all like to own the album, but each of them has a limit on the amount she is willing to pay for it. A buyer's maximum is called her willingness to pay, and it measures how much that buyer values the good" (Mankiw, 2018).

2.1.8.1 Willingness to pay for green products

The concept of customers' willingness to pay (WTP) for environmentally friendly products acts as a link between companies' efforts in green marketing and the measurable

response of consumers to these efforts. Khoiriyah and Toro (2018) define willingness to pay (WTP) for green products as the degree to which consumers are ready to pay a premium for environmentally friendly products. According to Mamun, Fazal, et al. (2018), this readiness refers to a specific purpose to buy environmentally friendly items, emphasising the proactive actions of customers towards sustainability.

Gregory-Smith et al. (2017) argue that assessing the willingness to pay (WTP) for eco-friendly products is a more accurate method of gauging individuals' commitment to environmental friendliness, as opposed to solely relying on self-reported behaviours and general intents. The activation of willingness to pay (WTP) depends on a consumer's understanding of the connection between environmental degradation and their overall health and happiness, resulting in a preference for items that cause less harm to the environment (Chu, Lin & Chi, 2013).

Despite the growing trend towards eco-friendly products, several barriers prevent a universal shift in consumer preferences towards sustainability. The main obstacles to the adoption of green products are the high costs and the lack of awareness regarding their benefits (Chen, Tsai & Hsieh, 2017). However, research suggests that there is a difference in the willingness of customers to pay (WTP). For example, Kucher et al. (2019) found that a majority of consumers in the United States and Europe, specifically 70 percent, are prepared to pay a premium of 5 percent for environmentally friendly products that are of equal quality to conventional products. Nevertheless, Spanish consumers shown a readiness to pay a premium of 22 to 37 percent for food goods that are environmentally friendly (Wei et al., 2018).

The core principle underlying consumer willingness to pay (WTP) for green products is the perceived value relative to the extra cost involved (Royne et al., 2011). Consumers who are aware of the benefits and costs of environmentally friendly products are more likely to be willing to pay a higher price. This inclination driven by knowledge can extend beyond the realm of food products, where the documented health effects of choosing organic options over processed ones are well-established, to a broader range of environmentally sustainable products where the ecological benefits justify the higher cost.

Consumer willingness to pay for green products is key in sustainable marketing. (Štofejová. 2023) It means we need precise information and educational strategies to close the gap between perceived and actual value of green products. (Štofejová. 2023) Estimating the premium consumers are willing to pay for these products is a big challenge. (Krosofsky, 2021; Gerhardt, 2022). This means how much more are consumers willing to pay for green products vs conventional products which can vary greatly depending on demographics, environmental awareness and personal values.

And also we need to incentivise consumers to buy green products. Wong (1996) and Parsoya (2021) both say we need to communicate clearly the environmental benefits of green products and address cost and perceived value. Wong says marketing strategies influence consumer demand while Parsoya says we need to incorporate green into marketing programs. Royne (2016) and Wei (2014) further say we need targeted marketing communication strategies that consider different dimensions of environmental concern and demographic variables and green advertising appeal and low pricing to enhance consumer perception and purchase intention. All these studies say we need effective marketing strategies to incentivise consumers to buy green products.

2.1.9 Attitude Toward Enviromentally sustainable products

The process of customers accepting environmentally sustainable products contains a complex interaction between their attitudes, perceptions, and their final willingness to become involved in environmentally conscious purchase behaviors. Theories such as the Theory of Reasoned Action and the Theory of Planned Behaviour, which are based on social psychology, provide a fundamental understanding of how attitudes have an important effect on human actions, particularly those connected to green consumption (Arli et al., 2018).

Consumer perceptions of environmentally sustainable products have a strong connection to the wider discussion on environmental responsibility and sustainable lifestyles. The attitudes, which represent the opinions of consumers of environmentally friendly products, serve as the foundation on which purchasing intentions are built (Lin, Nadlifatin, Amna, Persada & Razif, 2017). Studies have shown that there is a positive relationship between people's pro-environmental attitudes and their intention to buy environmentally sustainable products. This correlation has been observed in both

developed and developing countries, as highlighted by various studies conducted by Choi & Johnson (2019), Arli et al. (2018), and Prakash & Pathak (2017).

This consensus highlights an important pattern: when consumers have positive views of environmentally sustainable products that correspond with their environmental beliefs, they are more likely to prioritize these products above conventional alternatives (Angelovska, Sotiroska, & Angelovska, 2012). These views not only show that people recognize the environmental advantages of environmentally sustainable products, but also demonstrate their dedication to reducing their own ecological impact.

Although there appears to be a strong connection between positive views towards environmentally friendly items and the intention to acquire them, there is often a significant difference between what people say they prefer and what they actually buy. This phenomenon is sometimes referred to as the "Green Gap" (Arli et al., 2018). The problem described as a considerable number of consumers who claim to prefer organic food but do not really buy it reflects the intricate nature of green consumerism (Joshi & Rahman, 2015)

2.1.10 Subjective Norms: The Influence of Social Factors on the Behaviour of Purchasing Green Products

Subjective norm refers to the perception of societal pressure that affects people' decision to either participate in or avoid certain behaviors, such as buying environmentally sustainable products (Chen & Deng, 2016). This refers to the perceptions of approval or disapproval from important individuals such as family, friends, co-workers, peers, and teachers on the engagement in environmentally friendly behaviours (Chen & Deng, 2016; Chaudhary & Bisai, 2018; Mohiuddin, Mamun, Syed, Masud & Su, 2018). Subjective norm captures the combined impact of significant influencers on individual decision-making processes.

Subjective norm, which highlights the major impact of social factors on individual decision-making, especially when it comes to choosing green products is a key idea in the field of social psychology and consumer behaviour. According to the Theory of Reasoned Action and the Theory of Planned Behaviour, the idea is that an individual's

behavior towards green products can be influenced by social pressures and the perceived expectations of others (Chen & Deng, 2016; Arli et al., 2018)

Extensive research has been conducted on the correlation between subjective norm and green buying intentions in different geographical and cultural settings, resulting in inconclusive findings. Multiple studies conducted in both developing countries and developed regions have consistently shown a strong positive relationship between subjective norms and the intention to make environmentally-friendly purchases (Teng et al., 2018; Arli et al., 2018; Sreen, Purbey & Sadarangani, 2018; Choi & Johnson, 2019). The results indicate that when people perceive a widespread agreement among their social circle about the benefits of green products, they are more inclined to buy these products. This behavior is motivated by the need to conform to the norms and values of the group.

Yet, several studies have found that the connection between subjective norms and green purchasing intentions is not significant, especially in situations where green products are relatively new or when consumers have a high level of education (Mamun, Mohamad, et al., 2018; Chaudhary & Bisai, 2018; Yazdanpanah & Forouzani, 2015; Wang et al., 2018). These results indicate that the effect of subjective norms is complicated, implying that factors including familiarity with the product, personal beliefs, and educational background can reduce the effect of social constraints on green purchase behavior.

2.1.11 Perceived Behavioral Control and its Influence on the Consumption of Environmentally Friendly Products

Perceived behavioral control, a key component of the Theory of Planned Behavior, is a complex construct that encompasses both self-efficacy and controllability. It plays a significant role in shaping behavioral intentions and actions (Ajzen, 2002). The accessibility and affordability of environmentally friendly food goods, along with the consumer's purchasing power, can have a substantial influence on intentions to engage in green purchasing (Teng et al., 2018). Moreover, this idea is influenced by previous encounters and expected challenges, which all contribute to an individual's confidence in their ability to participate in environmentally-friendly consumption (Paul et al., 2016).

Perceived behavioral control is a crucial factor in influencing consumers' intentions and behaviors when it comes to buying environmentally friendly products. This idea, which

is strongly based on the Theory of Planned Behavior, includes individuals' perceptions of the level of effort required to carry out pro-environmental acts, such as buying environmentally friendly products. It measures the level of confidence individuals have in the ability to perform certain actions, considering factors such as the availability of resources, ability to pay, expertise, and limitations (Arli et al., 2018; Teng et al., 2018).

The research findings regarding the impact of perceived behavioral control on the intention to buy environmentally friendly products have been insufficient, however several studies indicate a positive correlation. For example, in certain situations, such as in Iran, Malaysia, Nigeria, and even in developed areas like the United States, the impact of perceived behavioral control on intentions to make environmentally friendly purchases has been determined to be insignificant (Yazdanpanah & Forouzani, 2015; Khor & Hazen, 2017; Karatu & Mat, 2015; Choi & Johnson, 2019). Moreover, perceived behavioral control has been proven to be a strong predictor of green product purchasing intentions in several developing countries, including Indonesia, China, Malaysia, and India (Arli et al., 2018; Chen & Deng, 2016; Teng et al., 2018; Paul et al., 2016). These differences can be explained by changes in customer mentality, past buying experiences, and changes in accessibility of environmentally friendly items. Consumers who have previously purchased green products may feel self-assured in their capacity to make similar purchases again (Choi & Johnson, 2019).

2.1.12 Environmental Concern and Its Influence on the Consumption of Environmentally Friendly Products

Environmental concern is a crucial aspect in the examination of green consumerism, containing a degree of individual consciousness, emotional investment, and desire to participate in actions that reduce damage to the environment. Environmental concern is a concept that is defined differently depending on the field of study. Mutsaers (2015) has observed that it is a broad and complicated concept. Lasuin and Ching (2014) highlight the importance of emotional commitment to environmental issues, whereas Ahmad and Thyagaraj (2015) concentrate on the awareness of environmental challenges and the willingness to support or participate in finding remedies. In this study, we will focus on the awareness of environmental challenges and the willingness to participate in their solutions, as Environmental Concerns.

The identification of environmental concern as a crucial driver of pro-environmental activities is widely accepted, showing an individual's level of concern towards environmental challenges (Jaiswal & Kant, 2018). This concern can appear in different signs, ranging from particular thoughts to practical acts focused on sustainability (Prakash & Pathak, 2017). Environmental concerns can be an important factor in motivating an individual to buy environmentally sustainable products (Mostafa, 2006; Ahmad et al., 2018). Moreover, Consumers who have a strong environmental consciousness are less discouraged by the financial expenses linked to eco-friendly products, indicating support for environmental preservation and providing a sustainable future for future generations (He et al., 2018; Onurlubaş, 2018).

Yet, there are papers that have shown an insignificant impact of environmental concern on green purchasing intentions in both developing and developed countries (Choshaly, 2017; Chaudhary & Bisai, 2018; Setyawan et al., 2018; Choi & Johnson, 2019). So it means, that having environmental concerns does not always result in making environmentally-friendly purchases. This phenomenon is supported by research conducted by the Pew Research Center (2010).

2.1.13 Environmental Knowledge and its Influence on the Consumption of Environmentally Friendly Products

Environmental knowledge is an individual's understanding, consciousness, and ability to remember information about environmental problems. It has an important impact on attitudes and behaviors towards environmentally friendly products. In other words, environmental knowledge is defined as information and understanding of concepts about the environment and its ecosystems (Lin & Niu, 2018; Kusuma & Handayani, 2018; Mostafa, 2006; Goh & Balaji, 2016; Kumar, Manrai & Manrai, 2017; Jaiswal & Kant, 2018). More precisely, it refers to the understanding of the environmental consequences of production methods and consumption decisions (Erdil, 2018).

Studies have shown the significant impact of environmental knowledge in developing individuals who are ecologically conscious and aware. People who possess a strong understanding of the environment are more inclined to take active steps to protect it (Li, Li, Jin & Wang, 2019). Acquiring such knowledge not only educates individuals about environmental problems and the methods to solve them, but also develops a sense of

responsibility toward protecting the environment and encouraging sustainable development (Mostafa, 2006; Azizan & Suki, 2013; Maichum et al., 2017; Sharaf et al., 2015). Hence, those who possess a solid understanding of environmental issues are more likely to participate in positive environmental actions, highlighting the important role of environmental knowledge in promoting environmentally friendly consumption (Sharaf & Isa, 2017).

