



## FACTORS THAT IMPACT GREEN PRODUCT PURCHASE BEHAVIOUR OF MALAYSIAN SHOPPERS

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### **Abstract:**

Today, the rapid development of technology has caused both positive and negative effects and environmental changes. While enjoying the convenience provided by technology, people should have the right mindset in keeping and protecting their environment healthy. Therefore, this study aims to examine the factors that impact the green product purchase behaviour of Malaysian shoppers in Klang Valley, Malaysia. Five independent variables were used in this research project to identify the factors that influence working consumers' purchasing behaviour toward green products: social influences, environmental attitudes, environmental concern, and perceived effectiveness of environmental problems and perceived effectiveness of environmental behaviour. Six hundred consumers are the solely targeted respondents in this study. It is found that there are no significant differences for the gender and race variables, whereas the monthly income variable found a significant difference. In addition, the study findings also discovered a significant relationship between the factors influencing consumers' purchasing behaviour towards green products. Consequently, these research findings have provided insights and feedback to businesses facing many challenges in convincing consumers to purchase green products. By gathering this information, marketers can understand the route that shifts the environmental factors to green purchase behaviour. They also would be able to formulate their various strategies to effectively attract more consumers to purchase green products.

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## 1. Introduction

This research aims to study the factors that impact green product purchase behavior among Malaysian shoppers in the Klang Valley, Malaysia. Green product purchase behavior is a trend and philosophy where consumers are more drawn towards a product in terms of its value in the sustainability of the environment that we live in. This study will examine consumers' decisions, which we can derive as factors, and the correlation of the factors to the designed location of consumers. The reason for choosing the Klang Valley is because it is at the center of business development and populated with people from different backgrounds of life and decision-making behaviours. Thus, we hope this might be a vital factor in understanding the dynamics behind the purchaser's behavior.

### 1.1 Background of the Study

Green product purchase behavior is buying environmentally friendly products, which are usually recycled and bring benefits to the environment. Examples include minimizing energy use and reducing waste, where behaviour minimizes harm to the environment as much as possible, or even benefits that motivate shoppers to adopt eco-friendly and clean habits (Prinona, 2002).

It is important because today, everyone is trying to shift from the conventional methods of marketing, which were not environmentally friendly, to environmental consciousness and customer-centric. Therefore, green product purchase behaviour raises the voice against harmful production, consumption, or disposal of such products that harm consumers, society, and the environment (Kanapathipillai & Kumaran, 2022).

Green product purchase behavior helps to contribute to ensuring sustained long-term growth along with profitability and helps save money in the long run. Moreover, adopting a green and eco-friendly lifestyle is about sustainability that transforms into profits in green sectors with secure futures. Additionally, there is no limit to human needs and demands for resources, and it is inversely proportional to the current availability of resources. Therefore, green markets must facilitate buyers and emphasize that consuming resources efficiently eliminates environmental degradation. For example, future-safe markets include biomaterials, green buildings, personal transportation, smart grids, mobile applications, and water filtration systems (Kanapathipillai & Kumaran, 2022).

However, there are challenges in green purchases where green products require renewable and recyclable materials, which is costly. Besides, problems of deceptive marketing, publicity, promotion, and false claim of green trend selling exist (Desirée Schmuck, 2018). It also requires the latest technologies, which require considerable investments in research and development. Furthermore, most people are unaware of

green products and their uses, and consumers are unwilling to pay a premium for green products (Nunez, 2019).

Global warming has always been an important and serious issue in maintaining a good and safe environment for the sustenance of the surrounding (Nunez, 2019). Today's air-conditioners rely on chemicals called HFCs (hydrofluorocarbons), which are potent greenhouse gases. HFCs have been used to replace ozone-depleting substances, and their emissions have increased rapidly in the past two decades (Purohit et al., 2022). Rapid industrialization is a significant contributing factor to the pollution ratio. The irresponsible elimination of toxins and waste products pollutes rivers and water sources. All these hazardous factors have created awareness among consumers where there is a sense of responsibility towards environmental concerns, improving their personal quality of life. To be green is a way of maintenance or a consumer trend. Therefore, we will have to dig deeper to examine the consumers' purchase behaviour regarding green products in Klang Valley, Malaysia. Customers concerned about the environment and supporting green marketing is known as green consumers. These types of consumers only purchase items that are bridgeable and very environmentally friendly. This has a lot to do with their principles of life generally. Thus, this study will help to comprehend why consumers prefer green products.

## **1.2 Research Problem Statement**

Based on the previous studies on the factors that influenced consumers' green purchasing behaviour, it can be argued that people are now experiencing the early stage of development toward the consumption of green products (Ali et al., 2011). In Malaysia, fewer people purchase green products because the prime concern of people is not to care about health and the environment but to ensure that they can meet the personal and family consumption needs to survive (Handriana, 2016). However, recent studies have focused on green product consumption. Consumers are now more vulnerable to environmental problems than developed countries due to the lack of financial resources and advanced technologies. Businesses that offer eco-friendly products and services would be very profitable in the market as the 'Green' trend has become mainstream in marketing. However, findings from numerous studies by former researchers on green purchase behaviour are contradictory (Kaur et al., 2019). Consumers have kept their tastes and old habits the same, despite many environmentally friendly products with green attributes and features introduced in the markets. Consumers are less willing to purchase or pay extra money to purchase green packaged products even though they realize the products' existence and availability in the market.

Therefore, in this research, we wanted to understand the uncertainties which will be studied further to get a reasonable conclusion by evaluating the factors that influence green purchase behaviours among consumers and aiming to identify the majority age range to be supporting consumers towards green products who can lead by example and focuses on persuasive advertising to educate consumers where green marketing should not be considered as one more approach to marketing. It must be pursued with much

greater dynamism as it has an environmental and social impact. We vigorously continue to analyse the factors such as social influence, environmental attitudes, environmental concern, perceived effectiveness of environmental problems, and perceived environmental responsibility influence towards green purchase behaviour of Malaysian shoppers.

The world around us is constantly evolving and adapting to new changes and patterns in business production and demands correlating with consumer needs. On the other hand, consumers are constantly exposed to news of global warming and rapid industrialization, which causes our sea level to rise, the depletion of ozone layers, and massive pollution. Thus, a rise in the importance of green purchase behaviors among Malaysians is crucial to create more responsibility to protect the earth and increase the quality of life. Therefore, it is important to find out what causes consumers not to behave environmentally friendly even though they are aware of and realize the degrading environmental issues.

In this study, we decided to focus on Malaysian shoppers focusing on one specific scope location in Klang Valley because high purchasing power caused them to have the final decision in all purchasing activities. Therefore, the factors that affected working consumers' green purchase behaviour are worth finding out using the Theory of Planned Behaviour (TPB).

According to research (Hojjat & Behnaz, 2016), a positive correlation exists between social influence and green product shoppers' purchase behaviour. Likewise, social impact is very influential for the formation and development of attitudes to lead to green buying behaviours because the level of influence of family, friends, and social status has a powerful influence on a person. However, according to (Doran, 2009), individuals who lack a strong personal obligation towards the betterment of the environment and society may not be willing to select green products, especially when they have different options. Therefore, more findings should be found regarding the relationship between social influence and green product shoppers' purchase behaviour. Additionally, according to (Haron et al., 2005), there is a positive correlation between environmental attitude and green product shoppers' purchase behaviour. (Schultz, 2000) stated that environmental attitude is the collection of beliefs, affect, and behavioural intentions a person holds regarding environmentally related activities. Thus, on the aspect of eco-friendliness of habits and behaviours, Malaysians have changed behaviour a great deal to benefit the environment and willingness to pay more for green products. On the contrary, environmental attitude negatively correlates with green product purchasing behaviour (Joshi & Rahman, 2015). In general, attitude is a state of mind or feeling someone has toward a specific subject. Therefore, according to (Joshi & Rahman, 2015), environmental attitude is not a predictor of green purchasing behaviour and can be inconsistent between people's attitudes as verbally expressed and their actual behaviour.

As to the environmental concern factor, the more a consumer is concerned about the environment, the more this consumer will purchase green products. The concern is

represented in the consumer's emotional involvement regarding different environmental matters (Joshi & Rahman, 2015). The more we are concerned about our environment, the more green purchasing behaviour will be achieved. Additionally, there is a positive correlation between environmental concern and green purchasing behaviour (Datta, 2011). Schultz (2000) mentioned three interrelated environmental issues: biosphere, people, and self. This broad scope of environmental concern factors can positively correlate environmental concern and green product purchasing behaviour. However, it is only sometimes for an individual to behave or purchase green if he or she is concerned for the environment, which is identified as a value-action gap (Pickett- Baker and Ozaki, 2008). Thus, research shows that people only sometimes want to buy green products even though they have a high level of awareness and consciousness (Rahman, 2015) that green products are suitable for the environment. This may be due to situational factors influencing green product purchasing behavior. This reveals a different perspective where introducing these trends in the market is just a scheme to boost the economic market and to influence and redirect consumer purchase behaviour.

