FACTORS AFFECTING GREEN PURCHASE INTENTION AMONG UNIVERSITY STUDENTS

LIM RUI WEN

BACHELOR OF INTERNATIONAL BUSINESS
(HONOURS)

UNIVERSITI TUNKU ABDUL RAHMAN

FACULTY OF ACCOUNTANCY AND MANAGEMENT
DEPARTMENT OF INTERNATIONAL BUSINESS

DECEMBER 2023

FACTORS AFFECTING GREEN PURCHASE INTENTION AMONG UNIVERSITY STUDENTS

BY

LIM RUI WEN

A final year project submitted in partial fulfilment of the requirement for the degree of

BACHELOR OF INTERNATIONAL BUSINESS (HONOURS)

UNIVERSITI TUNKU ABDUL RAHMAN

FACULTY OF ACCOUNTANCY AND MANAGEMENT
DEPARTMENT OF INTERNATIONAL BUSINESS

DECEMBER 2023

DECLARATION

I hereby declare that:

(1) This undergraduate FYP is the end result of my own work and that due acknowledgement has been given in the references to ALL sources of information be they printed, electronic, or personal.

(2) No portion of this FYP has been submitted in support of any application for any other degree or qualification of this or any other university, or other institutes of learning.

(3) Sole contribution has been made by me in completing the FYP.

(4) The word count of this research report is _____10020_____.

Name of student:	Student ID:	Signature:
Lim Rui Wen	2005505	

Date: 13 December 2023

ACKNOWLEDGMENT

I want to sincerely thank the following people and organization for their support and contributions, which were very helpful in finishing this study.

Firstly, I am deeply grateful to my supervisor, Ms Annie Yong Ing Ing, for her guidance, mentoring, and continuous support throughout the entire research and writing process. Her insightful feedback and constructive criticism significantly enhanced the quality of this report.

Secondly, I would like to thank all the respondents who filled out my questionnaires. My research project would not have been possible done without the data collected from them.

Thirdly, I would like to express my gratitude to, my second examiner, Pn Nuraishah Binti Raimee for providing me with valuable feedback on how to improve my research and correct me parts that I did wrong.

Finally, I would like to thank Universiti Tunku Abdul Rahman for providing access to essential resources, data, and facilities necessary for the successful completion of this project.

DEDICATION

My supervisor, Ms Annie Yong Ing Ing, has been a huge assistance to me during the entire process of research project, thus I would want to dedicate this one to her. This study project has been greatly impacted by her advice and assistance.

Next, let me not overlook my close friends. In addition, I would like to dedicate them to their willingness to lend a helping hand, whether it is proofreading drafts or offering constructive feedback, made this process smoother and more enjoyable.

TABLE OF CONTENTS

LIST OF TABLES

Page

LIST OF FIGURES

Page

LIST OF ABBREVIATIONS

TRA	Theory of Reasoned Action
TPB	Theory of Planned Behavior
AVE	Average Variance Extracted
HTMT	Heterotrait-Monotrait Ratio of Correlations
VIF	Variance Inflation Factor
GPI	Green Purchase Intention
PBC	Perceived Behavior Control
A	Attitude
SN	Subjective Norms
EC	Environmental Concern

LIST OF APPENDICES

PREFACE

Students who pursuing a Bachelor of International Business must write a research report under the UKMZ3016 Research Project in order to receive their bachelor's degree. " Factors Affecting Green Purchase Intention Among Univeristy Students " is the title of this research project.

This study's primary goal is to identify the variables influencing private university students in Malaysia toward green purchase intention. Four factors have been studied throughout the study that influence university students' intentions to purchase green products: attitude, subjective norms, perceived behavioral control, and environmental concerns.

This study was conducted because of various flaws in earlier research into purchase intention toward green products. However, that research has conflict that whether the university students in Malayisa have positive relationship between independent variables between green purchase intention into the buying of green goods.

On the other side, it's also critical to comprehend the various factors influencing university students' intentions for green products. Therefore, the purpose of this study is to assist diverse parties in gaining a better understanding of purchase intention to buy green products.

ABSTRACT

The swift growth of the economy and technological advancements in recent decades have undoubtedly enhanced the convenience of people's lives. Nonetheless, these progressions have also given rise to various environmental issues, including pollution, global warming, and climate change. As as result, more and more people are aware about the environmental issues. These people included the business. Numerous businesses are conscious of environmental concerns and aim to play a role in safeguarding the environment. Consequently, they are introducing a range of innovative products designed to exert a lesser impact on the environment compared to conventional products, these are commonly referred to as green products.

Therefore, the objective of this research is to identify the variables influencing university students' green purchase intention toward green product. The theory used in this study is theory of planned behavior. In addition, the data was collected by questionnaire and analyzed with SmartPLS 4.0 to test whether the model in this study is reliable, validity and hypothesis testing. The result showed that attitude, subjective norms, perceived behavioral control, and environmental concerns have a positive relationship toward green purchase intention. Thu, this study contributes these factors affecting green purchase intention among private university students in Malaysia.