The correlation between environmental knowledge and a willingness to buy eco-friendly items has been studied, resulting in different results. Studies have shown that in both developing and developed countries, having knowledge about the environment has a significant positive effect on people's intents to make environmentally-friendly purchases. This has been proven by researchers Goh & Balaji (2016), Chauhan & Bhagat (2017), Maichum et al. (2017), and Choi & Johnson (2019). Studies also highlight the importance of environmental knowledge in the decision-making process of consumers (Kusuma & Handayani, 2018; Mei et al., 2012; Hossain & Lim, 2016).

Yet, some researches have indicated that environmental awareness has little impact on green purchasing intentions, showing a gap between knowledge and behavior in specific circumstances (Sharaf & Isa, 2017; Ahmad & Thyagaraj, 2015; Maichum et al., 2016). So It means that having knowledge about the physical environment is not always leading to environmentally conscious purchasing behavior (Sharaf et al., 2015; Jaiswal & Kant, 2018).

2.2 Theoretical Framework

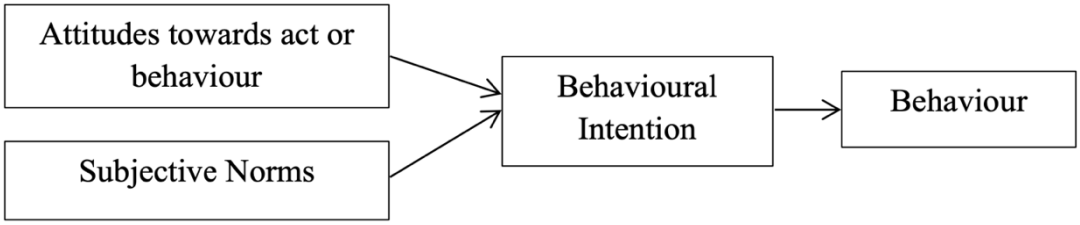
The increasing demand for environmentally-friendly items in the face of worsening environmental conditions demonstrates a significant change in consumer preferences towards sustainable consumption. This transition, which reflects an increasing recognition of the environmental impact of consumer goods, provides a distinct chance to examine the economic aspects of customers' willingness to pay extra for sustainable product characteristics (Li & Kallas, 2021; van Gelder, 2021). This section examines the link between willingness to pay for environmentally friendly products and its drivers based on theories that have previously been developed by studies. These theories are Theory of Reasoned Action (Fishbein and Ajzen, 1975) Theory of Planned Behaviour

(TPB) (Ajzen, 1991) and Extended Theory of Planned behaviour (Yadav and Pathak, 2016).

2.2.1 The Theory of Reasoned Action (TRA)

The Theory of Reasoned Action (TRA), established by Martin Fishbein and Icek Ajzen in 1967, offers a conceptual structure for understanding the impact of attitudes and subjective norms on human action. The theory of reasoned action (TRA) argues that individuals' behaviors are influenced by their rational cognitive processes and intentional assessment of the probable outcomes of their acts. This theory suggests that behavioral intention, which is impacted by attitudes towards the conduct and subjective norms within society, is the main factor that determines behavior (Fishbein and Ajzen, 1975)

TRA provides important insights into the drivers of individuals' intentions and behaviors in relation to environmental issues and the use of green products. Multiple studies have



utilized the Theory of Reasoned Action (TRA) to explain consumers' attitudes and intentions about environmentally friendly products. Sun, Teh, and Linton (2018) emphasize the significance of the Theory of Reasoned Action (TRA) in examining the behaviors of consumers when it comes to purchasing green products. They stress the importance of attitudes, intentions, and behaviors in this particular area.

Fig. 1. The Theory of Reasoned Action (Fishbein and Ajzen, 1975).

Prakash and Pathak (2017) argue that the Theory of Reasoned Action (TRA) is especially valuable for analyzing the link between attitudes, intentions, and behaviors concerning the purchasing of environmentally friendly products. They believe that understanding consumers' intents to purchase environmentally sustainable products is crucial for tackling environmental issues. Mei et al. (2012) also employed the Theory of Reasoned Action (TRA) to investigate the elements that affect individuals' intention to make

environmentally friendly purchases. This further emphasizes the suitability of the theory in analyzing behaviors related to environmental consciousness.

Attitudes and subjective norms are significant factors in determining behavioral intentions in TRA. Attitudes are indicators of individuals' views and evaluations of a specific activity, such as the act of buying environmentally friendly products. Positive attitudes towards eco-friendly behaviors are likely to enhance persons' intentions to participate in such behaviors. Subjective norms, in addition, encompass the social influences and views of societal expectations related to particular activities. The idea of social acceptance or disapproval can have a substantial impact on individuals' intentions and subsequent behavior

Individuals who believe that they will receive social acceptability for adopting environmentally friendly habits can be more inclined to have the intention to buy green products. On the other hand, societal expectations that discourage environmentally friendly behaviors may limit individuals' willingness to participate in such efforts. Thus, the Theory of Reasoned Action (TRA) offers a structure for understanding the connection between attitudes and subjective norms in shaping intentions toward environmental protection and green consumption. (Fishbein and Ajzen, 1975)
Although TRA has considerable advantages, it also has limits that restrict its suitability in specific circumstances. Critics suggest that the Theory of Reasoned Action (TRA) places excessive emphasis on the impact of intentionally planned intents on establishing behavior while overlooking the importance of uncontrolled or unplanned behaviors. Not all acts are triggered by conscious cognitive processes, and in certain instances, individuals may behave carelessly without taking into account their objectives or the consequences of their actions. Moreover, TRA focuses solely on behaviors that are under the complete control of individuals, ignoring the influence of external factors or circumstances that may affect behavior (Paul et al., 2016).

Ultimately, the Theory of Reasoned Action (TRA) provides crucial insights into comprehending individuals' attitudes, intentions, and behaviors about environmental issues and the utilization of environmentally friendly products. The Theory of Reasoned Action (TRA) offers a systematic approach to forecast and shape environmentally conscious behaviors by analyzing the interaction between attitudes and subjective Norms. Yet, it is important to understand the constraints of the theory and take into account

environmental factors that can impact behavior beyond conscious intentions. However, the TRA continues to be a vital instrument for academics and policymakers that aim to encourage sustainable consumption and tackle environmental issues.

2.2.2 Theory of Planned Behaviour (TPB)

The Theory of Planned Behavior (TPB) is an expansion of the Theory of Reasoned Action (TRA), which improves its framework to provide a more detailed understanding of human behavior. The Theory of Planned Behavior (TPB), created by Martin Fishbein and Icek Ajzen, includes an extra factor called perceived behavioral control as we discussed it earlier.This factor improves the applicability of TPB different situations, such as environmental issues and the use of eco-friendly products. Theory of Planned Behaviour (TPB) highlights the need of using thoughtful thinking models in decision-making (Conner and Armitage, 1998).

The Theory of Reasoned Action (TRA), highlighted the significance of intentions as the primary driver of action. This theory suggests that people's intentions and actions are influenced by their attitudes towards a behavior and the subjective norms present in society. However, TRA got criticized for overlooking issues such as individuals' perceived perceived control in influencing their actions. Fishbein and Ajzen introduced TPB as a response, which contains perceived behavioral control as a third factor influencing behavioral intention, in addition to attitudes and subjective norms(Ajzen, 1991).

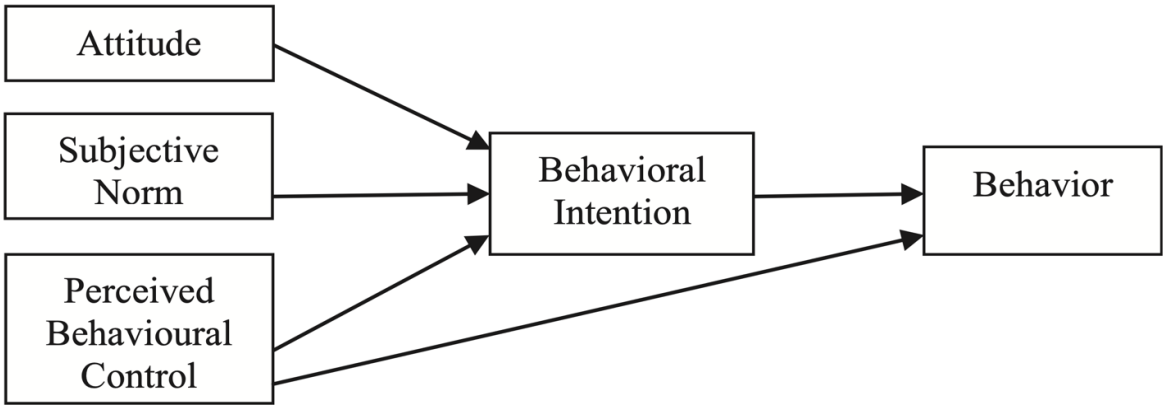


Fig. 2. Theory of planned behavior (adopted from Ajzen, 1991).

The TPB maintains the fundamental elements of the TRA, such as the attitudes towards the behavior and subjective norms. TPB has been frequently used in research studying pro-environmental behavior as well as consumers' intentions and actions towards environmentally friendly products. Studies have demonstrated TPB's effectiveness in understanding and predicting individuals' environmentally conscious actions. The inclusion of perceived behavioral control in TPB enhances its ability to explain why individuals engage in environmentally friendly practices despite potential barriers or constraints. (Hsu et al. 2017)

Furthermore, TPB has been helpful in understanding consumers' intentions and behaviors towards green products and services. Yadav and Pathak emphasize TPB's relevance in analyzing consumer attitudes and purchase intentions regarding green restaurants, hotels, energy-saving appliances, and organic products. The theory's predictive power enables researchers to identify factors that influence individuals' decisions to adopt environmentally friendly products and services. (Yadav and Pathak, 2016)

2.2.3 Extending the Theory of Planned Behavior (ETPB)

The Theory of Planned Behavior (TPB) has made an important contribution to the understanding of individuals' intentions and behaviors, specifically in relation to green consumption. However, TPB has received criticism for its focus on self-interest motives and ignoring other relevant variables. Yadav and Pathak have suggested expanding the Theory of Planned Behavior (TPB) by including extra factors including environmental concern and environmental knowledge. This would improve the TPB's ability to predict and explain behavior (Yadav and Pathak 2016).

The TPB received criticism for its narrow focus on self-interested motivations, overlooking important variables that impact behavior, particularly in the field of sustainable consumption. Nguyen, Lobo, and Greenland (2016) suggest that the Theory of Planned Behavior (TPB) overlooks other aspects beyond individual attitudes, subjective standards, and perceived behavioral control (PBC), so restricting its accuracy in predicting green purchasing behavior. This has generated interest in expanding TPB by integrating supplementary dimensions that more effectively represent individuals' motivations and decision-making processes.

2.2.4 Integration of Environmental Concern and Knowledge

Ajzen (1991) and Perugini and Bagozzi (2001) propose that the Theory of Planned Behavior (TPB) should be updated with the new findings in psychology and solve new problems in human behavior. Recent research indicates that including cognitive elements, such as concern for the environment and knowledge about the environment, can improve the ability of the Theory of Planned Behavior (TPB) to predict green consumption behavior. This approach offers a greater understanding of how people make environmentally friendly choices. Moon, Mohel, and Farooq (2019) emphasize the significance of incorporating these factors into TPB models, especially in new economies where environmentally friendly consumption is becoming more important. Yadav and Pathak (2016) emphasize the importance of incorporating environmental concern and knowledge into the Theory of Planned Behavior (TPB) to have a better understanding of how individuals' intentions to purchase green items are affected. Moreover, the studies conducted by Jaiswal and Kant (2018), Maichum et al. (2016), Choi and Johnson (2019), and Setyawan et al. (2018) can be evidence of the importance of environmental concerns and knowledge in forming customers' choices to buy environmentally friendly products. Armitage and Conner (2001), Donald et al. (2014), Read et al. (2013), and Yazdanpanah and Forouzani (2015) also support the idea of adding particular components and exploring new methods to improve the explanatory capability of the Theory of Planned Behavior (TPB).