The perceived seriousness of an environmental problem is related to the level of risk that such a problem holds. Thus, green consumerism attitudes advocate for the efficient use of energy, which ultimately helps in saving money, reducing utility bills, lowering emissions of greenhouse gas, and enabling economies to meet the growing energy demands, which helps the environment by reducing the amount of pollution that enters the soil, water, and air (Shin, M. 2019). There is a positive correlation between the perceived seriousness of environmental problems responsibility and green product purchase behaviour (Goh & Nabsiah, 2014). However, on the contrary situation, variables such as availability, product display, and price reduction also influence consumer behaviour. This discrepancy or gap between consumers' favorable attitude towards and actual purchase behaviour of green products is referred to as 'green purchasing inconsistency' or 'green attitude-behavior gap' (Zhuang et al., 2021). It signifies that a consumer's positive attitude towards green products sometimes translates into action. It is essential to examine why the perceived seriousness of an environmental problem has a weaker influence on consumers' green purchase behaviour (Lee, 2010).

The perceived environmental responsibility relates to the user's duty to safeguard the ecology and ensure that their activity has no detrimental impact on the ecosystem, including environmental groups responsible for environmental conservation. The intention to take individual responsibility is reflected in the customer's desire to spend more money to obtain green products. Perceived environmental responsibility has significantly affected adolescents' green product purchase behaviour activity. In terms of gender, unlike men, women have a higher propensity to continue taking a role in addressing environmental issues. Therefore, the idea of perceived environmental responsibility requires further understanding of its role as a predictor of environmentally friendly behaviour and, more precisely, environmental activism (Wang, 2020). There is a positive correlation between perceived environmental responsibility and green product purchase behaviour (Bierhoff, 2013). Conversely, poor product attributes and inferior

quality may result in a conflict between the personal needs of consumers and their sense of perceived environmental responsibility, which may further increase the inconsistency between attitude and actual buying actions when in lack a feeling of strong personal obligation towards the betterment of the environment may not be willing to select green products. (Makatouni, 2002).

On the contrary, numerous findings and studies reveal a different perspective on the topic. Some believe introducing these trends in the market is just a scheme to boost the economic market and to influence and redirect consumer purchase behaviour. Thus, the statements above show a gap in the literature that needs addressing.

### 1.3 Research Questions

Based on the research problem stated above, the following research questions were generated to answer why consumers purchase green products.

**RQ 1:** Is there a statistically significant relationship between social influence and green products shoppers purchase behaviour in Klang Valley?

**RQ 2:** Is there a statistically significant relationship between environmental attitude and green products shoppers purchase behaviour in Klang Valley?

**RQ 3:** Is there a statistically significant relationship between environmental concern and green products shoppers purchase behaviour in Klang Valley?

**RQ 4:** Is there a statistically significant relationship between perceived seriousness of environmental problems and green products shoppers purchase behaviour in Klang Valley?

**RQ 5:** Is there a statistically significant relationship between perceived environmental responsibility and green products shoppers purchase behaviour in Klang Valley?

### 1.4 Research Objectives

This study examines the relationship between social influence, environmental attitude, environmental concern, perceived seriousness of environmental problems, perceived environmental responsibility, and green product shoppers' purchase behaviour. Therefore, the following research objectives are put forward to bridge the gap in the literature.

**RO 1:** To scrutinize if there is a statistically significant relationship between social influence and green products shoppers purchase behaviour in Klang Valley.

**RO 2:** To analyse if there is a statistically significant relationship between environmental attitude and green products shoppers purchase behaviour in Klang Valley.

**RO 3:** To study if there is a statistically significant relationship between environmental concern and green products shoppers purchase behaviour in Klang Valley.

**RO 4:** To assess if there is a statistically significant relationship between perceived seriousness of environmental problems and green products shoppers purchase behaviour in Klang Valley.

**RO5:** To determine if there is a statistically significant relationship between perceived environmental responsibility and green products shoppers purchase behaviour in Klang Valley.

## 2. Literature Review and Hypothesis Development

This section will describe the theories and models used in this research. The basic theory is based on the Theory of Reasoned Action (TRA) and the Theory of Planned Behaviour (TPB). Literature from previous studies, journals, and reports will be referenced to be able to use in writing the five independent variables and the dependent variables listed in this research. This is followed by the research conceptual framework, which will be developed to graphically summarize the relationships between variables. The hypothesis to be tested is also presented in this section.

### 2.1 Underpinning Theory

The following theories are put forward as they underpin this study.

#### 2.1.1 Theory of Reasoned Actions (TRA)

With regard to the attitude behaviour gap, two classical theories: The Theory of reasoned action (TRA) and the Theory of planned behaviour (TPB), introduced by (Fishbein & Ajzen, 1975) and (Ajzen & Fishbein, 1980), have been used in a variety of environmental behaviours studies to capture measures of buying behaviour of green or sustainable products including developing countries (Hsu et al., 2017).

According to (Ohio University, 2022), the Theory of Reasoned Action (TRA) is used to understand consumers' pre-existing attitudes consumers bring to their product purchasing decisions. Consumer act on behaviours they believe will create or receive a particular outcome, normal or otherwise. Therefore, rational decision-making is a key element that motivates consumers to make a product purchase.

Studies prove a significant relationship between consumer attitudes and behaviours where a consumer's purchasing behaviour is said to be determined by intention. Intentions are created by consumer attitudes (Jaiswal & Kant, 2018). There is a stage where consumers tend to act out of interest in using green products before a product purchase decision is implemented (Maniatis, 2016; Zhang et al., 2019). In the study (Hong et al., 2017; Moslehpour et al., 2018), consumers who used a particular product showed a higher purchase level than consumers who indicated that they did not intend to buy. The intent here may or may not pursue consumer behaviour, and no matter which, the intent is a direct precursor to consumer behaviour (Sethi et al., 2018).

First, attitudes, these attitudes are grouped into two things, namely: consumer's attitude and consumer's product purchasing intention (Alsaggaf & Althonayan, 2017).

Second, Subjective norms are the second determinant of behavioural intention (Ajzen, 1991). Normative beliefs about important references, whether or not necessary to be made by an individual, are called subjective Norms and follow references on their motivations (Ajzen, 1991; Wu et al., 2017).

### **2.1.2 Theory of Planned Behaviour (TPB)**

The Theory of planned behaviour (TPB) is a continuation of the Theory of reasoned action (TRA) that has been adapted in this research to study the relationship between human attitudes toward behaviour, subjective norms, and perceived behavioural control that shapes the individual behavioural intent and behaviours in various fields of study such as marketing, advertising, campaigns, public relations, health, and others. The most important proponent of human behaviour is the intention, which can always use information as the rational side of being human (Paul et al., 2016). The third stage is the perception of behavioural control, and the third determinant of behavioural intentions is behavioural control. Perception of behavioural can be described as easy or difficult perception in behaviour (Ajzen, 1991; Paul et al., 2016). Precisely, behavioural control perceptions assess the perception of the extent to which a person can control the factors that may facilitate or limit the actions needed to deal with particular situations. Furthermore, as cited by (Alsaggaf & Althonayan, 2017), the perception of behavioural control is the convenience or barrier consumers feel in making a purchase or using green products.

In addition, modified behavioural measures have also widely adopted a range of environmentally friendly products in the Klang Valley market: skin care products (Hsu et al., 2017) and environmentally friendly packaging, which has been studied and stated by (Prakash & Pathak, 2017).

The same theory will be used in this research, where we will examine consumer perception of behavioural control that will shape and be influenced by independent variables. As per (Wu et al., 2017), through that examination, we can determine at which point it affects consumers' green product purchase behaviour. Proposed Green product purchase intent should be used as a substitute for actual Green product purchasing behaviour because the Theory of Planned Behaviour (TPB) supports that behavioural intent is an acceptable prediction of actual Green product purchasing behaviour. The proposed Theory assumes the possibility of future events and the power of Theory Reasoned Action (TRA) by adding perceived behavioural control. Such theories argue that combining the three elements of perspectives on behaviour, opinions and evaluating normal behaviours, and perceived behavioural controls will reshape individual behavioural plans/desires and action behaviours. Referring to the theory, human behaviour is led by three types of serious thinking that are likely to result from the behaviour, beliefs related to the normative expectations of others (normative beliefs) and beliefs about the existence of variables that can help or stop/interfere with behavioural achievement (controlling beliefs). Typically, the better the behaviour and norm, the stronger the perceived control, and the better one's plan to demonstrate that behaviour.