CHAPTER 1: RESEARCH OVERVIEW

1.0 Introduction

This study will investigate the factors affecting the intention of Malaysian local students and international college students to buy green products. As part of this chapter, we will discuss the research background, the problem statements, the research problems, the objectives and the significance.

1.1 Background Research

The economy's quick development and the progress of technology in the past few decades have brought convenience to people's lives. However, these advances also cause many environmental issues, including climate change, global warming, and pollution. Many of these problems have a direct impact on the economy, society, and the environment. These issues have also aroused the concern of all parties. Lifestyles and values change as people become more aware of the environment. Consumers are starting to understand not just how important the environment is, but also how much their purchase decisions and behaviors affect the environment.

Moreover, people care and are concerned about environmental problems, as well as businesses. Many businesses are aware of the ecological issues and hope to contribute to helping protect the Earth. Therefore, they produce a series of new products that have less harmful to the environment than the traditional products, which we call green products. Green products are designed to reduce or eliminate pollution, use of toxic substances, and toxic waste to protect the environment (Ottman et al., 2006). These products are typically decomposable, renewable, and recyclable and are less environmentally harmful than traditional products (Dangelico and Pontrandolfo, 2010).

The growing demand for green products from consumers has prompted companies to start focusing on the green product market. Hence, companies have come up with green marketing strategies.

Several companies like IKEA, Uniqlo Co., Ltd, and Dutch Lady Milk have adopted green business practices as they believe that green products will provide them with a competitive edge over their rivals. (Saxena & Khandelwal, 2010). Moreover, they believe that green marketing practices can lead to sustainable growth.

1.2 Research Problem

Although customers were concerned about the environment, they did not take action. Kong et al. (2014) pointed out that 90 percent of Malaysians are aware of environmental problems and are concerned about them. However, several past studies indicate that Malaysian consumers do not seem inclined to buy green products (Sharaf et al., 2015; Hasan et al., 2018; Nadiah & Norashikin, 2019; Tan et al., 2019). Sharaf et al. (2015) argue that most Malaysians perceive green products to be expensive commodities, designed for high-income consumers, thus they refuse to purchase green products. Furthermore, green products' relatively high prices and difficulty in finding stores to sell them encourage consumers to ignore the benefits of green products (Azmi & Hafiez, 2018). Consumers' lack of interest in environmental sustainability restricts internal marketers from devising more effective marketing strategies for green products.

In addition, Gurău & Ranchhod (2005) claimed that developed countries have the leading green product markets because consumers in developed countries will pay more for green products than consumers in developing countries. People in developing countries are less inclined to buy green products because they are more concerned with meeting the survival needs of themselves and their families rather than their health and the environment. On the other side, most people in developed nations are more inclined to purchase green products because they know the importance of saving the environment (Handriana, 2016). Nevertheless, according to Zorn (2017), most natural disasters caused by climate change occur in developing countries. The number of people who died from natural disasters between 1991 and 2005 was approximately ninety percent, as well as ninety-eight percent of those affected, came from developing countries. Accordingly, Customers in these nations are become more conscious of how their actions affect the environment. (Maichum et al.,

2016). Hence, these studies have conflicted on whether developing country like Malaysia still have lower purchase intentions toward green products.

1.3 Research Objective

1.3.1 General Objective

The aim of this study is to examine the variables that influence students' intentions to purchase green products at private university.

1.3.2 Specific Objectives

1. To determine attitudes affecting green purchase intention toward green products.
2. To determine subjective norms affecting green purchase intention toward green products.
3. To determine perceived behavior control affecting green purchase intention toward green products.
4. To determine environmental concerns affecting green purchase intention toward green products.

1.4 Research Question

1. Is there any relationship between attitude and green purchase intention?

2. Is there any relationship between subjective norm and green purchase intention?

3. Is there any relationship between perceived behavior control and green purchase intention?

4. Is there any relationship between environmental concern and green purchase intention?

1.5 Significance of Study

Firstly, this research is necessary because it is challenging for marketers and manufacturers of green products to get into and maintain position in Malaysia's market. Due to there being insufficient information regarding green purchase intentions and green behavior. Marketers and companies can use the findings to gain a better understanding of consumers' motivations to purchase green products. Therefore, sellers of green products and marketers can use it as a competitive advantage to increase green product sales. Also, it will help marketers and firms develop and improve green promotions to increase the number of green customers.

Secondly, universities play an essential role in promoting green products. Several empirical studies worldwide have explored students' intentions to purchase green products. For instance, studies on green buying intention were undertaken at Universiti Utara Malaysia by Sharaf et al. (2015) and Sharaf and Isa (2017). A similar study was conducted at Universiti Malaysia Sabah in 2014 by Lasuin and Ching. However, the research carried out in Malaysian private universities is limited. As a result, studies should be also conducted at private universities in Malaysia since they have a higher number of students and enrolment level than public universities. The term "young consumer" refers to those who were born between 1995 and 2012, they are members of Generation Z (Williams, 2010). Therefore, university students can be regarded as young consumers. The reason is that although college students' purchasing power is limited at present, they should understand the importance of sustainability of the environment and protecting the environment because they are educated (Choshaly, 2017). Second, it is expected that they will have some knowledge of environmental sustainability because they are educated. Thirdly, university students make their own purchasing decisions (Butt, 2017). To conclude, this research aims to better

understand the motivation of university students from different countries, which can benefit international and local companies by providing information to consumers regarding green products and motivating them to adopt green purchasing practices.