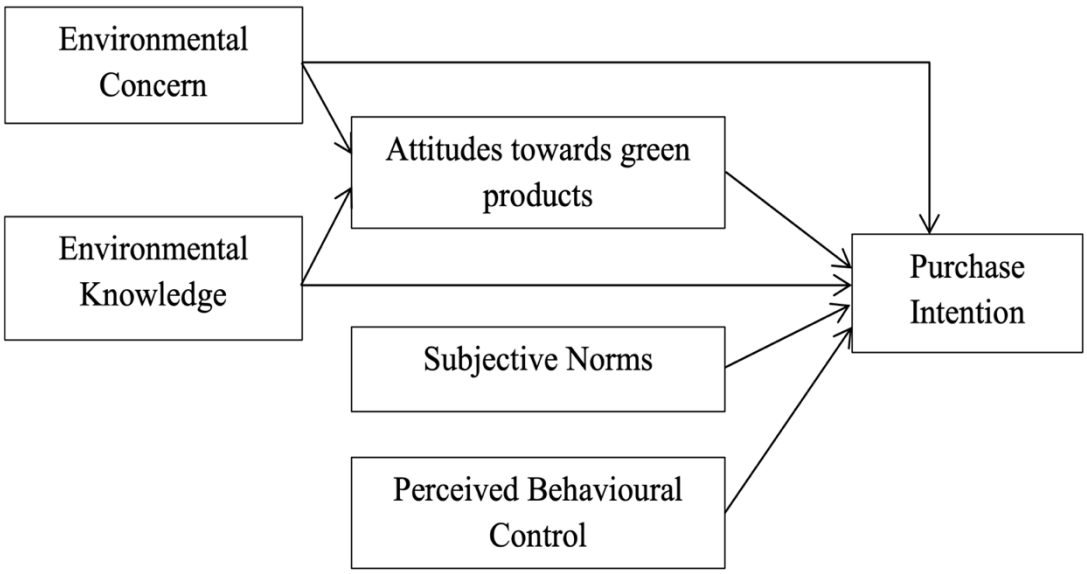


Fig. 3. The Extended Theory of Planned Behavior (Yadav and Pathak 2016).

Finally, the addition of environmental concern and knowledge into the Theory of Planned Behavior (TPB) helps in understanding environmentally friendly behavior. With these elements, researchers can improve the prediction capability and applicability of TPB when it comes to environmental issues and the purchase of eco-friendly products. This extended framework gives us the chance to understanding individual motives and processes for making decisions, which facilitates the creation of efficient solutions to encourage sustainable behavior and address issues related to the environment.

2.2.4 Conceptual Framework

We will use the following conceptual framework to examine the willingness to pay a premium for environmentally friendly items, building upon earlier theoretical models that have been discussed. The conceptual framework contains five independent variables: attitudes toward green products, subjective norms, perceived behavioral control, environmental concern, and environmental knowledge. Previous studies suggest that these independent variables will have a considerable impact on the willingness to pay for green products, which is a form of green purchase intention.

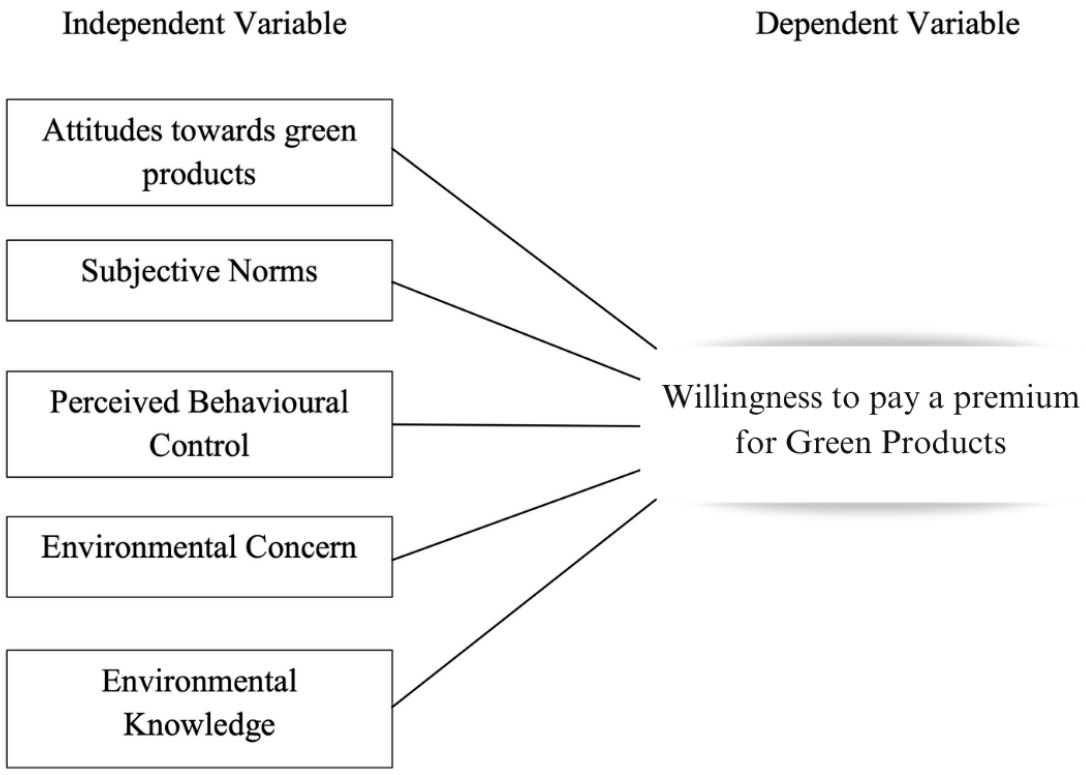


Fig. 4. Conceptual Framework

2.2.3 Hypotheses Formation

We operationalize our conceptual framework through five testable hypotheses:

H1: Consumers' positive attitudes toward eco-friendly products increase their willingness to pay a premium for these products.

H2: Higher perceived social pressure to buy eco-friendly products increases consumers' willingness to pay a premium for these products.

H3: Higher level of perceived behavioral control over purchasing eco-friendly products increases consumers' willingness to pay a premium for these products.

H4: Higher level of environmental concern increases consumers' willingness to pay a premium for these products.

H5: Higher level of environmental knowledge increases consumers' willingness to pay a premium for these products.

CHAPTER 3: RESEARCH METHODOLOGY

3.1 Introduction

The primary objective of this study is to analyze the willingness to pay a premium for environmentally friendly products among students of different educational levels in California, as well as identify the elements that influence their willingness to pay. The importance of research methodology, which is fully explained in this chapter, cannot be stressed in order to accomplish this purpose. The research design is discussed first, followed by data collection methods, sampling design, research tools, scales, and definitions. This quantitative study uses online questionnaires for data collection.

3.2 Research Design

Research design is a thorough and comprehensive strategy designed to tackle a specific research problem (Zikmund, Babin, Carr, & Griffin, 2013). Research design can be classified into two primary categories: qualitative and quantitative research.

Quantitative research mainly deals with the quantification and examination of numerical data. Quantitative research is a scientific approach that uses different statistical methods to analyze the gathered data (Daniel, 2016). Statistical methods in quantitative research facilitate the description of results, shorten the analytical process, and guarantee the objectivity of outcomes (Daniel, 2016).

This study uses a survey-based (quantitative) research methodology. A survey-based methodology entails distributing structured questionnaires to a sample of consumers to collect data on their attitudes, beliefs, and behaviors about environmentally friendly products. Many researchers have employed similar research methodologies to investigate the factors that influence people's willingness to engage in environmentally friendly purchases. (Khoiriyah and Toro, 2018, Teng et al. (2018), Khor and Hazen, 2017). This approach is especially appropriate for examining aspects at the personal level, such as attitudes, subjective norms, and perceived behavioral control. It closely aligns with the theoretical framework of the Theory of Planned Behavior (TPB). The Theory of Planned conduct (TPB) proposes that conduct is directly influenced by behavioral intentions, which are formed by attitudes, subjective standards, and perceived behavioral control (Ajzen, 1991).

3.2.1 Benefits of the survey-based methodology

Flexibility in Data collection: Surveys provide great flexibility, enabling data collecting through several means including online, in-person, and telephonic surveys. The flexibility of this approach improves the extent and applicability of the results (Groves et al., 2009).

Direct Hypothesis Testing: Surveys facilitate direct hypothesis testing by gathering data that quantifies the variables of interest, such as attitudes, subjective norms, perceived behavioral control, and willingness to pay a premium for environmentally friendly

products. This approach simplifies the process of carrying out hypothesis testing and confirming theoretical models (Creswell, 2014).

In-depth Understanding of Consumer Preferences: Surveys offer comprehensive data on consumer attitudes, perceptions, and behaviors, providing valuable insights into consumer preferences and decision-making processes. Having an understanding of the elements that affect consumer willingness to pay a premium for environmentally friendly products is crucial (Malhotra & Birks, 2007).

Quantitative Analysis: Quantitative analysis is facilitated by surveys, as they allow for the use of statistical tools to test hypotheses and obtain practical insights. The capacity to analyze data is essential for providing recommendations based on data (Bryman & Bell, 2015).

3.2.2 Drawbacks of the survey-based methodology

Limited Depth: One of the biggest downsides of surveys is the limited depth of response. Closed questions are easy to analyse but don't give the rich, detailed answers that qualitative methods like interviews or focus groups do (Patton, 2015). This can lead to a shallow understanding of complex behaviour and motivations.

Response Bias: Surveys are prone to various types of response bias, such as social desirability bias where respondents answer what they think is socially acceptable rather than their true opinion (Podsakoff et al., 2003). This can compromise the data.

Low Response: Online surveys especially suffer from low response rates (Sheehan, 2001). This can limit the representativeness of the sample and bias the results if those who respond are different from those who don't.

Misinterpretation of Questions: There's also the risk of respondents misinterpreting the questions and answering incorrectly. Unlike interviews where clarifications can be sought, surveys don't allow real-time clarification (Fowler, 2014).

3.2.3 Justification and Relevance to the Research

The survey-based approach is well correlated with the research questions, aims, and theoretical framework of this thesis. It enables the thorough gathering of data on consumer attitudes, perceptions, and behaviors regarding green products. Furthermore, this approach has been successfully utilized in many important studies in this particular field of research:

Yadav and Pathak (2016, 2017): These studies expanded upon the Theory of Planned Behavior (TPB) to investigate the intentions of young consumers in developing nations when it comes to purchasing environmentally friendly products. Their discoveries emphasize the significance of attitudes, subjective standards, and perceived behavioral control in influencing intentions to make environmentally friendly purchases, confirming the effectiveness of the survey-based method.

Korgerud (2021/2022): This study investigated consumer tendency to purchase and financially support environmentally-friendly products. Surveys were utilized to evaluate the influence of general and specific opinions on this tendency. The study provided useful insights regarding sustainable consumption choices.

Siddique and Hossain (2018): This study examined the sources of consumer awareness regarding environmentally friendly products and how they influence their purchasing choices in Bangladesh. The researchers utilized surveys to collect and analyze consumer data.

Kumar and Ghodeswar (2015): conducted a study that examined the elements influencing customers' decisions to purchase green products. They utilized surveys to conduct a thorough analysis of consumer motivations and barriers.

Rather and Rajendran (2014): This study utilized surveys to investigate consumer consciousness and its effect on environmentally-friendly shopping behavior, providing empirical evidence on the role of environmental awareness in consumer buying habits

D'Souza et al. (2006): This investigation into green products and corporate strategy used surveys to understand consumer responses to green marketing initiatives.