Finally, when given a fair share of authority over behaviour, individuals are expected to carry out their plans/desires when opportunities arise from the occurring events such as those relations of independent variables (IVs), which are social influence, environmental attitude, environmental concern, perceived seriousness of environmental problems as well as perceived environmental responsibility to the dependent variable (DV) which is green product purchase behaviour.

## **2.2 The Relationship between Social Influence and Consumers' Purchasing Behaviour**

Social influence has frequently been studied as the impact of humans' interaction with their social network (Chopdar et al., 2018), which is particularly important in influencing green purchasing behaviours (Chopdar et al., 2018; Chopdar & Sivakumar, 2019; Lu et al., 2017). Research conducted by (Lim, Perumal, & Ahmad, 2019) discovered that social influence is a process by which an individual modifies his or her opinion, beliefs, or behaviour as a result of social interaction with others. When a third party influences a person's activity or thought, this is referred to as having a social impact.

Various people influence customers' purchasing decisions, including family, friends, salespeople, and even an acquaintance who shares his experience (Yogananda & Nair, 2019). Social influence informs and motivates consumers to form or replicate new attitudes and behaviours accepted by the public (Alzubaidi et al., 2021). Furthermore, research conducted during the pandemic has highlighted social influence's impact on people's feelings, perceptions, attitudes, and behaviours (Reeves et al., 2020a, 2020b). According to a study by (Uce et al., 2022), social influence significantly impacts consumer product evaluation and selection. The social network and product involvement are linked. Consumers' social context, such as friends, co-workers, and family, which provide critical influence and feedback on their usage, will ultimately influence their product and brand choice.

Normative beliefs, the customer's beliefs about certain viewpoints that reference groups influence, may impact consumer purchasing behaviour. This reference group is a social influence, and subjective norms strongly influence consumer purchasing behaviour (Mohd Noor, 2017). Peer pressure, obedience, sales, and marketing are other examples of social influence that can lead to people developing green product attitudes toward consumption and behavioral intentions (Chopdar et al., 2022).

Social influence frequently manifests as perceived social pressures that affect an individual's attitudes and directly impact a person's attitude (Ojo & Fauzi, 2020). Consumer expectations primarily influence personal attitudes. According to (Nugraha & Widyaningsih, 2021), social impact can take many forms and affect the behaviour of those who buy green products. Moreover, information sharing over social media has been noted to positively impact consumers' intention to buy green products (Bugshan & Attar, 2020).

Consumer attitudes toward green products have shifted due to positive social influence. However, (Martin & Simintiras, 1995) found a weak effect of green purchasing behaviour. One possible explanation is the current green consumer market's lack of

maturity, characterized by low innovation in green products, token environmental gestures, and ambiguity in the utility and satisfaction of green product use. As a result, positive gain goals fail to translate into actual green consumption, resulting in a significant gap between green motivation and behaviour.

People's social contacts have decreased due to the COVID-19 pandemic; this factor influences green purchasing behaviour by not having the same amount of information available from their close social circles when deciding to purchase green products (Rodriguez et al., 2020). Additionally, the COVID-19 pandemic has influenced potential users' decision-making processes in such a way that they increasingly rely on information sources outside their close social circles, as well as how the information is obtained and observations of other people's behaviour (Erjavec & Manfreda, 2022). Thus, hypothesis H1 was proposed to address the gap that exists in the literature.

**H1:** There is a statistically significant relationship between social influence and consumers' green product purchase behaviour in Klang Valley.

### **2.3 The Relationship between Environmental Attitude and Consumer's Purchasing Behaviour**

Attitude is "*a mental and neural state of preparedness that significantly influences the individual's response to all objects and situations with which it is associated*" (Allport, 1935). Attitude is the most critical determinant of consumers' green purchase intention and behaviour. Attitude encompasses both attitudes toward the environment and attitudes toward products. Attitude toward the environment reflects individual morale and is thought to significantly influence green product purchase intention more than product attitude (Kanapathipillai & Kumaran, 2022). The concept of purchasing green products became popular in the 1970s, when the negative consequences of environmental degradation to humans became increasingly apparent in Western countries, leading to the rise of green movements that demanded businesses to be more environmentally responsible (Kilbourne, W. E. & Beckmann, 1998). Environmental attitudes are defined as "*the collection of beliefs, affect, and behavioural intentions that a person holds toward environmentally related activities, issues*" or as a "*psychological tendency expressed by evaluating perceptions or beliefs about the natural environment, including factors affecting its quality, with some degree of favour or disfavour*" (Kanapathipillai & Kumaran, 2022).

According to researchers (Yogananda & Nair, 2019), Attitude depicts a consumer's likes and dislikes through an evaluation process that can be either positive or negative and directly linked to behavioural intentions. Attitudes in the context of the environment include characteristics that are not intuitively interpreted and a collection of consumer beliefs about biological activities and problems (Yogananda & Nair, 2019). An individual's environmental Attitude serves as his cognitive shield against environmental degradation. This results from a person's mindset, which bases their Attitude toward environmental issues on the belief that they are the essential elements in the natural environment, leading to green purchasing (Alfonsius & Gilbert, 2021).

Similarly, scholars have argued that customers who are concerned about the environment tend to purchase more green products (Yadav & Pathak, 2016) and (Landry et al., 2018), on the other hand, argued that environmental concern does not always translate into actual environmental behaviour, while (Sadiq, 2019) confirmed the concern-behavior gap in green product consumption behaviour. Inadequate knowledge of green product labeling, certification, and control is one of the barriers to the growth of green consumption. This impacts distrust and skepticism toward calling products green and refusing to accept higher prices. According to (Katarzyna & Tomasz, 2022), Green suspicion inhibited purchase intentions for environmentally protective products. The relationship between environmental attitudes and green purchase intentions is moderated by green skepticism. Skepticism reduces environmental anxiety while harming green purchasing behaviour. Consumers skeptical of the environment are unwilling to accept higher product prices.

According to (Nam, Dong & Lee, 2017), Attitude contributes to a sense of belief, which is vital in decisions like purchasing green products. (Alfonsius & Gilbert, 2021) argued that attitudes are the most consistent explanatory factor in predicting consumers' willingness to pay for green products. It can be concluded that price is not the primary barrier to consumers purchasing green products if they are environmentally conscious and consumer willingness to pay more for eco-products according to (Yogananda & Nair, 2019), but their findings were inconclusive. They discovered a significant link between environmental Attitude and green purchasing behaviour based on their research. The ideals of a person's specific behaviour, Attitude as a negative review, and Attitude influence their intent. The more desirable the Attitude, the stronger the will and purpose of performing a specific behaviour. A positive attitude toward the environment encourages consumers to become "green," as green shoppers see green shopping as an essential community responsibility (Wong, Jia Yii, Wong, Hui Shein, Wong, Winnie, 2020).

The attitude and beliefs of consumers that they can make a positive difference in the reduction of contamination/pollution are referred to as perceived consumer effectiveness (Sharma et al., 2020). Individuals who have a positive attitude toward the environment will eventually take action to protect the environment by purchasing environmentally friendly products. Furthermore, it is influenced by individual perceptions, resulting in an emotional predisposition to agree or disagree with specific environmental objects. Thus, ecological attitudes can be measured by making cognitive judgments about environmental protection, purchasing environmentally friendly products, and participating in environmental activities (Alfonsius & Gilbert, 2021). (Taufique et al., 2017) discovered that consumers' trust in green products leads to pro-environmental consumer behaviour. Similarly, (Ricci et al., 2018) found that positive belief leads to a positive attitude, which leads to higher intentions to purchase green products. Thus, hypothesis H2 was proposed to address the gap that exists in the literature.

**H2:** There is a statistically significant relationship between environmental attitude and consumers' green product purchase behaviour in Klang Valley.

## **2.4 The Relationship between Environmental Concerns and Consumer's Purchasing Behaviour**

Environmental concern describes the extent to which consumers believe ecological issues are critical to the nation's well-being. It expresses involvement and awareness of environmental consequences and reflects an individual's attachment to ecological problems and environmental protection. Environmental concern is considered a social-altruistic value orientation because people's underlying ecological concerns cause them to care more about the environment, which affects the lives of others (Kamalanon et al., 2022).

Environmental concerns may have a direct impact on green purchase intent. Environmental concern is defined as acting in a way that helps protect the environment, such as purchasing and consuming products with the least negative impact on the earth and people. (Kanapathipillai & Kumaran, 2022). Environmental concern was identified as a cognitive pro-social factor used as an independent variable to extend the framework (Chuah & Lu, 2019). Thus, rising environmental, health, and safety concerns increase consumer demand for green food products (Schifferstein & Ophuis, 1998).