Therefore, it is necessary to do research, to remove the economic factors, climate change, and negative perception of green products, and what other factors will cause university students from different countries to buy green products.

1.6 Conclusion

In summary, environmental issues like climate change and environmental degradation are brought on by unsustainable consumerism. By using green goods, these issues can be lessened. However, the market response to green products has not been as positive as anticipated. This can be because people are discouraged from purchasing green products because of their high cost. As a result, this study aims to comprehend the variables influencing university students in private universities in Malaysia to have the purchase intention toward green products. The factors will be looked at: perceived behavioral control, subjective norms, attitudes, and environmental concerns.

CHAPTER 2: LITERATURE REVIEW

2.0 Introduction

The theory used in this study is covered in the first section of the paper. The second section reviews four independent factors (attitudes, perceived behavioral control, subjective norm, and environmental concern) and one dependent variable (green purchase intention). Third, the third portion discusses theoretical frameworks. The final section contains the formulation of the study's hypotheses.

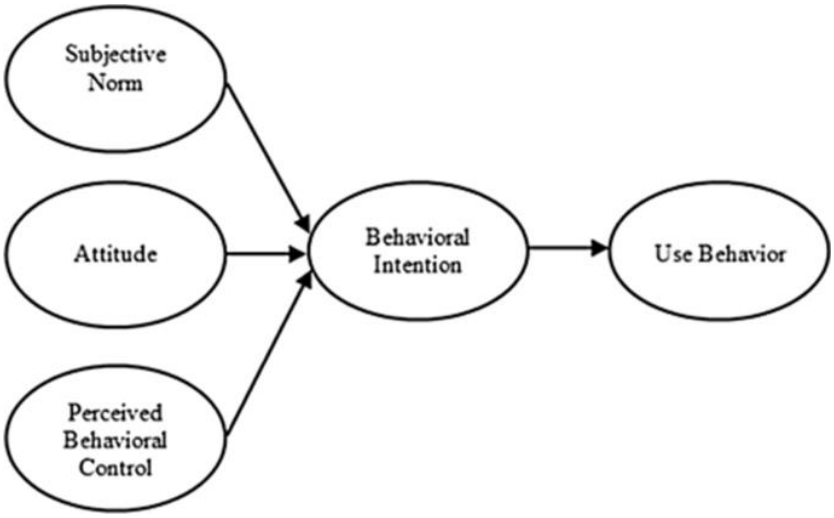
2.1 Underlying Theory

One of the most influential behavioral decision theories is the theory of planned behavior (TPB) (Ajzen, 1991). The theory of reasoned action (TRA) originated from Fishbein et al. 's (1975) theory of reasoned action, clarifies how social context, non-volitional influences, and individual characteristics affect intentions. If people behave rationally, the TRA assumes that the intention to carry out (or not carry out) a particular behavior determines that action shortly after the intention (Ajzen, 1985). While, TPB has been empirically proven to be effective (Ajzen, 1991) and has become a popular conceptual framework for studying human behavior. According to the TPB framework, attitude, subjective norm, and perceived behavioral control contribute to the formation of a 'behavioral intention'. Several studies have shown that the TPB accurately predicts many kinds of behavior (Chen & Hung, 2016). In predicting consumers' intentions to buy green products, TPB has proven to be useful (Auliandri et al., 2018; Santos et al., 2021; Prakash & Pathak, 2017; Yadav & Pathak, 2017). Therefore, this theory can be used as this theoretical framework to study the factors affecting universities student’s intentions to purchase green products.

However, there have been several studies suggesting that more factors should be added to the TPB (Karimy et al. 2015; Paul et al., 2016; Teo et al. 2016; Jing et al. 2016). It has been suggested that

environmental concerns must be added to the theory (Jaiswal & Kant, 2018). Therefore, environmental concerns will be added to the conceptual framework.

Figure 2.1: Theory of Planned Behaviour



Source: Ajzen (1991)

2.2 Concept of Green Products

Green products exhibit a reduced environmental footprint and cause less harm to the environment and the human body. Growing worries about pollution levels on a local and worldwide scale, climate change, garbage overflow, and natural resource depletion have led to the development of green products (Srivastava, 2007). The literature also uses the terms environmental products, sustainable products, and eco-products to describe green products (Sdrolia & Zarotiadis, 2018). In addition, over 50 definitions of green products exist. Environmental compatibility, environmental protection, environmental friendliness, environmental sustainability, decreased production waste, environment-friendly production, resource-conservation potential, recyclability, durability, toxic-free ingredients, less packaging, and public health protection, and low energy consumption have all been linked by researchers to green products.