Sharma, Sonwalkar, and Kapse (2013): This study focused on consumer purchase behavior for green products, utilizing surveys to gather data on consumer attitudes and behaviors.

These studies confirm the usefulness and relevance of using surveys to investigate consumer behavior about environmentally friendly products. By using this methodology, the thesis will benefit from a well-established method that enables reliable data gathering, hypothesis testing, and the generation of significant insights about sustainable consumer behavior.

The survey questionnaire used in this study consists of closed-ended questions. This means that participants can select their responses from a predetermined number of options (Hruschka et al., 2004).

3.3 Data collection

Data collecting is an essential aspect of research since it affects the precision of the obtained results. Sekaran and Bougie (2010) differentiate between primary and secondary data, and we specifically use primary data. Primary data means newly collected data that is intended for certain goals (Sekaran & Bougie, 2013). Typical ways of collecting primary data include the use of questionnaires, surveys, and government papers. We will use questionnaires as a tool for collecting relevant data, as they provide dependable and anonymous responses (Zikmund et al., 2013; Daniel, 2016). The questions focus on the extent to which individuals are willing to pay a premium for environmentally friendly products. Using a questionnaire is both cheap and successful, as used in studies conducted by Khoiriyah and Toro (2018), Teng et al. (2018), and Khor and Hazen (2017). It is delivered online through prolific (https://www.prolific.com/) following the approach utilized by Choshaly (2017), Iyer et al. (2016), and Chen and Deng (2016) in their studies of green purchase intentions. Data was collected during the year 2024.

The questionnaire includes two sections: Section 1 collects personal demographic information. Section 2 consists of questions that assess both dependent and independent variables in this study.

3.4 Target Population and sample size

The study focuses on students of different educational levels in California, aiming to explore their willingness to pay a premium for eco-friendly products. California was chosen due to its status as the most populous state in the US. A total of 147 respondents participated in the survey, providing a diverse sample of student perspectives across various demographics and educational backgrounds. Thus, the sample size for this study is 147, denoted as n = 147.

3.5 Operational Definitions for Measuring Independent and Dependent Variables

3.5.1 Willingness to pay premium for green products

The willingness to pay a premium for green products is a measure of the degree to which consumers are prepared to spend additional money in order to get environmentally friendly products (Khoiriyah & Toro, 2018).

We will measure the willingness to pay a premium for green products with the following three Items:

- I would pay a higher price for green products if I knew they were produced using environmentally sustainable practices.
- I would choose green products over cheaper non-green alternatives because I believe it is important to support environmentally friendly practices.
- I would pay extra for green products even if they are less attractive in looks than non-green products.

All items are assessed using a five-point Likert scale. The five-point Likert scale gives a value of 1 to "Strongly Disagree" and a value of 5 to "Strongly Agree".

3.5.2 Attitude towards green products

Attitude towards green products refers to the evaluation of the performance of green products, whether it is positive or negative (Mamun, Mohamad, et al., 2018).

We will measure Attitude towards green products with the following three Items:

- I believe that green products are more beneficial for the environment than conventional products.
- I feel a sense of satisfaction and pride when I purchase green products.
- I think that green products are generally of higher quality than conventional products.

All items are assessed using a five-point Likert scale. The five-point Likert scale gives a value of 1 to "Strongly Disagree" and a value of 5 to "Strongly Agree".

3.5.3 Subjective norm

Subjective norm refers to an individual's beliefs of whether a majority of people agree with a specific behavior (Arli et al., 2018).

We will measure Subjective norm with the following three Items:

- My close friends believe that buying green products is the right thing to do.(The subjective norm can be influenced by family and friends (Arli et al., 2018).)
- Influential people in my life consider it important that I buy green products.
- Whenever I buy an eco-friendly product, my action is appreciated by those around me.

All items are assessed using a five-point Likert scale. The five-point Likert scale gives a value of 1 to "Strongly Disagree" and a value of 5 to "Strongly Agree".

3.5.4 Perceived behavioural control

Perceived behavioural control refers to an individual's belief regarding the level of difficulty or ease associated with doing a specific activity (Arli et al., 2018).

We will measure Perceived behavioural control with the following three Items:

- Green products are readily available in shops near my residence.
- The cost of green products is within my budget.
- My past experiences have made purchasing green products relatively easy for me.

All items are assessed using a five-point Likert scale. The five-point Likert scale gives a value of 1 to "Strongly Disagree" and a value of 5 to "Strongly Agree".

3.5.5 Environmental Concerns

Environmental concern refers to the extent to which people are aware of environmental concerns and are willing to support efforts to address these issues or individually contribute to their resolution (Ahmad & Thyagaraj, 2015).

We will measure Environmental concern with the following three Items:

- I worry about the pollution levels in my local area.
- I feel troubled by the environmental damage caused by human activities.
- I believe that protecting the environment is crucial for future generations.

All items are assessed using a five-point Likert scale. The five-point Likert scale gives a value of 1 to "Strongly Disagree" and a value of 5 to "Strongly Agree".

3.5.6 Environmental Knowledge

Environmental knowledge refers to a fundamental understanding of the facts, concepts, and relations concerning the natural environment and its crucial ecosystems (Goh & Balaji, 2016).

We will measure Environmental knowledge with the following three Items:

- I know more about green products than the average person.

- I understand the concept of carbon footprint and its implications.
- I know how to interpret environmental labels and symbols on product packaging.

All items are assessed using a five-point Likert scale. The five-point Likert scale gives a value of 1 to "Strongly Disagree" and a value of 5 to "Strongly Agree".

3.7 Data Validation

Johanson and Brooks (2010) highlight the importance of using clear and appropriate language in scale building, while avoiding any errors or omissions. In order to guarantee this, multiple validation procedures will be used. Before being distributed to the sample group, the questionnaire was be reviewed by an expert.

3.8 Data coding

Table 1. Data coding

Responses	Code
Strongly Disagree (SD)	1
Disagree (D)	2
Neutral (N)	3
Agree (A)	4
Strongly Agree (SA)	5
Gender	M = 1, F = 0 Other / Prefer Not to say = .
Age	(18-28) = 18, (29-39) = 29 (40-50) = 40, (50+) = 50
Highest Education Level	High School = . Vocational Education and Training = 0 University Degree or higher = 1
Years of work experience	Continuous Variable
Marital Status	Single = 0, Married = 1 Other / Prefer Not to say = .
Continent of Birth	North America = 1 Others = 0

3.9 Data Analysis

After the data processing, the data is analyzed to determine whether the hypotheses suggested in this study are accepted or rejected (Sekaran & Bougie, 2016). This process sheds light on the research questions (Sekaran & Bougie, 2016). The quantitative data collected from the questionnaires will be subjected to statistical analysis using both descriptive and inferential methods.

3.9.1 Descriptive statistics

We will conduct a descriptive analysis, utilizing frequencies and percentages to provide a comprehensive summary of the subject.

Table 2. Example of percentages table

Attitude	Strongly Disagree (SD)	Disagree (D)	Neutral (N)	Agree (A)	Strongly Agree (SA)
Question 1(Q1)	30%	25%	20%	10%	15%

Measurement of Central Tendency & dispersion:

Table 3. Example of table showing Central Tendency & dispersion

Attitude	M	Median	SD
Question 1	2,93	3,00	1,05

3.9.2Inferential Analysis

This is the most important step where we use the data collected from the sample to draw inferences about the population (Aldrich, 2019). In this study we will use Ordered Logistic Regression to examine the relationship between our dependent variable which is "willingness to pay a premium for green products" and independent variables which are attitude towards green products, subjective norm, perceived behavioural control, environmental concern, and environmental knowledge. The data in this study will be examined using the statistical program Stata.

Model Structure

Our ordinal logistic regression model can be formulated as follows:

$$\log\left(\frac{P(Y \leq j)}{P(Y > j)}\right) = a_j + \beta_1 . Att + \beta_2 SN + \beta_3 . PBC + \beta_4 . EC + \beta_5 . EK + e$$

Where:

- Y is the dependent variable (Willingness to pay a premium for ecofriendly products) with categories 1,2, 3…5.
- $P(Y \leq j)$ is the cumulative probability that the dependent variable Y is less than or equal to category j.
- $P(Y > j)$ is the cumulative probability that the dependent variable Y is greater than category j.
- a_j is the intercept (or threshold) for category j, which changes for each category.
- $\beta_1, \beta_2, \beta_3, \beta_4, \beta_5$ are the coefficients for each independent variables (attitude towards green products, subjective norm, perceived behavioural control, environmental concern, and environmental knowledge)

3.9.2.1 Why Ordinal Logistic Regression?

We choose to use ordinal logistic regression (OLR) in this study because of the nature of the dependent variable and the research questions. Ordinal logistic regression is best suited for modeling relationships where the dependent variable is ordinal, meaning it has categories with a logical order but unknown intervals between categories. In this study, the dependent variable is the willingness to pay a premium for environmentally friendly products among students of different educational levels in California, which is measured on an ordinal scale (Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree).

As we said Ordinal logistic regression is used when the dependent variable is ordinal. In our study, willingness to pay a premium is measured on an ordinal scale, capturing different degrees of willingness in a hierarchical order. Traditional linear regression models are not suitable for such data because they assume equal spacing between

categories and a continuous dependent variable (Agresti, 2010). OLR does meet these assumptions, so it's a good choice for ordinal data.

OLR is designed to handle ordinal data by estimating the probability of the dependent variable falling into each category given the independent variables (Long & Freese, 2014). This is useful in understanding how factors such as environmental attitudes, subjective norms, and perceived behavioral control affect willingness to pay a premium for environmentally friendly products. By using OLR, we can model the cumulative probabilities of the ordinal categories and see how changes in the independent variables affect the likelihood of being in a higher or lower category of willingness.

Ordinal logistic regression has several theoretical and practical advantages:

Flexibility: OLR can model complex relationships between the dependent variable and multiple independent variables without assuming equal intervals between categories (Harrell, 2015).

Interpretability: The results of OLR are easy to interpret. The odds ratios give clear insights into how each predictor variable affects the odds of being in a higher category of the ordinal outcome (Hosmer, Lemeshow, & Sturdivant, 2013).

Non-linear relationships: OLR can capture non-linear relationships between the predictors and the ordinal outcome which is important when dealing with complex human behaviors like willingness to pay for environmentally friendly products (Williams, 2016).

In summary, the use of ordinal logistic regression in this study is justified because of the nature of the dependent variable, and the advantages of OLR for ordinal data. By using OLR we can get robust and interpretable results on the factors that affect students' willingness to pay a premium for environmentally friendly products and contribute to the literature on sustainable consumer behavior.

CHAPTER 4: RESULTS AND ANALYSIS

4.1 Introduction

In this chapter, data analysis is presented. First, the descriptive analysis is performed. Secondly, contingency tables are done to see how the data changes with respect to another categorical variable. Thirdly, Ordered logistic regression is applied to test the hypothesis of the thesis and see if the factors are significant. We performed this analysis by using SPSS.

4.2 Descriptive Analysis

Initially, a descriptive analysis is conducted to facilitate a comprehensive understanding of the data. We started with descriptive analysis of the demographic data collected in Section one of the survey questionnaire. Then, the data obtained from the questions in section 2 undergoes descriptive analysis. The analysis includes the using of tables and pie charts to summarize the data.

4.2.1 Respondents' Demographic Profile

This research considers six demographic categories: age, gender, continent of birth, highest level of education, marital status, years of experience. Each category is analyzed individually in the sections that follow.

4.2.1.1 Age

Table 4. Age

Age Group	Frequency	Percentage	Cumulative Frequency	Cumulative Percentage
18-28	86	59%	86	59%
29-39	45	31%	131	89%
40-50	9	6%	140	95%
50+	7	5%	147	100%

The respondents are grouped according to their age groups. Based on Table 6 and Figure 5, 59% (86 respondents) of the participants are 18 to 22 years old. Then, 31% (45 respondents) are 29 to 39 years old. Six percent (9 respondents) are between 40 and 50 years old. Finally, only 7 respondents, which is 5% of the total, are above 50 years old.