Environmental concern refers to an individual's emotional characteristics, such as liking or disliking, worries, and considerations, as well as the belief, attitudes, and level of respect toward the environment (Rajendran et al., 2019). As a result, environmental concern suggests that a person is emotionally involved in ecological issues. Previous research indicates that altruistic value influences explorers' natural conviction and, as a result, reinforces consumers' behaviour to limit their impact on the environment while purchasing green products (Chuah & Lu, 2019).

The greater the perceived environmental responsibility, the more concerned consumers are about the environment (Yang & Zhang, 2020). Similarly, (Yarimoglu & Binboga, 2019) contends that environmental concerns influence green purchasing behaviour in consumers. Customers more concerned about environmental issues will still purchase green products even if the price is significantly higher than non-green or less eco-friendly products, despite environmental concerns' positive impact.

Similarly, studies show that customers in China who are concerned about the environment are more likely to change their lifestyle and purchasing behaviour to green to promote green products in the face of economic growth (Cai et al., 2019; Wang et al., 2021). The China Consumers Association has urged Chinese consumers to use environmentally friendly products that benefit their personal and environmental well-being (Shao, 2019). The Hong Kong Trade Development Council reports said that overall consumer spending on green products increased by 71% in 2017 over 2016 (Qi, 2018). According to the China Sustainable Consumption Research Program, 20-30% of Chinese consumers are willing to spend more money on green products in 2019 (Mikhailova, 2020).

Despite the fact that ambivalent attitudes have a negative impact on environmental concerns in green purchasing behaviour. Consumers with highly ambivalent attitudes toward environmental problems have a low tolerance for the negative attributes of green products, resulting in a more rigorous cognitive evaluation and emotional experience of selective conflicts. Furthermore, consumers with common ambivalence may ignore or tolerate product flaws. Previous research has found that consumers have ambivalent attitudes toward environmental concerns and green purchasing behaviour. Consumers, for example, have mixed feelings about their recycling habits. While they see recycling as an essential way to help the environment, they also see it as a waste of time (Dahai, et al., 2022). Thus, hypothesis H3 was proposed to address the gap that exists in the literature.

**H3:** There is a statistically significant relationship between environmental concern and consumers' green product purchase behaviour in Klang Valley.

## **2.5 The Relationship between Perceived Seriousness of Environmental Problems and Consumers' Purchasing Behaviour**

Humans face numerous environmental challenges. Environmental degradation has resulted in hazardous atmospheric deviation, water, and air pollutants, ozone utilization, and dimness. Preferences for private families have exacerbated natural corruption. Many countries worldwide are concerned about climate change, water pollution, global warming, and hazardous waste management (Nguyen, Huynh, Le, 2022).

According to (Zheng et al., 2022), the perceived seriousness of environmental problems is defined as a level of personal concern and significant interest in environmental issues. When people encountered those ecological issues, it took much work to know how many inconveniences and difficulties they would have to deal with, as well as the attitude and behaviour they should have toward the environmental issues. For example, ease of consumption may lead consumers to purchase a product or food even if they are aware that the packaging of the product or food is hazardous to nature and the environment.

Aside from that, when people encountered environmental problems, it took time to predict how many inconveniences and difficulties they would face, as well as the behaviour and attitude they should adopt toward ecological issues. For example, consumers may purchase a product or food even if they know its packaging harms nature and the environment. The environment has emerged as a societal concern (Dahai, Fei, Shen & Pilsik, 2022).

Consumers are concerned about their well-being and quality of life and are starting to focus on the environment and purchase green products (Wang, Han, Kuang, and Hu, 2018). This influences environmentally conscious consumers to buy green products. The intensity, danger, and seriousness of environmental issues and problems may affect an individual's green purchasing behaviour (Zsofia, 2022). Furthermore, despite being unaware of the gravity of environmental issues, most people continue to

buy non-eco-friendly products containing hazardous chemical substances that harm the environment (Wijekoon & Sabri, 2021).

Consumers reassess their perceived gains and losses when the media reports on the environmental crisis, which changes their green purchasing behaviour. To avoid or mitigate the harm caused by environmental problems, buyers become more aware of green functional value, breaking the stereotype that green products are unjustifiably expensive (Tu et al., 2020; Xu et al., 2020). Media exposure can increase consumers' perceptions of the seriousness of environmental issues (Yang & Zhang, 2020) and cause them to pay more attention to incentives for green consumption (Tang et al., 2020). The generated appeal for additional benefits from green consumption would aid in accelerating green purchasing behaviour formation. Thus, hypothesis H4 was proposed to address the gap that exists in the literature.

**H4:** There is a statistically significant between the perceived seriousness of environmental problems and consumers' green product purchase behaviour in Klang Valley.

## **2.6 The Relationship between Perceived Environmental Responsibility and Consumers' Purchasing Behaviour**

Perceived environmental responsibility is defined as an individual's level of concern for the environment and social responsibility to save the environment from continuous deterioration by using non-eco-friendly products. According to the study, individuals who place a high value on various living things on Earth are more likely to be concerned about environmental factors that may endanger particular important objects (Jaini, Quoquab, Mohammad, and Hussin, 2019). Green purchasing behaviour is a pro-environmental behaviour because it improves the quality of the environment by making purchases that reduce environmental problems caused by unsustainable production and consumption (Xixiang et al., 2022).

(Tang et al., 2020) defined perceived environmental responsibility as an emotional investment in environmental issues. However, (Xixiang et al., 2022) described perceived ecological responsibility as a person's behaviour and attitude that he or she is responsible for his or her consumption behaviour and its effects on nature and the environment. Environmental responsibility is a person's perception of self-employment in environmental protection (Nguyen, Huynh & Le, 2022). According to (Nishant, Pratibha & Shailender, 2021), perceived environmental responsibility is defined as a level of emotional participation in environmental issues, as well as a person's behaviour and attitude that he or she is responsible for his or her consumption habits and their effects on nature and the environment.

Furthermore, growing environmental concerns, well-being, and security drive customer demand for green food product purchases (Yogananda & Nair, 2019). According to (Saddam et al., 2022), the manufacturing process caused significant environmental damage. As a result, green consumers will avoid non-eco-friendly products that endanger and harm their health.

According to a study on the relationship between perceived environmental problems and consumers' green product purchase behaviour, consumers concerned about environmental degradation are more likely to purchase additional green products, with significant influence from their peers and surroundings (Suki, 2019).

The majority of environmental degradation occurs during the manufacturing process. As a result, consumers who support green products will avoid non-green products that endanger and harm their health (Suki, 2019) discovered that when people are aware of negative consequences and feel responsible for them, they are more likely to help others. (Yeong & Kyu, 2021) confirmed that Asian citizen societies are becoming aware of grave environmental issues. Individuals' perceived responsibility must be considered when promoting green purchasing behaviour. As a result, perceived ecological responsibility influences purchasing behaviour toward green products. Thus, hypothesis H5 was proposed to address the gap that exists in the literature.

**H5:** There is a statistically significant relationship between perceived environmental responsibility and consumers' green product purchase behaviour in Klang Valley.

## **2.7 Green Product Purchase Behaviour**

Green purchasing behaviour is defined in this study as making environmentally friendly purchases that recycle or conserve resources or benefit the environment (Gonçalves et al., 2016; Mishal et al., 2017; Chen et al., 2020; Yang & Zhang, 2020). Green purchasing behaviour is the practice of selecting environmentally friendly products over those that may endanger the environment based on various factors.