One of the major issues facing all living creatures in our world today is global pollution. Hence, the companies designed the product to minimize the use of non-renewable resources, avoiding toxic materials used in the final product. A number of studies have shown that green products are less likely to contain hazardous compounds, in addition to being more recyclable and friendly to the environment (Azevedo et al., 2011). Furthermore, green products reduce greenhouse gas emissions, help with energy conservation, and cause little to no pollution and toxicity (Azevedo et al., 2011). Recycled paper, energy-saving lightbulbs, eco-friendly bags, and vehicles with low energy consumption are examples of green products. (Jaiswal & Kant, 2018; Joshi & Rahman, 2015; Lee, 2008).

2.3 Review of Variables

2.3.1 Green Purchase Intention

It is believed by Ajzen (1991) that an individual's purchase intention is influenced by subjective norms (beliefs about right and wrong), behavioral patterns (beliefs about the outcome of the behavior), and perceived behavioral control (beliefs about whether they can control whether they engage in certain behaviors). In the TPB framework, intentions are a central concept. Generally, it refers to the intention and motivation to perform a particular behavior (Patch et al. 2005). Green purchasing intention, as defined by Rashid (2009), is the possibility that consumers may prefer to buy green products over conventional ones. It can also be characterized as internal desire and readiness of the consumer to buy green products. It influences consumers' choices to purchase green goods favorably (Usmani et al., 2015). believed that consumers may be willing to purchase green products if they have green purchase intentions (Chen & Chang 2012). Furthermore, as stated by Newberry et al. (2003), purchasing intentions are common tools for predicting purchase behavior. Thus, to measure current and future green product purchases, consumers' green purchase intentions are a key variable.

2.3.2 Attitude

It is frequently assumed in social psychology literature that attitude causes human behavior. The TRA and the TPB, state that attitude influences a person's performance (Arli et al., 2018). According to Ajzen (1991), attitude is one of the three core concepts of planned behavior and defines an attitude as an objective feeling about something, someone, or something else. An individual's attitudes are their opinions about how well they perform a particular behavior. Green buy attitudes are defined by Chen and Deng (2016) as the extent to which individuals place a positive or negative value on green purchase behaviour. Sun et al. (2021) recognizes that a major factor in promoting green purchase behaviour is customer attitudes. Consumer attitudes may reveal how they perceive a product. Previous research has shown that attitudes were associated with behavioral intentions and were regarded as crucial variables for predicting purchase intentions.

Khoiriyah and Toro (2018) stated that people will form a positive attitude toward green products when they believe they are healthier and more environmentally friendly. Additionally, despite green products being costly as compared to conventional products, people who have a positive attitude toward green products will induce them to have high purchase intentions.

Thus, this study will find out whether Malaysian and international students' concern about environmental problems can directly affect their decision to buy green products.

2.3.3 Subjective Norm

In social psychology, the idea of social pressure that drives someone to engage in or refrain from engaging in specific behaviours is known as a subjective norm. (Ajzen, 1991). Normative beliefs regarding the expectations of significant referents are assumed to determine subjective norms. These referents include relatives, family members, colleagues, and friends. Researchers have shown that the viewpoints of friends, family, and other influential groups play a crucial role in shaping individuals' choices when it comes to consumption decisions. (Kai & Haokai, 2016). As

a result, consumers tend to act in accordance with group beliefs. To some extent, subjective norms can predict behavior intention (Chen & Deng, 2016).

Some researchers found that consumer purchase intention towards green products are not directly influenced by subjective norms. (Varshneya et. al, 2017). However, when consumers are uncertain of a specific conduct's outcomes, they may seek out support from others (Bratt, 1999). For example, they may seek opinions from others before purchasing anything they need clarification on. Thus, positive evaluations and word-of-mouth recommendations from other people who are important to them might affect the mindsets and intentions of other people. Furthermore, the values of a consumer's family and friends can influence the consumption patterns of green products (Almohammadi & Abdulghaffar, 2022).

2.3.4 Perceived Behavioral Control

Perceived behavioral control refers to the degree of difficulty experienced by a person when carrying out a specific activity, and it reflects their perception of the elements that help or hinder that particular action (Johnson & Hall, 2005). In support of the previous statement, the research of Ajzen, (1991) stated that individual perception of the degree of difficulty in carrying out a specific activity is defined as perceived behavioral control. It is argued that external and internal perceived behavioral control determine the formation of favorable or unfavorable perceptions of a specific behavior. Besides, according to Fishbein and Ajzen (2010), people are inclined to engage in simpler behaviors rather than complex behaviors. In short, if making product recommendations according to customer's unique needs and preferences will make the decision-making process easier, people will be willing to buy a product. For instance, recommending the energy-efficient appliance that best fits a customer's needs might make the decision-making process easier.

Moreover, Choi and Johnson (2019) stated individuals who have previously bought eco-friendly products may develop confidence in their capability to make future green purchases. This means that has experience on purchases green products increased confidence in making decisions

enhances behavioral control. As a result, they are more inclined to state a stronger intention to purchase green goods.