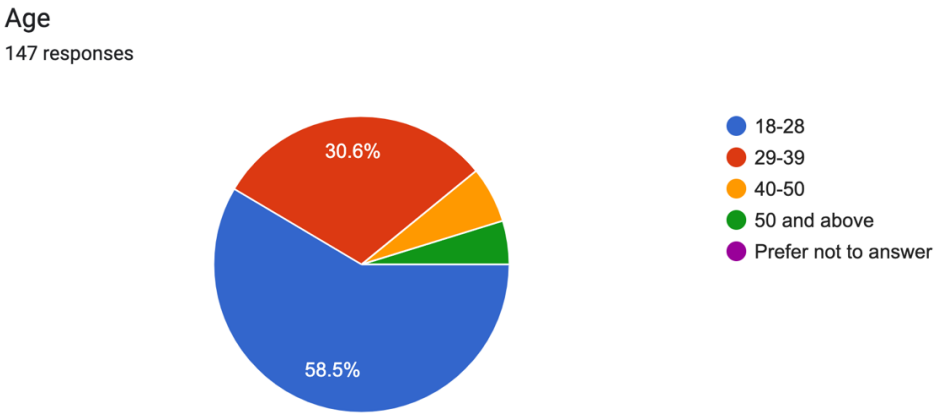


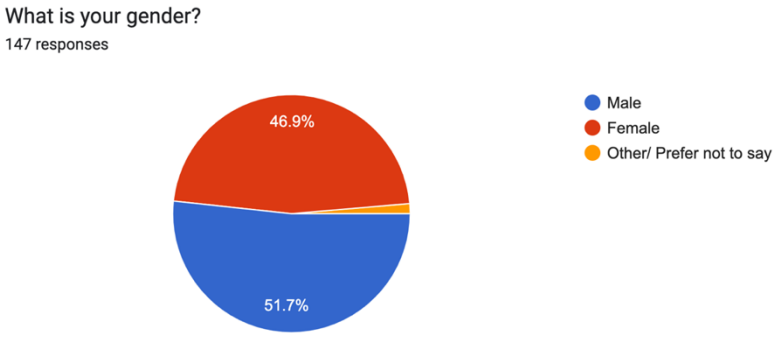
Fig. 5. Age

4.2.1.2 Gender

Table 5. Gender

Gender	Frequency	Percentage	Cumulative Frequency	Cumulative Percentage
Female	69	47%	69	47%
Male	76	52%	145	99%
Others	2	1%	147	100%

The respondents are grouped according to their gender. Based on Table 7. and Figure 6, 52% (76 respondents) of the participants are male, while 47% (69 respondents) are female. Only 1% of the participants preferred not to disclose their gender or identified as other.



4.2.1.3 Continent of Birth

Table 6. Continent of Birth

Continent	Frequency	Percentage	Cumulative Frequency	Cumulative Percentage
North America	132	90%	132	90%
South America	1	1%	133	90%
Europe	2	1%	135	92%
Asia	10	7%	145	99%
Africa	2	1%	147	100%
Australia	0	0%	147	100%

The respondents are grouped according to their continent of birth. Based on Table 8. and Figure 7, (90% (132 respondents) of the participants were born in North America. Then, 1% (1 respondent) was born in South America, and another 1% (2 respondents) were born in Europe. Seven percent (10 respondents) were born in Asia. Additionally, 1% (2 respondents) were born in Africa. There are no respondents who were born in Australia.

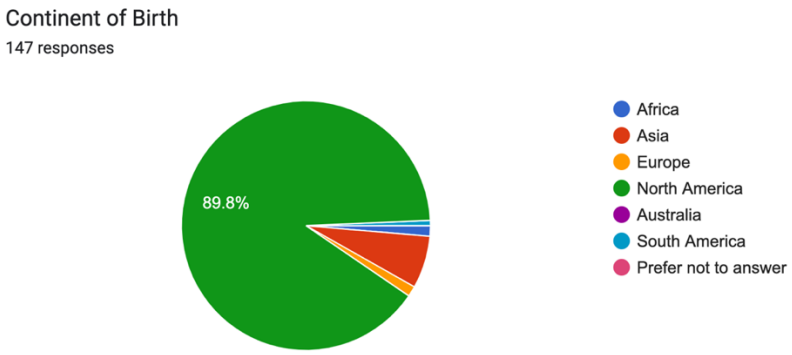


Fig. 7. Continent of Birth

4.2.1.4 Highest level of Education

Table 7. Highest Level of Education

Highest Level of Educcation	Frequency	Percentage	Cumulative Frequency	Cumulative Percentage
High School	49	33%	49	33%
Vocational Education and Training	17	12%	66	45%
Bachelor	60	41%	126	86%
Master	14	10%	140	95%
Phd	3	2%	143	97%
Prefer not to answer	4	3%	147	100%

The respondents are grouped according to their highest level of education. Based on Table 9 and Figure 8. 33% (49 respondents) have a high school education. Twelve percent (17 respondents) have vocational education and training. Forty-one percent (60 respondents) hold a bachelor's degree. Ten percent (14 respondents) have a master's degree, while 2% (3 respondents) have a Ph.D. Finally, 3% (4 respondents) prefer not to answer.

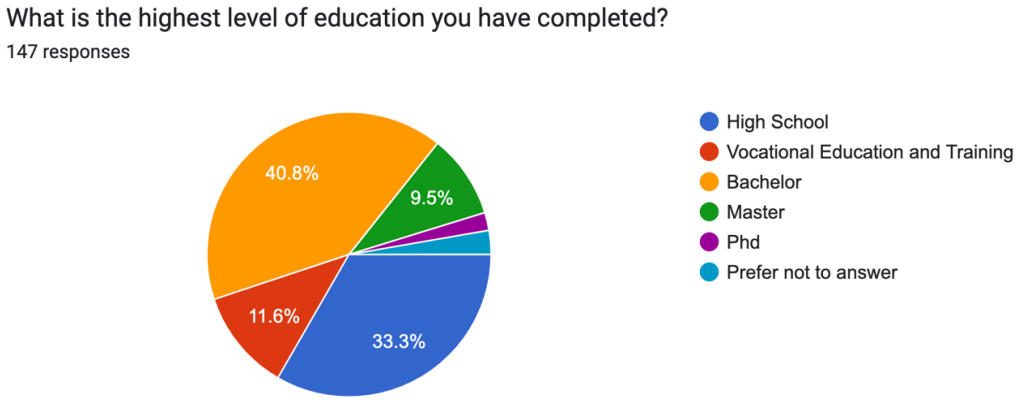


Fig. 8. Highest Level of Education

4.2.1.5 Marital Status

Table 8. Marital Status

Marital Status	Frequency	Percentage	Cumulative Frequency	Cumulative Percentage
Single	111	76%	111	76%
Married	25	17%	136	93%
Other	11	7%	147	100%

The respondents are grouped according to their marital status. Based on Table 10. 76% (111 respondents) are single. Seventeen percent (25 respondents) are married, and 7% (11 respondents) fall into the "other" category.

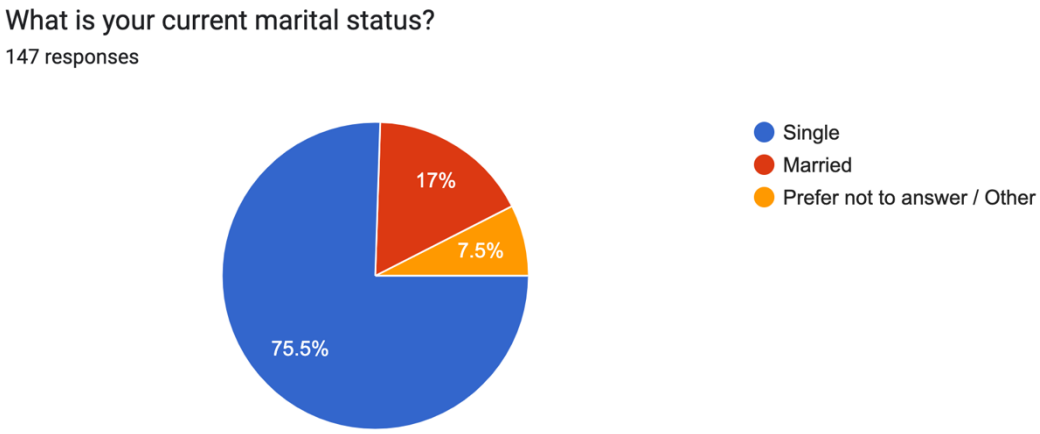


Fig. 9. Marital Status

4.2.2 Main Question results

In this part we deal with the responses for the questions related to the dependent variables and the independent variables collected in Section 2. The analyses performed include frequencies, percentages some measures of central tendency & dispersion.

4.2.2.1 Responses to Questions of Willingness to Pay for a Premium

Table 9. Frequencies of Responses to Questions related to Willingness to Pay for a Premium

Frequencies					
	1	**2**	**3**	**4**	**5**
WTPP	**SD**	**D**	**N**	**A**	**SA**
Q1	3	19	40	70	15
Q2	3	25	35	68	16
Q3	8	36	34	50	19
Total	14	80	109	188	50

Table 10. Percentages of Responses to Questions related to Willingness to Pay for a Premium

Percentages					
	1	**2**	**3**	**4**	**5**
WTPP	**SD**	**D**	**N**	**A**	**SA**
Q1	2%	13%	27%	48%	10%
Q2	2%	17%	24%	46%	11%
Q3	5%	24%	23%	34%	13%
Total	3%	18%	25%	43%	11%

Table 11. Measurement of Central Tendency & dispersion of Responses to Questions related to Willingness to Pay for a Premium

Measurement of Central Tendency & dispersion				
	Mean	**Median**	**Variace**	**SD**
Q1	3,51	4,00	0,84	0,92
Q2	3,47	4,00	0,94	0,97
Q3	3,24	3,00	1,27	1,13

The survey responses indicate a strong inclination towards willingness to pay a premium for eco-friendly products. For Question 1 “I would pay a higher price for a product if I knew it was produced using environmentally sustainable practices”, nearly half of the respondents (48%) expressed agreement, with an additional 10% strongly agreeing. This demonstrates a considerable readiness among respondents to invest more in products that are environmentally friendly. Question 2 “I choose eco-friendly products over less

expensive, non-eco-friendly alternatives because supporting environmentally friendly practices is important to me" shows a similar trend, with 46% agreeing and 11% strongly agreeing, reinforcing the finding that a significant portion of the sample values eco-friendly products enough to pay a higher price. In Question 3 "I would pay extra for eco-friendly products even if they are less attractive in looks than non-eco-friendly products", while the percentage of strong agreement is slightly higher at 13%, the agreement percentage drops to 34%. Despite this slight variation, the overall trend remains positive. The cumulative percentages indicate that 43% of respondents agree and 11% strongly agree with paying a premium, suggesting a market potential for higher-priced eco-friendly products. Neutral responses (25%) reflect a segment that is undecided, and a minority (21%) either disagrees or strongly disagrees, showing some resistance to premium pricing.

4.2.2.2 Responses to Questions of Attitude towards eco-friendly products

Table 12. Frequencies of Responses to Questions of Attitude towards eco-friendly products

Frequencies					
	1	**2**	**3**	**4**	**5**
Attitude	**SD**	**D**	**N**	**A**	**SA**
Q1	1	7	14	84	41
Q2	3	14	39	66	25
Q3	2	23	62	51	9
Total	6	44	115	201	75

The data reveals a predominantly positive attitude towards eco-friendly products among respondents. For Question 1 "I believe that eco-friendly products are more beneficial for the environment than conventional products", a notable 57% of respondents agree, and 28% strongly agree that they have a favorable attitude towards eco-friendly products. This indicates that a large majority holds positive views about these products. Question 2 "I feel a sense of satisfaction and pride when I purchase eco-friendly products" supports this with 45% agreement and 17% strong agreement, illustrating consistent positive attitudes. Even though Question 3 "I think that eco-friendly products are generally of higher quality than conventional products" shows a lower level of strong agreement (6%), a substantial

35% still agree. Overall, 46% of respondents agree, and 17% strongly agree, reflecting a strong positive sentiment towards eco-friendly products. Neutral responses stand at 26%, indicating some ambivalence, while only 11% either disagree or strongly disagree, suggesting limited opposition to eco-friendly products.