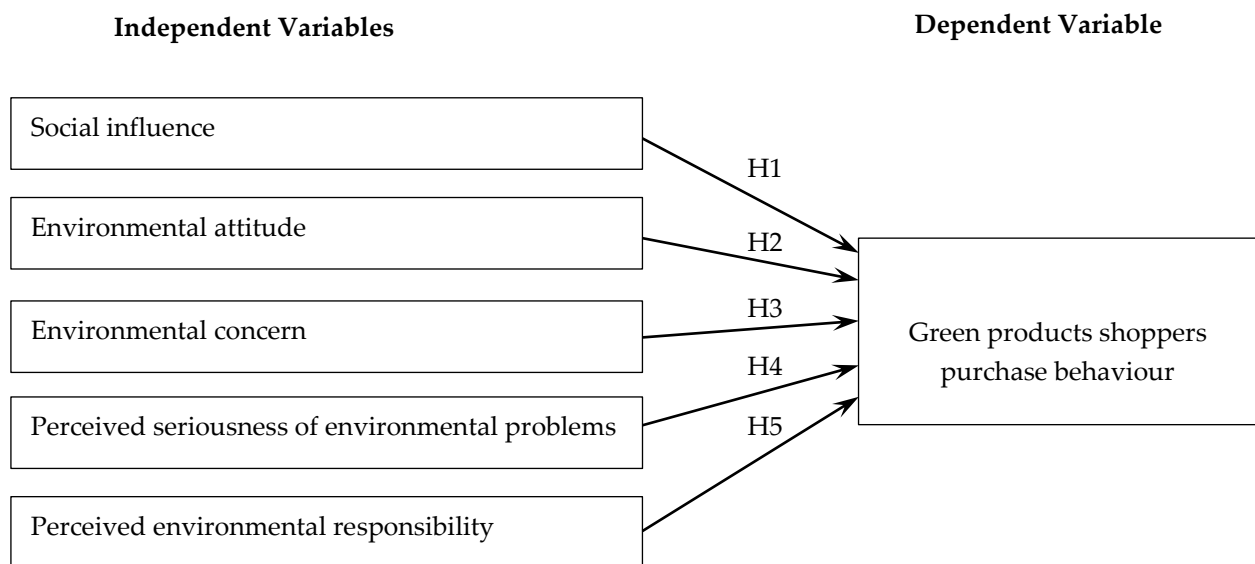
Green purchasing behaviour refers to the purchase of environmentally friendly or sustainable products that are "reusable" and "beneficial" to the environment, as opposed to purchasing such products that pollute the environment and society (Farheen, 2020). A green product meets consumer needs without harming the environment and helps ensure environmental sustainability. Green products can be recycled, have fewer packaging requirements, and have a low environmental impact (Kanapathipillai & Kumaran, 2022).

Green purchasing behaviour, according to (Deepak & Rishi, 2018), refers to the purchase of eco-friendly or sustainable products that are "recyclable" and "beneficial." In comparison to purchasing such products that harm the environment and society, Green purchasing intent and behaviour are critical components of green purchasing. People who value pro-environmental behaviours, perceive high green self-concepts and identity, and believe that their consumption impacts the natural environment are more likely to purchase green products, according to recent empirical evidence (Sharma et al., 2020).

Green purchasing intent and behaviour are critical components of green purchasing. Consumers' willingness to buy environmentally friendly products is reflected in their green purchase intention. Motives are the factors that encourage consumers to make green purchases (Kanapathipillai & Kumaran, 2022). According to

(Shibu & Leonard, 2014), the environment and people are both affected by rapid development and technological progress. For example, increased greenhouse gas emissions cause global warming and pollution, which harm the environment and people. Consumers are now attempting to contribute to environmental problem resolution through their purchasing behaviour. Green purchasing behaviour can be studied using repurchasing, customer purchasing attitude, and loyalty purchases (Kanapathipillai & Kumaran, 2022). Environmentally friendly purchasing is viewed as socially responsible and ethical decision-making. Green consumers consider the societal implications of their consumption and use their purchasing power to effect social change (Kanapathipillai & Kumaran, 2022). Green product awareness positively impacts consumers, shifting customer behaviour toward sustainable energy and green product purchases. Green purchase intention is defined as the motivation that an individual has to make an effort to practice green purchasing behaviour (Sheng et al., 2019).

## 2.8 Proposed Conceptual Framework



**Figure 2.1:** Proposed Conceptual Framework

Based on the above conceptual framework, it is clear to show that consumers' green product purchase behaviour is not only influenced by social influence but also requires some other cognitive factors such as environmental attitude, environmental concern, perceived seriousness of environmental problems, and perceived environmental responsibility by measuring attitudes directly and to address with the consumer's purchase intent and their purchasing behaviour for general green products has been recognized and understood by (Kumar et al., 2017).



### **3. Methodology**

This section will describe the data collection methodology used to answer the research question and prove the hypotheses. This chapter describes the population of the study, sampling, and measurements.

#### **3.1 Population, Sampling and Measurements**

The quantitative research method was chosen for this study because it will yield projectable data to a larger population and enable researchers to interpret the data into scientific graphs and charts efficiently. In addition, the data gathered through this method will examine the relationships between the independent variables, including social influence, environmental attitude, environmental concern, perceived seriousness of environmental problems, perceived environmental responsibility, and the dependent variable, green product shoppers, purchase behaviour.

This study will use descriptive research to describe the variables' characteristics. Descriptive analysis is a nonexclusive kind of analysis that can clarify the patterns in a set of information. It interprets simple information into an organized organization that enables it to be effectively perceived and outlined (Castleberry & Nolen, 2018). The descriptive analysis strategy investigates all types of segment information, including age, race, and orientation.

To achieve the objective of this study, 600 questionnaires were sent out to the target respondents who are shoppers living in Klang Valley. There are about 8.4 million individuals living in Klang Valley, as recorded by (World Population Review, 2022). Therefore, from the 8.4 million population, 384 is a sufficient sample size according to the (Krejcie & Morgan, 1970) tabulation. A total of 384 responses were collected, with a 64 percent response rate. Moreover, the survey was conducted using Google Docs, WhatsApp, and Telegram applications.

For this research, non-probability sampling was used to assemble the models, yet not everyone picked is permitted an equal opportunity. Therefore, this infers that the likelihood of everyone being picked is not possible. This implies that the participants participating in this study will be picked randomly (Blomqvist et al., 2015).

Data gathered was scrutinized using descriptive analysis, which provides an understanding of the shoppers' characteristics. Additionally, inferential statistics such as Pearson's Correlation Analysis and Multiple Linear Regression Analysis were used to uncover the variables' associations and relationships and prove the hypothesis put forward.

### **4. Findings and Interpretation**

This section provides the findings of this study, including the respondents' demographic profiles, descriptive analysis, correlation matrix and regression analysis.

#### 4.1 Demographic Profile of Respondents

The profile of the respondents studied is displayed in Table 1.

**Table 4.1:** Demographic Profile of Green Product Shoppers (N=384)

Demographic Categories	Frequency	Percentage
<b>Gender</b>		
Male	168	43.8
Female	216	56.2
<b>Age Group</b>		
20 – 25	48	12.5
26 – 30	85	22.1
31 – 35	99	25.8
36 – 40	51	13.3
41 – 45	23	6.0
46 – 50	24	6.3
51 - 55	54	14.1
<b>Ethnicity</b>		
Malay	180	46.9
Chinese	53	13.8
Indian	141	36.7
Others	10	2.6
<b>Education Level</b>		
Primary School	3	0.8
Secondary School	31	8.1
Pre-University (6th Form)	21	5.5
Diploma	103	26.8
Bachelor's Degree	143	37.2
Master's Degree	78	20.3
Doctorate's Degree	5	1.3
<b>Income Level (Monthly)</b>		
Below RM 1,999	63	16.4
RM 2,000 - RM 2,999	89	23.2
RM 3,000 - RM 3,999	74	19.3
RM 4,000 and above	158	41.1

Based on Table 4.1, the number of responses collected in this research is N=384. The demographics survey of respondents shows the majority are females (56.2%). Regarding age range, the majority are 31-35 years old, which is 99 respondents or (25.8%). The majority ethnic group that responded are Malays, which is 180 or (46.9%). In terms of educational level, the majority of the respondents have completed their bachelor's degree, which is (37.2%). Finally, based on the monthly income level of the respondents a majority of the shoppers who responded earn more than RM4000 a month, which is 158 or (41.1%).

## 4.2 Reliability Analysis

**Table 4.2:** Reliability Analysis (N=384)

Items	Cronbach's Alpha	N of Items
Social Influence	0.869	5
Environment Attitude	0.878	5
Environmental Concern	0.836	5
Perceived Seriousness of Environmental Problems	0.908	5
Perceived Environmental Responsibility	0.890	5
Green Product Shoppers Purchase Behaviour	0.845	5

Based on Table 4.2, the value of Cronbach's Alpha for social influence is 0.869 with 5 items. The Cronbach's alpha values of environment attitude, environmental concern, perceived seriousness of environmental problems and perceived environmental responsibility are 0.878 (5 items), 0.836 (5 items), 0.908 (5 items), 0.890 (5 items) respectively. Finally, the Cronbach's alpha value of the dependent variable (green product shoppers purchase behaviour) is 0.845 with 5 items. Therefore, the construct is excellent for this research.

## 4.3 Mean and Standard Deviation Analysis

Descriptive Statistics displays the mean, standard deviation (SD), skewness and kurtosis values of this research.