The influence of perceived behavioral control on green purchase intentions has been studied, and researchers have concluded that perceived behavioral control significantly influences green purchase intentions in developing countries such as Vietnam (Nguyen et al., 2016), Malaysia (Mamun, Fazal, et al., 2018; Mamun, Mohamad, et al., 2018), Indonesia (Arli & Tjiptono, 2017), Taiwan (Hsu et al., 2017), and Pakistan (Moon et al., 2019), and India (Joshi et al., 2019). A study by Yadav and Pathak (2017) concluded that PBC was suitable for analyzing intentions to purchase green products.

2.3.5 Environmental Concern

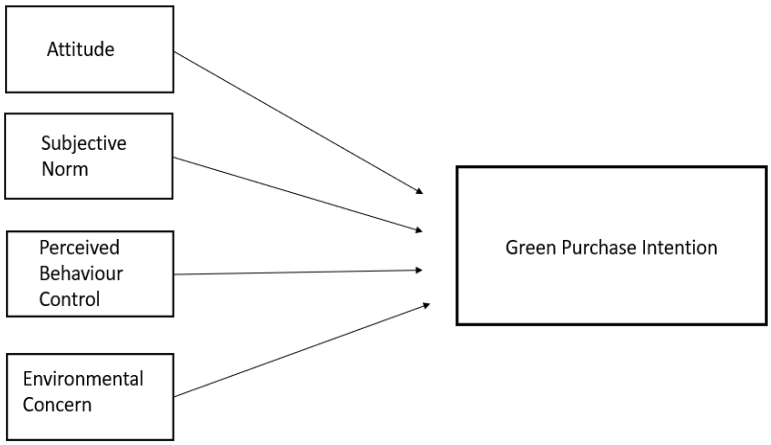
Environmental concern is defined by Hines et al. (1987) as an awareness of environmental problems. The concept of environmental concern has been described by Dunlap and Robert (2002) as the people aware the environmental problems and the support for eco-friendly solutions. Lin & Huang (2012) describe environmental concern as how a person feels about their environment and their apprehensions towards it. In addition, individual attempts to protect the environment are sometimes referred to as environmental concern (Setyawan, et al., 2018). Several studies stated that environmental concern directly influences the intention to purchase green products (Park & Li, 2020; Goh & Balaji, 2016; Prakash & Pathak, 2017; Yadav & Pathak 2017). Customers with strong environmental concerns and positive attitude toward green products are likely to have elevated levels of intention to make purchases (Khaola et al., 2014). Jaiswal & Kant (2018) describe environmental concern as young generations are concerned about environmental sustainability and feel that it is their personal duty to protect the environment by avoiding things that harm the environment when making purchases.

In addition, their interest and desire to buy green products are related to people's concern for the environment (Biswas et al., 2000; Mainieri et al., 1997). Therefore, environmental concern is a

crucial factor for marketers, makes it simple for them to reach environmentally conscientious consumers. (Mostafa, 2007).

2.4 Conceptual Framework

Figure 2.2: Conceptual Framework



Source: Developed for the research.

2.5 Hypothesis Development

2.5.1 Attitude

The attitude of consumers toward green products has been examined in some studies in developing countries, including Malaysia (Mamun, Fazal, et al., 2018), India (Jain & Agarwal, 2017), China (Bhutto et al., 2019) and Indonesia (Khoiriyah & Toro, 2018) and results indicated a significant relationship between green purchase intentions and attitudes toward green products. Moreover, Chaudhary and Bisai (2018) found that there is a considerable correlation between university

students' intention to purchase green products and their attitude towards green products. This study is therefore based on the following hypothesis:

However, the attitudes of consumers toward green products did not significantly influence green purchase intentions. There are studies that have shown insignificant results in developing countries, as China (Xu, Hua, Wang & Xu, 2020; Xu, Wang & Yu, 2020) and Indonesia (Setyawan et al., 2018). Due to inconsistent results, there is a need to investigate this issue in Malaysia. This study is therefore based on the following hypothesis:

*H*1: There is a positive relationship between attitude and green purchase intention.

2.5.2 Subjective Norm

There is evidence that suggests that subjective norms can be used to accurately predict consumer intention to buy green products (Taylor & Cosenza, 2002). Subjective norms have been found to significantly influence the purchase intention toward green products in developing nations like India (Sreen et al., 2018), Malaysia (Teng et al., 2018), and Indonesia (Arli et al., 2018), Besides developing countries such as the United States, subjective norms also significantly affect green purchase intentions (Choi & Johnson, 2019). Therefore, subjective norms could be used to predict behavioral intentions to a certain extent because individuals are more likely to act in accordance with group beliefs.

Kumar. (2021) stated that people are more inclined to buy green products when subjective norms are higher. The research indicated that family, friends, and coworkers significantly influence a consumer's decision to buy green goods. Furthermore, Shukla (2019) pointed out that people's decisions to purchase green products were significantly influenced by subjective standards.