Table 13. Percentages of Responses to Questions of Attitude towards eco-friendly products

Percentages					
	1	2	3	4	5
Attitude	SD	D	N	A	SA
Q1	1%	5%	10%	57%	28%
Q2	2%	10%	27%	45%	17%
Q3	1%	16%	42%	35%	6%
Total	1%	10%	26%	46%	17%

Table 14. Measurement of Central Tendency & dispersion of Responses to Questions related to Attitude towards eco-friendly products

Measurement of Central Tendency & dispersion				
Attitude	Mean	Median	Variace	SD
Q1	4,07	4,00	0,63	0,79
Q2	3,65	4,00	0,89	0,94
Q3	3,29	3,00	0,73	0,85

4.2.2.3 Responses to Questions of Subjective Norms

Table 15. Frequencies of Responses to Questions of Subjective Norms

Frequencies					
	1	2	3	4	5
Subjective Norms	SD	D	N	A	SA
Q1	4	17	49	64	13
Q2	6	38	51	39	13
Q3	7	44	59	29	8
Total	17	99	159	132	34

Responses to questions about subjective norms, which assess the influence of social pressures on eco-friendly behaviors, show varied opinions. For Question 1 "My close friends believe that buying eco-friendly products is the right thing to do", 44% of respondents agree, and 9% strongly agree that social norms influence their behavior, indicating that a significant portion feels social expectations to act in environmentally friendly ways. Question 2 "Influential people in my life consider it important that I buy eco-friendly products " reveals a drop in agreement to 27%, with 9% still strongly agreeing, suggesting that while social norms are influential, their impact may vary. Question 3 "Whenever I buy an eco-friendly product, my action is appreciated by those around me" sees further decline, with 20% agreeing and only 5% strongly agreeing, indicating less perceived social pressure. Cumulatively, 30% agree and 8% strongly agree that subjective norms impact their behavior, while 36% remain neutral, reflecting mixed perceptions. The disagreement (22%) and strong disagreement (4%) percentages highlight that a notable portion of respondents do not feel significant social pressure regarding eco-friendly behaviors.

Table 16. Percentages of Responses to Questions of Subjective Norms

Percentages					
	1	2	3	4	5
Subjective Norms	SD	D	N	A	SA
Q1	3%	12%	33%	44%	9%
Q2	4%	26%	35%	27%	9%
Q3	5%	30%	40%	20%	5%
Total	4%	22%	36%	30%	8%

Table 17. Measurement of Central Tendency & dispersion of Responses to Questions related to Subjective Norms

Measurement of Central Tendency & dispersion				
Subjective Norms	**Mean**	**Median**	**Variace**	**SD**
Q1	3,44	4,00	0,82	0,91
Q2	3,10	3,00	1,04	1,02
Q3	2,91	3,00	0,90	0,95

4.2.2.4 Responses to Questions of Perceived behavior control

Table 18. Frequencies of Responses to Questions of Perceived behavior control

Frequencies					
	1	**2**	**3**	**4**	**5**
Perceived behavior control	**SD**	**D**	**N**	**A**	**SA**
Q1	4	19	20	81	23
Q2	10	41	39	49	8
Q3	2	26	31	80	8
Total	16	86	90	210	39

Table 19. Percentages of Responses to Questions of Perceived behavior control

Percentages					
	1	**2**	**3**	**4**	**5**
Perceived behavior control	**S D**	**D**	**N**	**A**	**SA**
Q1	3%	13%	14%	55%	16%
Q2	7%	28%	27%	33%	5%
Q3	1%	18%	21%	54%	5%
Total	4%	20%	20%	48%	9%

Table 20. Measurement of Central Tendency & dispersion of Responses to Questions related to Perceived behavior control

Measurement of Central Tendency & dispersion				
Perceived behavior control	**Mean**	**Median**	**Variace**	**SD**
Q1	3,68	4,00	0,96	0,98
Q2	3,03	3,00	1,11	1,05
Q3	3,45	4,00	0,80	0,89

The survey results for perceived behavioral control indicate that many respondents feel capable of purchasing eco-friendly behaviors. Question 1 “Eco-friendly products are readily available in shops near my residence”, shows a high level of agreement, with 55% agreeing and 16% strongly agreeing that they can engage in eco-friendly actions. For Question 2 “The cost of eco-friendly products is within my budget “, 33% agree, and 5%

strongly agree, indicating a slightly lower but still substantial perceived control. Question 3 “My past experiences have made purchasing eco-friendly products relatively easy for me” maintains similar levels, with 54% agreeing and 5% strongly agreeing. The overall totals reveal that 48% agree, and 9% strongly agree, underscoring a positive perception of control over their eco-friendly actions. Neutral responses account for 20%, showing some uncertainty, while disagreement (20%) and strong disagreement (4%) indicate that a segment of the population feels less capable of engaging in such behaviors.

4.2.2.4 Responses to Questions of Environmental concern

Table 21. Frequencies of Responses to Questions of Environmental concern

Frequencies					
	1	**2**	**3**	**4**	**5**
	SD	**D**	**N**	**A**	**SA**
Q1	4	20	23	64	36
Q2	1	4	17	59	66
Q3	1	2	6	57	81
Total	6	26	46	180	183

Table 22. Percentages of Responses to Questions of Environmental concern

Percentages					
	1	**2**	**3**	**4**	**5**
	SD	**D**	**N**	**A**	**SA**
Q1	3%	14%	16%	44%	24%
Q2	1%	3%	12%	40%	45%
Q3	1%	1%	4%	39%	55%
Total	1%	6%	10%	41%	41%

Table 23. Measurement of Central Tendency & dispersion of Responses to Questions related to Environmental concern

Measurement of Central Tendency & dispersion				
	Mean	**Median**	**Variace**	**SD**
Q1	**3,73**	4,00	1,13	1,06
Q2	**4,26**	4,00	0,67	0,82
Q3	**4,46**	5,00	0,50	0,70

Responses to questions on environmental concern highlight a high level of worry about environmental issues among respondents. For Question 1 (I worry about the pollution levels in my local area), 44% agree, and 24% strongly agree that they are concerned about environmental issues. This high level of concern is even more pronounced in Question 2 (I feel troubled by the environmental damage caused by human activities), where 40% agree, and a significant 45% strongly agree. Question 3 (I believe that protecting the environment is crucial for future generations) also shows strong concern, with 39% agreeing and 55% strongly agreeing. The cumulative data reveals that 41% of respondents agree, and 41% strongly agree with having environmental concerns, demonstrating a strong collective anxiety about environmental issues. Only 10% remain neutral, and a negligible 1% strongly disagree, indicating an overwhelming concern for the environment within the respondent base.

4.2.2.4 Responses to Questions of Environmental Knowledge

Table 24. Frequencies of Responses to Questions of Environmental Knowledge

Frequencies					
	1	2	3	4	5
	SD	D	N	A	SA
Q1	10	46	47	33	11
Q2	2	6	20	87	32
Q3	1	35	40	57	14
Total	13	87	107	177	57

Table 25. Percentages of Responses to Questions of Environmental Knowledge

Percentages					
	1	2	3	4	5
	SD	D	N	A	SA
Q1	7%	31%	32%	22%	7%
Q2	1%	4%	14%	59%	22%
Q3	1%	24%	27%	39%	10%
Total	3%	20%	24%	40%	13%

Table 26. Measurement of Central Tendency & dispersion of Responses to Questions related to Environmental Knowledge

Measurement of Central Tendency & dispersion				
	Mean	Median	Variace	SD
Q1	2,93	3,00	1,11	1,05
Q2	3,96	4,00	0,64	0,80
Q3	3,33	3,00	0,93	0,97

The responses indicate that respondents generally feel knowledgeable about environmental issues. In Question 1 (I know more about eco-friendly products than the average person), 7% strongly agree, and 22% agree that they have environmental knowledge, suggesting a solid base of informed individuals. Question 2 (I understand the concept of carbon footprint and its implications) shows even higher confidence, with 59% agreeing and 22% strongly agreeing, indicating widespread self-reported knowledge. Question 3 (I know how to interpret environmental labels and symbols on product packaging) continues this trend with 10% strongly agreeing and 39% agreeing. Overall, the totals reveal that 40% of respondents agree, and 13% strongly agree that they possess environmental knowledge, reflecting a well-informed respondent base. Neutral responses (24%) suggest that a significant minority are unsure about their knowledge level, while strong disagreement remains low at 2%, indicating that only a small fraction of respondents feel they lack environmental knowledge.

4.2.4 Ordinal logistic regression

We aggregated the results for each category of questions by computing the mean for each category. This averaging process allowed us to summarize the data in a way that highlights central tendencies, making it easier to compare across different categories. Additionally, by creating these new variables, we reduced the complexity of the data, facilitating more straightforward interpretation and analysis.

- Willingness to pay a premium for eco-friendly Products: wtp_dv = (Q1+ Q2 + Q3)/3
- Attitude: iv_set1 = (Q4 + Q5 + Q6)/3
- Subjective Norms: iv_set2 = (Q7 + Q8 + Q9)/3
- Perceived Behavioral Control: iv_set3= (Q10 + Q11 + Q12)/3
- Environmental Concerns: iv_set4 = (Q13 + Q14 + Q15)/3
- Environmental Knowledge: iv_set5 = (Q16 + Q17 + Q18)/3

Where dv stands for “dependent variable” and iv for “independent variables” (i.e., the covariates)

We conducted an Ordinal Logistic Regression analysis using Stata software. The analysis was executed with the following Stata command:

```
gen wtp_dv = (iwouldpayahigherpriceforaproduct + ichooseecofriendlyproductsoverle + iwouldpayextraforecofriendlyprod) / 3
gen iv_set1=(ibelievethatecofriendlyproductsa+ ifeelasenseofsatisfactionandprid+ ithinkthatecofriendlyproductsare)/3
gen iv_set2=(myclosefriendsbelievethatbuyinge + influentialpeopleinmylifeconside + wheneveribuyanecofriendlyproduct)/3
gen iv_set3=(ecofriendlyproductsarereadilyava+ thecostofecofriendlyproductsiswi+ mypastexperienceshavemadepurchas)/3
gen iv_set4=(iworryaboutthepollutionlevelsinm+ ifeeltroubledbytheenvironmentald+ ibelievethatprotectingtheenviron)/3
gen iv_set5=(iknowmoreaboutecofriendlyproduct+ iunderstandtheconceptofcarbonfoo+ iknowhowtointerpretenvironmental)/3
summarize wtp_dv iv_set1 iv_set2 iv_set3 iv_set4 iv_set5
bootstrap, reps(100) seed(12345): oprobit wtp_dv iv_set1 iv_set2 iv_set3 iv_set4 iv_set5 age northamerica1 male1 university1 married1
bootstrap, reps(100) seed(12345): ologit wtp_dv iv_set1 iv_set2 iv_set3 iv_set4 iv_set5 age northamerica1 male1 university1 married1
```

Table 27. Ordinal Logistic Regression Result

wtp_dv	Observed coefficient	z	P>|z|	Normal-based [95% conf. interval]	
iv_set1	1,40587	3,42	0,001	0,5992166	2,212522
iv_set2	0,196041	0,63	0,529	-0,4147721	0,8068541
iv_set3	0,6756782	2,42	0,015	0,129218	1,222138
iv_set4	0,8327541	2,79	0,005	0,247552	1,417956
iv_set5	0,8151787	2,28	0,023	0,1149104	1,515447
age	0,0317972	1,02	0,306	-0,0290488	0,0926432
northamerica1	0,2896831	0,45	0,653	-0,9735441	1,55291
male1	-0,135876	-0,36	0,719	-0,8762649	0,6045128
university1	0,1513658	0,34	0,732	-0,7144477	1,017179
married1	0,1513658	0,61	0,54	-0,7894034	1,506977

Based on the results of the Ordinal Logistic Regression in Table 27 Attitudes towards eco-friendly products positively influence willingness to pay a premium (coefficient =1.45, p-value = 0.001 < 0.05). This means that the higher level of agreement in terms of attitudes results in higher levels of willingness to pay a premium for eco-friendly products.