**Table 4.3:** Descriptive Statistics (N=384)

Factors	Mean	SD	Skew	Kurtosis	Min	Max
Social Influence	3.331	0.979	0.269	-0.344	1	5
Environment Attitude	3.424	0.494	0.257	0.618	1	5
Environmental Concern	3.918	0.873	0.563	0.179	1	5
Perceived Seriousness of Environmental Problems	4.092	0.844	-0.803	0.190	1	5
Perceived Environmental Responsibility	3.697	0.657	0.476	0.319	1	5
Green Product Shoppers Purchase Behaviour	3.766	0.896	-0.669	0.297	1	5

From Table 4.3, the factor Perceived Seriousness of Environmental Problems displays the highest mean value of  $4.092 \pm 0.844$ . The lowest mean value is Social Influence,  $3.331 \pm 0.979$ . Additionally, the normality test in Table 4.3 indicates that the skewness and kurtosis values have a threshold of  $\pm 2$  therefore the data are distributed normal, as cited by (Chinna & Yuen, 2015; Gravetter & Wallnau, 2014).

## 4.4 Correlation Analysis

To study how the variables are associated in terms of strength and direction, the correlation analysis is shown in Table 4.4: Correlation Matrix.

**Table 4.4:** Correlation Matrix (N=384)

Factors	1	2	3	4	5	6
Social Influence	1					
Environment Attitude	0.290**	1				
Environmental Concern	0.483**	0.308**	1			
Perceived Seriousness of Environmental Problems	0.240**	0.319**	0.484**	1		
Perceived Environmental Responsibility	0.446**	0.432**	0.666**	0.475**	1	
Green Product Shoppers Purchase Behaviour	0.560**	0.322**	0.602**	0.412**	0.576**	1

\*\* Correlation is significant at the 0.01 level (2-tailed).

According to the correlation matrix shown in Table 4.4, it was noted that the data significantly supported the measurement model. The correlation matrix reveals that the independent variable social influence is significantly correlated with the green product shoppers' purchase behaviour (0.560,  $p < 0.001$ ), which is positive and moderately correlated. This suggests that the independent variable of social influence may be a vital determinant of green product shoppers' purchase behaviour. This finding implies that independent social influence awareness impacts green product shoppers' purchase behaviour.

There was also a significant correlation between environmental concern and green product shoppers' purchase behaviour (0.602,  $p < 0.001$ ), which is positive and moderately correlated. This implies that the independent variable of environmental concern is a significant determinant of green product shoppers' purchase behaviour. Therefore, the independent variable of environmental concern influences green product shoppers' purchase behaviour.

Perceived environmental responsibility has been proven to have a significant correlation with the green product shoppers' purchase behaviour (0.576,  $p < 0.001$ ), which is positive and moderately correlated and implies that the independent variable perceived environmental responsibility is a crucial determinant of the green product shoppers' purchase behaviour.

The correlation between the perceived seriousness of environmental problems and green product shoppers' purchase behaviour is (0.412,  $p < 0.001$ ). It was discovered that there is a significant correlation between the perceived seriousness of environmental problems, with positive and moderate correlation. This indicates that the perceived seriousness of environmental problems is a key determinant of green product shoppers' purchase behaviour. Therefore, the independent variables perceived seriousness of environmental problems influences the green product shoppers' purchase behaviour.

Finally, the correlation between environmental attitude and green product shoppers' purchase behaviour is (0.322,  $p < 0.001$ ). This correlation is a significant and positive but small correlation. This indicates that environmental attitude is also a key determinant of green product shoppers' purchase behaviour. Therefore, the independent

variable environmental attitude also influences the green product shoppers' purchase behaviour.

Referring to the findings above, all five independent variables significantly correlated with green product shoppers' purchase behaviour. Furthermore, the correlation analysis also shows that each independent variable is significantly correlated with the other.

#### 4.5 Multiple Regression Analysis

Regression analysis is the statistical method used in this research to estimate the relationships between the 5 independent variables and a dependent variable.

**Table 4.5: Model Summary<sup>b</sup>**

Model 1	R	R Square	Adjusted R Square	Std. Error of the Estimate
	0.706	0.499	0.492	0.638
a. Predictors: (Constant), Social Influence, Environment Attitude, Environmental Concern, Perceived Seriousness of Environmental Problems, Perceived Environmental Responsibility				
b. Dependent Variable: Green Product Shoppers Purchase Behaviour				

From Table 4.5 Model Summary,  $R = 0.706$  which signifies the multiple correlation coefficient values which reveals a high degree of predictive accuracy. The  $R^2 = 0.499$ . This infers that 49.9% of the variation in the dependent variable (green product shoppers purchase behaviour) can be explained by the independent variables (social influence, environmental attitude, environmental concern, perceived seriousness of environmental problems, and perceived environmental responsibility).

**Table 4.6: ANOVA**

Model 1	Sum of Squares	df	Mean Square	F	Sig.
Regression	153.306	5	30.661	75.271	0.000 <sup>b</sup>
Residual	153.976	378	0.407		
Total	307.281	383			
a. Dependent Variable: Green Product Shoppers Purchase Behaviour					
b. Predictors: (Constant), Social Influence, Environment Attitude, Environmental Concern, Perceived Seriousness of Environmental Problems, Perceived Environmental Responsibility					

Table 4.6 ANOVA, shows that the independent factors statistically and substantially forecast the dependent variable, ( $F = 75.271$ ,  $p < 0.001$ ). Therefore, the regression model fit is good. Hence, the independent variables (social influence, environmental attitude, environmental concern, perceived seriousness of environmental problems, and perceived environmental responsibility) will be able to project the dependent variable (green product shoppers purchase behaviour).

**Table 4.7:** Coefficients

Model 1 Coefficients	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	0.107	0.254		3.419	0.000
Social Influence	0.285	0.039	0.312	7.295	0.000
Environment Attitude	0.158	0.074	0.032	2.135	0.000
Environmental Concern	0.261	0.054	0.254	4.836	0.000
Perceived Seriousness of Environmental Problems	0.115	0.046	0.108	2.500	0.000
Perceived Environmental Responsibility	0.276	0.072	0.202	3.814	0.000
Dependent Variable: Green Product Shoppers Purchase Behaviour					

Table 4.7 coefficients, show that social influence (B = 0.285; p < 0.001); environmental attitude (B = 0.158; p < 0.001); environmental concern (B = 0.261; p < 0.001); perceived seriousness of environmental problems (B = 0.115; p < 0.001) and perceived environmental responsibility (B = 0.276; p < 0.001) are statistically significant.

Thus, this implies that there is a significant relationship between the predictor variables (social influence, environmental attitude, environmental concern, perceived seriousness of environmental problems, and perceived environmental responsibility) and the dependent variable (green product shoppers purchase behaviour).

Based on Table 4.7, the linear regression equation is as follows:

Where;

$$PB = 0.107 + 0.285(SI) + 0.158(EA) + 0.261(EC) + 0.115(PSEP) + 0.276(PER)$$

Where:

PB = green product shoppers purchase behaviour;

SI = social influence;

EA = environmental attitude;

EC = environmental concern;

PSEP = perceived seriousness of environmental problems;

PER = perceived environmental responsibility;

Constant or the PB-intercept = 0.107.

Therefore, the result signifies that with a one-unit increase in social influence (SI), there is an increase in the green product shoppers' purchase behaviour (PB) by 0.285 units. A one-unit increase in environmental attitude (EA) will increase the green product shoppers' purchase behaviour (PB) by 0.158 units. When there is a one-unit environmental concern (EC) increase, green product shoppers' purchase behaviour (PB) will increase by 0.261 units. Additionally, with a one-unit increase in the perceived seriousness of environmental problems (PSEP), there is an increase in the green product shoppers' purchase behaviour (PB) by 0.115 units. Finally, the result indicates that with a

one-unit increase in perceived environmental responsibility (PER), there is an increase in the green product shoppers' purchase behaviour (PB) by 0.276 units.

Moreover, the result of the multiple regression probe evaluates the impact of the predictor variables (social influence, environmental attitude, environmental concern, perceived seriousness of environmental problems, and perceived environmental responsibility) on the outcome variable (green product shoppers' purchase behaviour). The stronger the standardization coefficient, the more significant the impact of the predictor variables (social influence, environmental attitude, environmental concern, perceived seriousness of environmental problems, and perceived environmental responsibility) on the outcome variable (green product shoppers' purchase behaviour). With a standard coefficient (Beta = 0.312), the predictor variable social influence (SI) contributes the highest to the variance in the green product shoppers' purchase behaviour (PB), and environmental concern (EC) follows with (Beta = 0.254). The standard coefficient of the predictor variables (environmental attitude (EA), perceived seriousness of environmental problems (PSEP), and perceived environmental responsibility (PER)) indicated Beta values of 0.032, 0.108, and 0.202, respectively.