There are some studies have examined the impact of PBC on green purchase intentions and concluded that PBC influences green purchase intentions significantly in developing countries such as India (Joshi, Shoerey & Gandhi, 2019), Indonesia (Arli et al., 2018), Vietnam (Nguyen et

al., 2016) Pakistan (Moon et al., 2019), and Taiwan (Hsu et al., 2017),The results were insignificant in developed nations such as the United States as well (Choi & Johnson, 2019). This study is therefore based on the following hypothesis:

*H*2: There is a positive relationship between subjective norms and green purchase intention.

2.5.3 Perceived Behavioral Control

Perceived behavioral control refers to the belief that an action is difficult or easy to perform (Arli et al., 2018). Thus, consumers will have higher perceived behavioral control when they perceive that green products are easily accessible and low-cost. People's belief that they can regulate and perform a behavior affects their purchase intention and behavior (Baker et al., 2007). When consumers feel that they have more control over the situation, their purchasing intentions are more likely to be formed.

However, in previous studies examining the impact of perceptions of behavioral control on green purchase intention, mixed results were found. Researchers also found that perceived behavioral control does not significantly affect green product purchasing intentions in developing countries like Nigeria (Karatu & Mat, 2015), Malaysia (Khor & Hazen, 2017), and Iran (Yazdanpanah & Forouzani, 2015), The results were insignificant in developed nations such as the United States as well (Choi & Johnson, 2019). This study is therefore based on the following hypothesis:

*H*3: There is a positive relationship between perceived behavioral control and green purchase intention.

2.5.4 Environmental Concern

Previous research looked at the relationship between environmental concerns and purchase intention toward green products. In developing nations like Thailand (Maichum et al., 2016) India (Prakash & Pathak, 2017), and Malaysia (Goh & Balaji, 2016), Studies have indicated that

environmental concerns have a significant impact on people's intentions to buy green products. Likewise, He et al. (2018) noted that consumers who care more about the environment are less likely to be affected by the cost of green products, will increase their propensity to buy green products. Thus, environmental concern is a key component of environmental research (Choshaly, 2017; Yadav & Pathak, 2017) and it is frequently used to gauge a person's level of care for environmental issues (Jaiswal & Kant, 2018). These studies showed a higher level of environmental concern leads to an increase in consumers' green purchase intentions.

However, some researchers have come to contradictory conclusions regarding the impact of environmental concerns on the purchase intention toward green products. For instance, in developing nations such as Indonesia (Setyawan et al., 2018), Malaysia (Choshaly, 2017), and India (Chaudhary & Bisai, 2018), environmental concerns were found to have little impact on the intention to purchase green products. Furthermore, in developed nations like the United States, found that environmental concerns have only a minimal influence on green purchase intentions (Choi & Johnson, 2019). There is a need to investigate this issue in the context of Malaysian working consumers' green purchase behavior. The results were insignificant in developed nations like the United States (Choi & Johnson, 2019) as well. This study is therefore based on the following hypothesis:

*H*4: There is a positive relationship between environmental concern and green purchase intention.

2.6 Conclusion

In conclusion, chapter 2 reviews the literature on the dependent variable and the independent variables. Moreover, the study's conceptual framework and hypotheses are developed.

CHAPTER 3: METHODOLOGY

3.0 Introduction

The objectives of this chapter were the research methods to collect and analyze the data. An explanation of study's methodology was also included in this chapter. The sampling technique, method of collecting data, pilot testing, and questionnaire design were all covered in this chapter. The data were analyzed using reliability analysis,

3.1 Research Design

Research design, according to Zikmund et al. (2013), is "a detailed proposal to solve a research problem." Qualitative research and quantitative research are two types of research design.

3.1.1 Quantitative Research

Quantitative research methods involve collecting numerical data and analyzing it based on statistical methods, which is appropriate since this study aims to determine the relationship between the dependent and independent variables. The quantitative approach involves quantifying and analysing variables to achieve results. The process involves using numerical data and statistical tools to analyze the data to answer questions such as when, who, what, where, and how (Apuke, 2017). Typically, online surveys, polls, and questionnaires are used to collect information from existing and potential customers. In the social sciences, quantitative outcome research is commonly used to study quantities using mathematical frameworks and theories. Typically, data collection is conducted on larger samples that represent the entire population. To research the factors affecting green purchase intention, Khoiriyah and Toro (2018), Khor and Hazen (2017), and Teng et al. (2018) adopted this research design. Therefore, quantitative research will be used in this study.

3.1.2 Descriptive Research

According to (Cant & Van Heerden, 2013; Burns & Bush, 2012) descriptive research provides context for events and provides answers to questions such who, what, when, where, and why. It seeks to get an accurate and thorough account of a circumstance (Cant & Van Heerden 2013). The primary objective of the descriptive research design in quantitative research is to examine the relationships between various variables. To do this, researchers must precisely define the population and the measurement, gather data, and evaluate the opinions and behaviours of the sample (Yang et al. 2014).

3.2 Sampling Design

3.2.1 Target population

The target population refers to the individuals for whom data is analyzed and interpreted. The objective of this study is to investigate the factors that can affect purchase intention toward green products among Malaysian and International students at private universities in Malaysia. Thus, the target population in this research study is Malaysian and International students in Malaysia. The reason is that although college students' purchasing power is limited at present, they should understand the importance of sustainability of the environment and protecting the environment because they are educated. (Choshaly, 2017).