Also, the results of the Ordinal Logistic Regression in Table 27 show that subjective norms towards eco-friendly products do not positively influence the willingness to pay a premium (coefficient = 0.19, p-value = 0.529 > 0.05). This indicates that a higher level of agreement with the questions asked about subjective norms does not result in higher levels of willingness to pay a premium for eco-friendly products. Therefore, social norms and social pressure towards eco-friendly products do not affect the willingness to pay a premium for these products.

Coming to the third independent variable Perceived behavior control, results of the Ordinal Logistic Regression in Table 27 indicates that Perceived behavior control in purchasing eco-friendly products positively influence willingness to pay a premium (coefficient = 0.67, p-value = 0.015 < 0.05). This means that the higher level of agreement in questions related to Perceived behavior control results in higher levels of willingness to pay a premium for eco-friendly products.

According to Table 27 environmental concerns positively influence willingness to pay a premium (coefficient = 0.83, p-value = 0.005 > 0.05). This means that the higher level of agreement in questions asked about environmental concerns results in higher levels of willingness to pay a premium for eco-friendly products. Thus, environmental concerns increase willingness to pay a premium for eco-friendly products.

Lastly, results of the Ordinal Logistic Regression in Table 27 indicates that environmental knowledge positively influence willingness to pay a premium (coefficient = 0.81, p-value = 0.023 < 0.05). This means that the higher level of agreement in questions related to environmental knowledge results in higher levels of willingness to pay a premium for eco-friendly products. (All other coefficients are insignificant)

Testing Hypotheses

Table 28. Summary of the Results

	Observed coefficient	**P>|z|**
Attitudes	1,40587	0,001
Subjective Norms	0,196041	0,529
Perceived Behavioral Control	0,6756782	0,015
Environmental Concern	0,8327541	0,005
Environmental Knowledge	0,8151787	0,023

Based on the results of the ordinal logistic regression analysis, as the summary is shown in Table 30, our hypotheses are either rejected, or failed to be rejected as follows:

- We fail to reject Hypothesis 1 because the p-value for "Attitudes" is less than 0.005, which indicates that this relationship is significant. This confirms hypothesis number one, which states: H1: Consumers' positive attitudes toward eco-friendly products positively influence their willingness to pay a premium for these products.

- The second hypothesis is rejected because the p-value for "Subjective Norms" is greater than 0.005, which indicates that this relationship is not significant. This rejects hypothesis number two, which states: H2: Higher perceived social pressure to buy eco-friendly products increases consumers' willingness to pay a premium for these products.

- We fail to reject Hypothesis 3 because the p-value for " perceived behavioral control " is less than 0.005, which indicates that this relationship is significant. This confirms hypothesis number three, which states: H3: Higher level of perceived behavioral control over purchasing eco-friendly products increases consumers' willingness to pay a premium for these products.

- We also fail to reject Hypothesis 4 because the p-value for " environmental concern " is less than 0.005, which indicates that this relationship is significant. This confirms hypothesis number four, which states: H4: Higher level of environmental concern increases consumers' willingness to pay a premium for these products.

- Finally, We fail to reject Hypothesis 5 because the p-value for " environmental knowledge" is less than 0.005, which indicates that this relationship is significant. This confirms hypothesis number five, which states: H5: Higher level of environmental knowledge increases consumers' willingness to pay a premium for these products.

CHAPTER 5: DISCUSSION AND CONCLUSION

5.1 Discussion

5.1.1 Attitudes Towards Eco-Friendly Products and Willingness to Pay a Premium

The Ordinal Logistic Regression results show that attitudes towards eco-friendly products have a significant and positive impact on consumers' willingness to pay a premium for eco-friendly products (coefficient = 1.45, p-value = 0.001 < 0.05). This is in line with the first hypothesis (H1) that positive attitudes towards eco-friendly products will positively influence willingness to pay a premium for eco-friendly products.

Going back to the literature review, this is in line with the theoretical framework and previous studies. Theory of Reasoned Action and Theory of Planned Behaviour states that attitudes affect human behaviour, especially in green consumption (Arli et al., 2018). This theoretical finding is supported by empirical evidence that positive consumer attitudes towards environmentally sustainable products is a strong predictor of purchasing intention (Lin, Nadlifatin, Amna, Persada & Razif, 2017; Choi & Johnson, 2019).

The literature also discussed how consumer attitudes, which includes their opinions and beliefs about eco-friendly products, is the foundation of their purchasing intention. Positive attitudes are linked to higher likelihood of consumers prioritizing eco-friendly products over conventional ones (Angelovska, Sotiroska, & Angelovska, 2012). This is in line with our regression results that an increase in positive attitudes towards eco-friendly products leads to higher willingness to pay a premium.

Moreover, the literature states that consumer perception of eco-friendly products is linked to broader concept of environmental responsibility and sustainable living (Lin et al., 2017). The significant positive relationship in this study supports the idea that when consumers like eco-friendly products, they are more likely to support these products financially, which means reducing their ecological footprint.

However, the "Green Gap" phenomenon as mentioned in the literature review shows that there is a big gap between consumers' stated preferences and actual purchasing behaviour (Arli et al., 2018; Joshi & Rahman, 2015). While this study shows that positive attitudes increase willingness to pay a premium, it is important to note that willingness to pay does

not always mean actual purchase. This gap suggests that other factors such as price sensitivity, availability and perceived effectiveness of eco-friendly products might influence actual purchasing decision.

In summary, the results support the hypothesis that positive attitudes towards eco-friendly products will increase consumers' willingness to pay a premium. This is in line with theoretical expectation and empirical evidence in the literature, hence the importance of consumer attitudes in green consumption. Future research can explore the factors that bridge the gap between willingness and actual purchase to develop strategies that can convert positive attitudes into green buying behaviour.

5.1.2 Subjective Norms and Willingness to Pay a Premium for Eco-Friendly Products

The Ordinal Logistic Regression results show that subjective norms towards eco friendly products do not affect consumers' willingness to pay a premium (coefficient = 0.19, $p = 0.529 > 0.05$). Although the coefficient is positive, since $p > 0.05$ at 95% level, we reject H2. H2 stated that higher social pressure to buy eco friendly products would increase consumers' willingness to pay a premium for eco friendly products.

In literature subjective norms are defined as the perceived social pressure to do or not to do certain behaviors including buying environmentally sustainable products. This social pressure comes from the approval or disapproval of significant others such as family, friends and colleagues (Chen & Deng, 2016; Chaudhary & Bisai, 2018; Mohiuddin, Mamun, Syed, Masud & Su, 2018). The theory behind subjective norms is that individuals are influenced by the expectations and behavior of their social circle which can greatly affect their purchasing decisions (Arli et al., 2018).

Previous studies have shown mixed results on the effect of subjective norms on green purchasing intention. Some studies found a strong positive relationship, where when individuals perceive social approval of eco friendly products they are more likely to buy those products to conform to social norms (Teng et al., 2018; Sreen, Purbey & Sadarangani, 2018; Choi & Johnson, 2019). This means social influence can play a big role in encouraging environmentally sustainable purchasing behaviors.

However, other studies found that the relationship between subjective norms and green purchasing intention is not significant especially in context where green products are new or where consumers are highly educated (Mamun, Mohamad, et al., 2018; Chaudhary & Bisai, 2018; Yazdanpanah & Forouzani, 2015; Wang et al., 2018). These findings show that the effect of subjective norms can be complex and decreased by factors such as product familiarity, personal belief and educational background.

Our findings are more in line with the second set of studies. Although subjective norms is hypothesized to have positive effect, the statistical result did not show significant relationship between social pressure and willingness to pay premium for eco friendly products.

In summary, while subjective norms theoretically and empirically are important in green purchasing behaviors, this study found no significant effect on willingness to pay premium for eco-friendly products. Future research can further explore the conditions under which social norms become more or less influential, the interaction between social influence, personal values, and practical considerations in green consumerism.

5.1.3 Perceived Behavioral Control and Willingness to Pay a Premium for Eco-Friendly Products

The results of the Ordinal Logistic Regression show that perceived behavioral control has a significant and positive effect on consumers' willingness to pay a premium for eco-friendly products (coefficient = 0.67, p-value = 0.015 < 0.05). This supports the third hypothesis (H3) that the higher the perceived behavioral control over purchasing eco-friendly products, the higher the willingness to pay a premium for those products.

In the literature review, perceived behavioral control (PBC) is an individual's perception of their ability to perform a certain behavior, influenced by internal skills and external conditions such as availability and affordability of products (Teng et al., 2018). The Theory of Planned Behavior (TPB) emphasizes the role of PBC in determining behavioral intentions, saying that the higher the perceived control, the more likely to do the intended behavior (Arli et al., 2018; Paul et al., 2016).
This result is in line with the theoretical framework and empirical findings in various studies. Perceived behavioral control is key in influencing consumers' intentions and actual behavior towards green product purchase. It is individuals' assessment of the effort

required to do pro-environmental actions, taking into account available resources, expertise and potential barriers (Arli et al., 2018; Teng et al., 2018).

Empirical studies have shown that PBC is a strong predictor of green purchasing intentions, especially in developing countries. For example, research in Indonesia, China, Malaysia and India has found that when individuals feel they have the resources and opportunities to buy eco-friendly products, their intention to buy those products increase (Arli et al., 2018; Chen & Deng, 2016; Teng et al., 2018; Paul et al., 2016). This is supported by this study, where higher perceived control over purchasing eco-friendly products means higher willingness to pay premium.

However, the literature also shows that the effect of PBC can differ across context. In some places such as Iran, Malaysia, Nigeria and even developed countries like the US, the effect of PBC on green purchasing intentions has been found to be non-significant (Yazdanpanah & Forouzani, 2015; Khor & Hazen, 2017; Karatu & Mat, 2015; Choi & Johnson, 2019). These variations can be due to differences in consumer mindset, past purchasing experience and availability of eco-friendly products. For example, consumers who have experience in buying green products may have more confidence (Choi & Johnson, 2019).

The result shows that PBC has significant positive effect on willingness to pay premium, so when consumers feel they have control over the purchasing process of eco-friendly products, they will invest more in those products. This means we need to enhance consumers' perceived control by making eco-friendly products more available and affordable and addressing the barriers to purchase.

In summary, the analysis proves that perceived behavioral control is a key factor in increasing consumers' willingness to pay premium for eco-friendly products. This is in line with Theory of Planned Behavior and empirical studies in various contexts, so we need strategies to enhance consumers' perceived control to promote sustainable consumption behavior.

5.1.4 Environmental Concern and Willingness to Pay a Premium for Eco-Friendly Products

Ordinal Logistic Regression results show that environmental concerns positively impact consumers' willingness to pay more for eco-friendly products (0.83, $p < 0.05$). This means the higher the agreement with environmental concerns statements, the higher the willingness to pay more for environmentally friendly products.

95% confidence interval confirms the 4th hypothesis (H4) which states that higher level of environmental concern increases consumers' willingness to pay more for eco-friendly products. This shows how important environmental concerns are in green purchasing behavior.