#### 4.6 Summary of Hypothesis Test

**Table 4.8:** Summary of Hypothesis Test (N=384)

Hypothesis	P-value	Result
H1: There is a statistically significant relationship between social influence and consumers' green purchase behaviour.	0.000	Accepted
H2: There is a statistically significant relationship between environmental attitude and consumers' green product purchase behaviour.	0.000	Accepted
H3: There is a statistically significant relationship between environmental concern and consumers' green product purchase behaviour.	0.000	Accepted
H4: There is a statistically significant between perceived seriousness of environmental problems and consumers' green product purchase behaviour.	0.000	Accepted
H5: There is a statistically significant relationship between perceived environmental responsibility and consumers' green product purchase behaviour.	0.000	Accepted

From Table 4.8, the first hypothesis (H1) is to test if there is a statistically significant relationship between social influence and consumers' green purchase behaviour. The p-value of social influence is 0.000, which is less than 0.001. Consequently, indicating a statistically significant relationship between social influence and consumers' green purchase behaviour.

The second hypothesis (H2) is to test if there is a statistically significant relationship between environmental attitude and consumers' green product purchase behaviour. The p-value of environmental attitude is 0.000, which is less than 0.001. Therefore, it denotes a statistically significant relationship between environmental attitude and consumers' green product purchase behaviour.

The third hypothesis (H3) is to investigate if there is a statistically significant relationship between environmental concern and consumers' green product purchase behaviour. The p-value of environmental concern is 0.000, which is less than 0.001. Hence, this implies a statistically significant relationship between environmental concern and consumers' green product purchase behaviour.

The fourth hypothesis (H4) is to test if there is a statistically significant relationship between the perceived seriousness of environmental problems and consumers' green product purchase behaviour. The p-value of the perceived seriousness of environmental problems is 0.000, less than 0.001. Thus, demonstrating a statistically significant relationship between the perceived seriousness of environmental problems and consumers' green product purchase behaviour.

Finally, the fifth hypothesis (H5) is to test if there is a statistically significant relationship between perceived environmental responsibility and consumers' green product purchase behaviour. The p-value of perceived environmental responsibility is 0.000, less than 0.001. Thus, indicating a statistically significant relationship between perceived environmental responsibility and consumers' green product purchase behaviour.

## 5. Discussion

As far as this study's context, the study's results are discussed in this section. IBM's Statistical Package for Social Science version 26 (SPSS) software was used to generate the results.

Firstly, this study scrutinized if there is a significant relationship between social influence and consumers' green product purchase behaviour in Klang Valley and tested hypothesis H1: There is a statistically significant relationship between social influence and consumers' green product purchase behaviour in Klang Valley. The result of this finding is supported by (Uce et al., 2022), that social influence significantly impacts consumer product evaluation and green product selection. Social networks and product engagement are linked. Consumers' social context, such as friends, colleagues, and family, which provide critical influence and feedback on their green product consumption, will ultimately influence their choice of green products and brands. (Lim et al., 2019) found that social influence is a process where an individual modifies his opinion, belief, or behaviour as a result of social interaction with others. When a third party influences a person's activities or thoughts, this is referred to as having a social effect. Instead, the result of this study negates the previous literature and previous results found by (Martin & Simintiras, 1995) that the relationship between social influence and consumers' green product purchase behaviour is weak. Additionally, this study refutes that social media or social networking such as Facebook, Twitter, LinkedIn, YouTube, Flickr, and others social media have an insignificant impact on consumers' green purchasing behaviour according to a survey conducted by Ad-ology Research (Business Wire, 2009). Therefore, social influence plays an important role in training people about



environmental activities. Thus, the findings of this study have answered the first research question and narrowed the literature gap.

Secondly, this study analysed if there is a significant relationship between environmental attitude and consumers' green product purchase behaviour in Klang Valley and tested the hypothesis H2: There is a statistically significant relationship between environmental attitude and consumers' green product purchase behaviour in Klang Valley. The result showed that environmental attitudes significantly affect consumers' green product purchase behaviour in Klang Valley. The result of this research complements previous research findings of (Laroche et al., 2001; Chyong et al., 2006; Alfonsius & Gilbert, 2021), which found that attitude is an important factor in predicting consumer's willingness to pay for more environmentally friendly or green products. These researchers revealed similar results where the weak determinants or low relationship between environmental attitudes and green purchases behaviour. This results from a person's mindset, which bases their attitude towards environmental issues on the belief that they are the most important element in the natural environment, which leads to green product purchases. In addition, (Paco et al., 2009) stated that attitudes can still influence customers to buy green products even if it is not necessarily used as a basis for making purchase decisions. Therefore, this may lead to the significance of the relationship between environmental attitudes and consumers' green product purchase behaviour in Klang Valley.

Thirdly, this study assessed if there is a significant relationship between environmental concern and consumers' green product purchase behaviour in Klang Valley and tested the hypothesis H3: There is a statistically significant relationship between environmental concern and consumers' green product purchase behaviour in Klang Valley. The results of this study can be confirmed by the previous scholar who mentions that consumers with high awareness and concern for the environment are willing to pay more (Bang et al., 2000) and buy green products (Kim et al., 2005) and vice versa. Therefore, the level of community concern for the environment is linked to their interest and desire to buy green products in Klang Valley. Other evidence was given from (Chuah & Lu, 2019) study, where environmental concerns were identified as cognitive pro-social factors, and those factors were used as independent variables to extend the framework. Therefore, growing environmental concerns lead to increased consumer demand for green food products (Schifferstein & Ophuis, 1998). Thus, the findings of this research have answered the third research question and narrowed the literature gap.

Fourthly, this research assessed if there is a statistically significant relationship between the perceived seriousness of environmental problems and consumer's green product purchase behaviour in Klang Valley and analysed the hypothesis H4: There is a statistically significant relationship between perceived seriousness of environmental problems and consumer's green product purchase behaviour in Klang Valley. Likewise, (Abu et al., 2022) research defined the perceived seriousness of environmental problems as a level of personal concern and significant interest in environmental issues. Moreover, the results of this research validated the findings of (Wang et al., 2018), who mentioned

that consumers care about their well-being and quality of life and start to focus on the environment and buy green products. However, this result overturned the statement of (Wijekoon & Sabri, 2021), where most people, despite not realizing how serious the environmental issue is, continue to buy non-environmentally friendly products that contain harmful chemicals that harm the environment.

Finally, this study also determined if there is a statistically significant relationship between perceived environmental responsibility and consumers' green product purchase behaviour in Klang Valley and tested hypothesis H5: There is a statistically significant relationship between perceived environmental responsibility and consumers' green product purchase behaviour in Klang Valley. This research can be supported by a previous study by (Xixiang et al., 2022) that environmental responsibility is defined as a person's behaviour and attitude that he or she is responsible for his or her consumption behaviour and its impact on nature and the environment. This statement is supported by (Nguyen et al., 2022). Contrarily, the outcome of this study repudiates the finding of (Gough, 1994), which has shown that to create green product purchasing behaviour, individuals should not be lacking their responsibility. Therefore, when the responsibility for environmental perception is well informed to the public, they will be ready to take responsibility for protecting and saving the environment. Thus, the findings of this research have answered the fifth research question and narrowed the literature gap.

## 6. Conclusion

This research aims to study the factors that impact the green products purchase behaviour of Malaysian Shoppers in Klang Valley. Independent variables of social influence, environmental attitude, environmental concern, perceived seriousness of environmental problems and perceived environmental responsibility were examined to see if they impacted the dependent variable green product purchase behaviour of Malaysian Shoppers in Klang Valley. Based on the outcome, all of the objectives of this research were achieved, and the gaps emphasized in the literature were bridged. Social influence, environmental concern, perceived seriousness of environmental problems, and perceived environmental responsibility have demonstrated a significant relationship to the green products purchase behaviour of Malaysian Shoppers in Klang Valley.