3.2.2 Sampling Frame and Sampling Location

Sampling frames describe the actual group of individuals from which a sample is taken. In a random sample, each individual within the sample frame should have an equal chance of being selected. Sampling frames should accurately reflect the individuals in the sample (Villegas, 2023).

The location where data are gathered is known as the sample location. Since the target population is all students including international and local students in private universities Malaysia, the sampling location selected is private universities.

3.2.3 Sampling Technique

Sampling can be done using either probability or non-probability methods, according to Zikmund et al. (2013). As a general rule, probability sampling refers to a circumstance where every single person in the target population is random selected as a sample subject for the study. On the other hand, the possibility of a sample being selected in advance is known as non-probability sampling.

Non-probability sampling can be classified into four categories: convenience sampling, quota sampling, snowball sampling, and judgmental sampling. (Zikmund, 2003). As a convenience sampling technique is used in this study because it is a cheap and quick way to collect data. When the researcher is collecting data, participants can be chosen for the sample based only on proximity.

3.2.4 Sampling size

Since a bigger sample size can result in more reliable results, Roscoe (1975) advised that sample size should be greater than 30 and less than 500 respondents. Based on GPowered 3.1, the minimum sample size should be 129, thus the sample size for this study should greater than this number. A total of 333 questionnaires were send to the target participants. According to Lackey and Wingate (1998). 10% of the total study size is typically enough for pre-test research. Therefore, 30 sets of questionnaires will be used as part of the pre-test to guarantee the validity and suitability of the questionnaire. After data screening, 299 out of 333 respondents can be used. Thus, only 299 surveys in total will be used for the actual data analysis.

3.3 Data Collection Methods

To collect information, the study uses both primary. To test the hypotheses, primary data was required and was gathered using a survey.

3.3.1 Primary Data

A primary data set is a collection of unknown data for a specific purpose or to solve a specific problem (Sekaran & Bougie, 2013). Primary data can be collected using questionnaires, surveys, and government documents. We collect primary data and information relevant to this topic from the target respondents by distributing questionnaires. Compared to other methods like observation and interview, Zikmund et al. (2013) claim that the questionnaire provides the respondent with a variety of responses for every question, making it more reliable. A questionnaire was used to collect data for this study because it is less time-consuming and a cost-effective way to collect data from respondents (Zikmund et al., 2013).

3.4 Research Instrument

3.4.1 Questionnaire Design

This research was conducted through a quantitative study using the survey method. As the most widely used tool for collecting primary data, the questionnaire was used to provide a broad perspective (Cant & Van Heerden, 2013). According to McDaniel and Roger (2010), a questionnaire is a set of questions used to collect the data needed to accomplish the study's goals. It also serves as a formal framework for interviewing respondents. In this study, the online questionnaires, Google Forms is used. In order to investigate the variables influencing the intention to make green purchases (Chen & Deng; 2016; Choshaly,2017; Iyer et al.; 2016) all used the online survey.

The researcher must take into account the question's nature when creating questionnaires, such as whether it is open-ended or closed-ended (Cant & Van Heerden, 2013). The questionnaire contained both closed-ended and open-ended questions. It was important to make sure that the respondents could easily understand the questionnaire, simple English language vocabulary was used, and straightforward, unambiguous, and succinct question construction was used.

A set of questionnaires should include a cover letter, demographic information, influencing variables, information on green purchasing behavior, and a closing statement. Firstly, the survey began with an opening letter outlining the aim of the research study, provided the necessary contact information for further inquiries, and appreciated their participation. Besides, instructions and assurances of confidentiality were given to all responders at the start of the questionnaire. All participants agreed to an informed consent form stating that they were volunteering to take part in the survey.

The questionnaire is divided into three sections. The respondents are required to answer questions in sections A (demographic information), section B (green purchase intention), section C (factors affecting green purchase intention). In section A, respondents must fill out that request for their demographic information. This section consists of four questions which are age, education level, nationality, and how much money is spent on green products.

In sections B and C, respondents are required to answer all the questions regarding the constructs. All constructs in sections B and C are evaluated using five-point Likert scales. The questionnaire used a five (5) -point Likert scale (Strongly Disagree =1 , Disagree = 2, Neutral =3, Agree =4, and Strongly Agree = 5), and respondents were asked to express their degree of agreement or disagreement with these statements. Five-point Likert scales, according to Babakus and Mangold (1992), are thought to lessen questionnaire respondent annoyance. As a result, the scales improve data quality and target respondents' response rates.

3.4.2 Pilot-Test

The purpose of a pilot test is to test the questionnaire on a small sample of respondents to detect and eliminate potential problems (Malhotra, 2010). It is therefore usually advised to do a pilot test to determine potential issues from a small sample of the targeted respondents before a larger test is carried out. Problems or concerns raised by respondents regarding the questionnaire were addressed, thereby decreasing errors and enhancing validity and reliability.