As per literature review, environmental concern means an individual's awareness of environmental issues and emotional commitment to reduce environmental damage (Mutsaers, 2015; Ahmad & Thyagaraj, 2015). Research always highlights environmental concern as a major driver of pro-environmental behavior including intention to buy environmentally sustainable products (Jaiswal & Kant, 2018).

Empirical studies show that consumers who have high environmental concern are more likely to prioritize environmental considerations in their purchasing decisions even if it means paying a premium (Mostafa, 2006; He et al., 2018; Onurlubaş, 2018). This is consistent with our Ordinal Logistic regression results that consumers with high environmental concern are willing to financially support eco-friendly alternatives, reflecting their commitment to environmental protection and sustainability.

But it is important to note that while environmental concern generally drives pro-environmental behavior including green purchasing intention, actual adoption of eco-friendly products may vary. Some studies suggest that even with high environmental concern, individuals may not always translate this concern into green purchasing behavior due to various barriers such as cost, availability or conflicting priorities (Choshaly, 2017; Chaudhary & Bisai, 2018; Setyawan et al., 2018; Choi & Johnson, 2019).The Pew Research Center (2010) found out that while many people express environmental concern, it doesn't translate to green purchasing behavior across all consumer segments.

In summary, environmental concern impacts consumers' willingness to pay more for eco-friendly products. This is backed by both theory and empirical studies, so promoting environmental awareness to boost sustainable consumption behavior.
Future studies can further explore the conditions under which environmental concern translates to actual purchasing decisions, how to bridge the gap between intention and action in green consumerism.

5.1.5 Environmental Knowledge and Willingness to Pay a Premium for Eco-Friendly Products

The Ordinal Logistic Regression shows that environmental knowledge has a positive effect on consumers' willingness to pay for eco-friendly products (0.81, $p = 0.023 < 0.05$). This means that the more consumers agree with the questions related to environmental knowledge, the more they are willing to pay for the eco-friendly alternatives.

The 95% confidence interval is significant for the fifth hypothesis (H5) which states that higher environmental knowledge leads to consumers' willingness to pay more for these products. This proves that environmental understanding is key to consumer behavior towards sustainability.

As mentioned in the literature review, environmental knowledge means an individual's understanding and awareness of environmental issues, including the consequences of production methods and benefits of eco-friendly products (Erdil, 2018; Li et al., 2019). Research shows that individuals with higher environmental understanding tend to have higher ecological consciousness and are more likely to practice environmental sustainability (Mostafa, 2006; Azizan & Suki, 2013; Maichum et al., 2017).

Environmental knowledge not only informs individuals about environmental problems but also instills a sense of responsibility towards environmental protection and sustainable development (Sharaf et al., 2015; Sharaf & Isa, 2017). This education and awareness is key to motivating consumers to choose eco-friendly products over conventional ones, even if it means paying more (Goh & Balaji, 2016; Chauhan & Bhagat, 2017; Choi & Johnson, 2019).

However, it is worth noting that while environmental knowledge is generally related to pro-environmental behavior, there are cases where this relationship may not translate to

actual buying behavior (Sharaf & Isa, 2017; Ahmad & Thyagaraj, 2015; Maichum et al., 2016). Cost considerations, availability of alternatives and competing personal priorities can bridge the gap between knowledge and behavior in certain situations.

The difference in the effect of environmental knowledge on green purchasing intention shows the complexity of consumer decision making. Despite having knowledge on environmental issues, individuals may not always prioritize eco-friendly purchase if other factors outweigh their environmental concern (Jaiswal & Kant, 2018; Mei et al., 2012; Hossain & Lim, 2016).
In summary, environmental knowledge leads to consumers' willingness to pay more for eco-friendly products. This is supported by theory and evidence, so education and awareness campaign should continue to promote sustainable consumption behavior.

Future study can look into the strategies to bridge the gap between environmental knowledge and behavior, to overcome the barriers that prevent consumers from translating their environmental awareness into green buying behavior.

5.2 Implications of the Study

The results of this study have several key implications for marketers, policymakers and researchers interested in promoting eco-friendly products and sustainable consumption.By looking at how attitudes, subjective norms, perceived behavioral control, environmental concern and environmental knowledge affect green buying behaviour, we get useful information about what affects willingness to pay a premium for eco-friendly products.

5.2.1 Marketing Implications

Targeted Marketing Strategies: The significant positive effect of attitudes towards eco-friendly products (coefficient = 1.45, p-value = 0.001) means marketers should focus on building positive attitudes towards such products. Marketing campaigns that highlight the ecological benefits, health benefits and high standards of eco-friendly products can help build positive attitudes. Testimonials and endorsements from well known environmentalists and celebrities can strengthen positive attitudes.

Educational Campaigns: The confirmed significance of environmental knowledge (coefficient = 0.81, p-value = 0.023) means marketers must allocate resources towards educational marketing that educates consumers about the ecological consequences of their purchases and the benefits of eco-friendly products. These campaigns could include workshops, informational websites, social media content and collaborations with educational institutions to integrate environmental education into curricula.

Using Social Influences: Although subjective norms were not significant (coefficient = 0.19, p-value = 0.529) we should not ignore the social factors. Marketers can use social proof by showcasing community leaders, influencers and peer endorsements to encourage consumers to conform to eco-friendly purchasing norms. Social media can be a powerful tool to create and nurture communities around green consumption.

Emphasising Perceived Behavioural Control: The positive and significant effect of perceived behavioural control (coefficient = 0.67, p-value = 0.015) means we need to empower consumers by making eco-friendly products more accessible and affordable. Marketers can offer incentives such as discounts, loyalty programs and convenient purchasing options to build consumers' confidence in their ability to choose eco-friendly products.

5.2.2 Implications for policy

Regulatory Support: Policymakers should consider implementing regulations that support the availability and affordability of eco-friendly products. Subsidies for green businesses, tax incentives for sustainable practices and stricter regulations on environmentally harmful products can create a more favourable market for eco-friendly alternatives.

Public Awareness Campaigns: Governments and environmental organisations must collaborate to implement public awareness programs that prioritise environmental knowledge and concern. These programs can educate citizens about the environmental impacts of their consumption choices and encourage sustainable behaviour.

5.2.3 Research Implications

Further Research on Subjective Norms: The non-significance of subjective norms in this study means we need to do further research to understand the nuances of social influences in green purchasing behaviour. Future research could investigate the circumstances in which subjective norms have a greater impact, such as in different cultural contexts or product categories.

Cross-Cultural Comparisons: Cross-cultural comparisons can provide insights into how different nations view and react to environmentally friendly products, considering the worldwide scope of environmental concerns. These studies can provide valuable insights for creating marketing and policy initiatives that are specifically designed to cater to different cultures.

5.3 Study Limitations

In this study "Evaluating the Green Premium: Consumer Willingness to Pay for Eco-Friendly Products" several limitations became apparent which should be acknowledged to provide a full understanding of the results. Given the time and resource constraints of a master's thesis these limitations are significant.

5.3.1 Sample Size and Demographics

Small Sample Size: The study had a sample size of 147. While this provided good data, the small sample size means the results can't be generalised to a larger population. A larger sample would have given more robust and generalisable results and a fuller understanding of the factors that influence consumer behaviour.

Geographic Focus: Focusing only on students in California limits the generalisability of the results to other regions and demographics. The environmental attitudes and behaviours of students in California may not be representative of the wider population, especially those in different geographic, cultural or socio-economic contexts. Future research should aim to include a broader geographic scope to capture a wider range of consumer perspectives.

5.3.2 Methodological Constraints

Survey Methodology: The survey methodology while effective for collecting data on consumer attitudes and behaviour has its limitations. Self-reported data can be subject to biases such as social desirability bias where respondents may overstate their environmentally friendly behaviours to appear more socially responsible. The survey design may not fully capture the complexity of consumer decision making processes.

Cross-Sectional Design: This study uses a cross-sectional design, collecting data at one point in time. This limits the ability to observe changes in attitudes and behaviour over time. Longitudinal studies would provide insight into how willingness to pay for eco-friendly products changes, and a more dynamic view of consumer behaviour in relation to environmental concerns.

5.3.3 Measurement and Variables

Scope of Variables: The study looked at five independent variables: attitudes towards green products, subjective norms, perceived behavioural control, environmental concern and environmental knowledge. While these are important, other factors like income level, brand loyalty and personal values may also influence willingness to pay a premium and were not included. Future research should look at a broader range of variables to get a fuller understanding of consumer behaviour.

Subjective Norms: Despite including subjective norms as a variable it was found to be insignificant (coefficient = 0.19, p-value = 0.529) in this study. The complexity of social influences on consumer behaviour may require more nuanced measures or qualitative approaches to fully understand their impact. Future research should look at the role of subjective norms in different contexts or with more refined measurement tools to get more detailed insight.

5.3.4 External Validity and Generalizability

Cultural Context: The findings are only applicable within the cultural context of California. Cultural factors have a big impact on environmental attitudes and behaviour and the results may vary widely in different cultural or national contexts. Cross-cultural studies are needed to validate the generalisability of these findings globally and get a full

understanding of how cultural differences impact willingness to pay a premium for eco-friendly products.

Product Specificity: The study doesn't specify what type of eco-friendly products were considered. Different product categories (e.g. food, clothing, electronics) may have different levels of consumer acceptance and willingness to pay a premium. Future research should look at product specific analysis to get more targeted insights and understand how consumer preferences vary across different types of eco-friendly products.

In summary, while this study provides useful insights into willingness to pay for eco-friendly products, acknowledging these limitations helps to understand the scope and applicability of the findings. Future research addressing these limitations will provide a fuller understanding of the drivers of sustainable consumer behaviour and provide valuable guidance for marketers, policymakers and researchers promoting eco-friendly products and sustainable consumption.

5.4 Conclusion

This study looked into the many factors that make consumers pay a premium for green products. By focusing on 5 variables—attitudes towards green products, subjective norms, perceived behavioral control, environmental concern and environmental knowledge—this research gives us insights into green buying behavior.

The results show that attitudes towards eco-friendly products, perceived behavioral control and environmental knowledge affect consumers' willingness to pay a premium for green products. These findings suggest we need to foster positive attitudes, empower consumers and increase their environmental knowledge to promote sustainable consumption. The high coefficient for attitudes (1.45, p=0.001) means we should market the benefits of eco-friendly products and use endorsements from trusted figures to boost consumer perceptions. The importance of perceived behavioral control (0.67, p=0.015) means we need to make eco-friendly products more accessible and affordable so consumers feel confident in their ability to make sustainable choices.

Education is key as shown by the high coefficient for environmental knowledge (0.81, p=0.023). Marketers and policymakers should collaborate to implement educational campaigns that inform consumers about the environmental impact of their purchases and the benefits of choosing eco-friendly options. These campaigns can use various platforms—social media, workshops, educational institutions—to reach a wide audience and create an informed consumer base.

Subjective norms didn't show a significant impact in this study (0.19, p=0.529) but we shouldn't underestimate the power of social factors in other contexts. Future research should look into the role of subjective norms especially in different cultural settings to understand how social influences can drive sustainable consumption.

This has implications beyond marketing strategies to policy recommendations. Policymakers should consider regulations that support the availability and affordability of eco-friendly products—subsidies for green businesses and stricter regulations on environmentally harmful products. Public awareness campaigns with environmental organizations are needed to educate citizens about sustainable consumption and encourage environmentally responsible behaviors.

Despite the findings, this study has limitations—small sample size and California students only which limits the generalizability of the results. Future research should aim for bigger and more diverse samples and longitudinal designs to capture changes in consumer behavior over time. Also, exploring other variables such as income level and brand loyalty could give us a more complete picture of what affects willingness to pay for eco-friendly products.

Overall, this study adds to the literature on sustainable consumption by looking into the many factors that make consumers pay a premium for green products. Let's address the limitations and build on these findings to further understand green buying behavior and create better marketing and policy strategies for a more sustainable world.

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