The first objective of this study was to scrutinize if there is a significant relationship between social influence and consumers' green product purchase behaviour in Klang Valley. The research has revealed a significant relationship between social influence and consumers' green product purchase behaviour in Klang Valley. Therefore, this study is in line with the findings of previous scholars (Chopdar et al., 2018; Chopdar & Sivakumar, 2019; Lu et al., 2017; Lim, Perumal, & Ahmad, 2019; Yogananda & Nair, 2019; Alzubaidi et al., 2021; Reeves et al., 2020a, 2020b; Uce Karna, Mularia Priska, & Herrisa Azhalia, 2022; Chopdar, 2022; Noor, 2017; Ojo & Fauzi, 2020; Nugraha & Widyaningsih, 2021; Bugshan & Attar, 2020) who discovered that social influence has a high impact on consumer choice and play an important role towards green product

purchase decisions. The social context of users such as friends, colleagues, salespeople, neighborhood, and family in their activities are relevant examples of studies showing that individuals adopt behaviour from others on their opinions, beliefs, or behaviours that provide critical influence and feedback on their use, which will ultimately influence individuals in their product and brand choices directly lead on green products purchase. Based on the findings it is in line with the Theory of Planned Behaviour (TPB) used in this study which shows the relationship between human attitudes toward behaviour, subjective norms, and perceived behavioural control that shapes the individual behavioural intent and behaviours. The perception of behavioural control is the convenience or barrier consumers feel in making a purchase or using green products. Typically, the better the behaviour and norm, the stronger the perceived control, and the better one's plan to demonstrate that behaviour.

The second objective of this study was to analyse if there is a statistically significant relationship between environmental attitudes and consumers' green product purchase behaviour in Klang Valley. The study has revealed a significant relationship between environmental attitudes and consumers' green product purchase behaviour in Klang Valley. Therefore, this study is in line with the findings of previous scholars (Kilbourne & Beckmann, 1998; Kanapathipillai & Kumaran, 2022; Yogananda & Nair, 2019; Alfonsius & Gilbert, 2021; Yadav & Pathak, 2016; Nam, Dong & Lee, 2017; Alfonsius & Gilbert, 2021; (Wong, Jia & Wong, Hui & Wong, Winnie, 2020; Sharma et al., 2020; Alfonsius & Gilbert 2021; Taufique et al., 2017; Ricci et al., 2018). Their studies have also shown that environmental attitude and consumers' green product purchase behaviour where environmental attitudes can be measured by making cognitive judgments about environmental protection, individuals who have a positive attitude towards the environment influence their attitude to take action, consumer trust in green products purchasing, environmentally friendly products, and participating in environmental activities and based on our finding it corresponds to the Theory of Planned Behaviour (TPB) used in this study and shows that environmental attitudes lead to a higher intention to purchase green products. This study shows that when Individual customers have strong intentions toward certain green products, they are more likely to have a strong intention to make a green product purchase decision.

The third objective of this study was to study if there is a statistically significant relationship between environmental concern and consumers' green product purchase behaviour in Klang Valley. The researchers have demonstrated a significant relationship between environmental concern and consumers' green product purchase behaviour in Klang Valley. Therefore, this study supported the findings of previous scholars (Kamalanon et al., 2022; Kanapathipillai & Kumaran, 2022; (Chuah & Lu, 2019; Schifferstein & Ophuis, 1998; (Rajendran et al., 2019; Yarimoglu & Binboga, 2019; Cai et al., 2019; Wang et al., 2021) who have also proven the significance of the relationship between environmental concern and consumer's green product purchase behaviour. Environmental concerns can act in ways that help protect the environment, such as buying and using products with the least negative impact on the earth and its people.

Individuals who are emotionally involved in environmental issues, increasing concern for the environment, health, and safety lead to increased consumer demand for green purchase products and have a direct impact on green product purchase intentions, this can be related to our findings and supports the Theory of Planned Behaviour (TPB) used in this study and shows that environmental concern leads to a higher intention to buy green products. This study shows that when individual customers have strong intentions toward green products, they are more likely to express firm intention to make a green product purchase decision.

The fourth objective of this study was to assess if there is a statistically significant relationship between the perceived seriousness of environmental problems and consumers' green product purchase behaviour in Klang Valley. The researchers have discovered a significant relationship between the perceived seriousness of environmental problems and consumers' green product purchase behaviour in Klang Valley. Therefore, this study supported the findings of previous scholars (Wang, Han, Kuang & Hu, 2018; Zsofia, 2022; Tu et al., 2020; Xu et al., 2020; Yang & Zhang, 2020; Tang et al., 2020) who have revealed the significance of the relationship between perceived seriousness of environmental problems and consumer's green product purchase behaviour. Besides media exposure, which can increase an individual's perceptions and intensity, an individual also cares about their well-being and quality of life. On the other hand, awareness of their dangers can influence individuals to care about the environment. Additionally, when they know how profound the perception of environmental issues and problems is, they focus on the environment, which immediately leads to purchasing green products. This can be verified with the Theory of Planned Behaviour (TPB) theory used in this study. This study shows that when individual customers have strong intentions toward certain green products, they are more likely to purchase green products.

The fifth objective of this study was to investigate if there is a statistically significant relationship between perceived environmental responsibility and consumers' green product purchase behaviour in Klang Valley. This study has established a significant relationship between perceived environmental responsibility and green product shoppers' purchase behaviour in Klang Valley. Therefore, this study is in line with the findings of previous scholars (Jaini, Quoquab, Mohammad & Hussin, 2019; Xixiang et al., 2022; Tang et al., 2020; Nguyen, Huynh, Le, 2022; Nishant, Pratibha & Shailender, 2021; Yogananda & Nair, 2019; Ebrahim, Khaled, Saleh, Jinyu & Hamzeh, 2022) who have also proven the significance of the relationship between perceived environmental responsibility consumer's green product purchase behaviour in Klang Valley. The level of individual concern for the environment and social responsibility to save the environment from continuous degradation by using non-environmentally friendly products with significant influence from their peers and environment have led to green product purchase behaviour. Green purchasing behaviour is pro-environmental behaviour because it improves the quality of the environment, and consumers who support green products will avoid non-green products that endanger and harm their

health. By making purchases that reduce environmental problems caused by the production and consumption of non-green products, these consumers show their responsibility towards the environment they live in. This will lead to green product purchase behaviour and is also in line with the Theory of Planned Behaviour (TPB) used in this study which displays the relationship between human attitudes toward behaviour, subjective norms, and perceived behavioural control that shapes the individual behavioural intent and behaviours. The perception of behavioural control is the convenience or barrier consumers feel in making a purchase or using green products. Typically, the better the behaviour and norm, the stronger the perceived control, and the better one's plan to demonstrate that behaviour.

Therefore, based on this research, it can be inferred that the five independent variables (social influence, environmental attitude, environmental concern, perceived seriousness of environmental problems, and perceived environmental responsibility) create a direct impact based on the green product purchase behaviour of Malaysian shoppers in Klang Valley. Marketers can use the results of this study to evaluate the purchasing behaviour of green products by Malaysian shoppers in Klang Valley. Importantly, this study proves that consumers are aware of environmental issues and willing to protect and save their environment by purchasing green products, improving their current and future quality of life.

## **7. Implication of Study**

According to the TPB theories applied in this study, consumer ecological beliefs factors, for instance, perceived environmental responsibility and perceived seriousness of environmental problems and environmental concern, are more suitable and accurate to explain the working consumers' green purchasing behaviour than environmental factors such as social influence. These research findings have provided insight and knowledge to marketers facing many challenges in persuading consumers to buy eco-friendly products. To successfully refine and redefine this new target market, we need to understand the route that shifts the environmental factors to green purchase behaviour. By gathering this information, marketers could formulate strategies to attract consumers more effectively to buy green products. Thus, future researchers can investigate how a consumer's ecological beliefs can significantly impact green purchasing behaviour.

## **8. Limitations and Further Research**

Several limitations have been identified in this research. Firstly, the main limitation of this study is geographical bias. Although the population of Klang Valley is more condensed compared to other areas or states, the findings of this study may only represent the views of some consumers in Malaysia. This may be due to the different settings of target respondents, who may have different views on green products. Therefore, it may not be appropriate to generalize the results that represented all

consumers in Malaysia. Secondly, this study is cross-sectional, whereby data was only collected at one point. Consumers' purchase behaviour will constantly change from time to time due to different influences. Therefore, the result of this finding is inappropriate to explain and reflect the pattern of consumers' purchase behaviour. In other words, this research can only describe the pattern of consumers' purchase behaviour at one point in time.

Additionally, some recommendations are presented to overcome these limitations in future studies. It is suggested to include other variables to investigate the factors that most impact green product purchase behavior among Malaysian shoppers instead of focusing on specific variables. Moreover, the sample group should be expanded to Peninsular Malaysia, Sabah, and Sarawak locations where the background, culture, education level, and monthly income differ from Klang Valley. Additionally, data can be collected using qualitative methods to bridge the literature gaps further.

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### **Conflict of Interest Statement**

As far as the authors are concerned, there is no conflict of interest linked with this study, and there has been no sponsorship regarding this study, authorship and publication that could have influenced its outcomes. As the researchers of this study, the authors confirm its originality and have not been published anywhere previously and affirm that it is not presently being considered for publication elsewhere.

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