According to Lackey and Wingate (1998), a pilot test is generally considered sufficient with a sample size of 10% of the overall research population. To ensure clarity and accurate responses, thirty sets of questionnaires were distributed to the respondents for pilot testing. After distributing the questionnaire, there is some respondent's feedback that they do not understand what green products mean. Therefore, the questionnaire needs to be improved by adding the definition and examples of green products.

Table 3.1: Reliability and Validity Result of Pilot Test

	Composite Reliability	Average Variance Extract
A	0.874	0.691
EC	0.903	0.620
GPI	0.874	0.684
PBC	0.907	0.718
SN	0.866	0.702

Source: Developed for the research.

3.5 Constructs Measurement

A construct measurement is crucial to maintaining the validity and reliability of the results and findings in this study.

3.5.1 Scale of Measurement

By collecting all the information, the researcher will be able to respond to or resolve the current problem in the business. In this study, the researcher will measure the questionnaire according to three measurement scales. The three measurement scales used in the questionnaire are nominal, ordinal, and interval scale.

3.5.1.2 Nominal Scale

Zikmund (2003) describes nominal scale as the simplest type of scale. Researcher can allocate subjects to categories or groups using a nominal scale. Due to the fact that the scale doesn't represent quantities or number. On a nominal scale, data are categorized into different groups without ranking. This scale is used in Section A of the questionnaire such as the nationality and education level.

3.5.1.2 Ordinal Scale

Compared to a nominal scale, an ordinal scale is more complex (MacKenzie, 2013). The ordinal scale can be used not only to categorize the data but also to rank it (Mistik et al., 2016). Mistik et al. (2016) note that ordinal scales don't provide much information about the difference between two measurement points. As a consequence, ordinal scales are not able to have equal intervals between consecutive measurement points (MacKenzie, 2013). Thus, this scale is used in Section A of the questionnaire such as the age group, and monthly spent.

3.5.1.3 Interval Scale

An interval scale, according to Zikmund (2003), is a numerical scale that divides this ordered arrangement of things into equal intervals while also arranging objects according to their size. The interval scale is best for measuring opinions. Variables can be used to rank data, but there is no precise difference between measures. Thus, this scale is used in sections B and C of the questionnaire, both independent and dependent variables are analyzed using the 5- 5-point Likert scale developed by Rensis Liker rank from "Strongly Agree," "Agree," "Neutral," "Disagree," and "Strongly Disagree.".

3.5.2 Origin of Construct

Table 3.2: Questions Asked in Questionnaire

Dependent Variable	Questions	Sources
Green Purchase Intention (GPI)	1. I will purchase green products for personal use. 2. I am willing to purchase green products for personal use. 3. I will make an effort to purchase green products. 4. I will purchase green products in my next purchase.	Yadav and Pathak (2017)

Independent Variable	Questions	Source
Attitude	1. Between green and conventional products, I prefer green ones. 2. I think that purchasing green products is favorable. 3. I think that purchasing green products is a good idea. 4. I think green products that can reduce environmental damage are important.	Mamun, Mohamad, et al. (2018)
Subjective Norm	1. Most people who are important to me think that I should purchase green products. 2. Most people who are important to me would support me purchasing green products 3. My family members think I ought to be purchasing green products. 4. My friends think I ought to be purchasing green products.	(Arli et al., 2018)
Perceived Behaviour Control	1. I believe I have the ability to purchase green products. 2. I have resources to purchase green products.	Paul et al. (2016)

	3. I have time to purchase green products. 4. Green products are generally available in the shops where I usually do my shopping.	
Environmental Concern	1. Major social changes are necessary to protect the natural environment. 2. I would be willing to reduce my consumption to help protect the environment. 3. Anti-pollution laws should be enforced more strongly. 4.I am concerned about the world's current natural (environmental) situation.	Chaudhary and Bisai (2018)

Source: Developed for the research.

3.6 Data Analysis

After data processing, the hypotheses constructed in this study are examined to see if they are supported or rejected (Sekaran & Bougie, 2016). Through this process, the research questions can be answered (Sekaran & Bougie, 2016). Statistical software called SmartPLS 4.0 is used to assess the data in this study. According to Hair et al. (2019), the PLS-SEM has several advantages,

including flexibility when working with non-normal data and small sample sizes as well as large sample sizes.

3.6.1 Descriptive Analysis

Zikmund (2003) describes descriptive analysis as the process of transforming raw data into a form that helps the researcher interpret and better understand it. Hair et al. (2006) defines descriptive analysis as a scientific method for identifying and describing the characteristics of a target population. To summarize data characteristics, descriptive statistics are used. As part of the descriptive analysis, tables are generated for measures of distribution shape, central tendency, and dispersion (Aldrich, 2019). Furthermore, frequency statistics are also included in the descriptive analysis (Larson, 2006).

3.6.2 Measurement Model

In the measurement model or inner model, all confirmed construct items were examined to determine whether they contributed significantly to the proposed mode. As part of the measurement model, reliability and validity will be assessed.

3.6.2.1 Reliability Test

To determine if instruments are consistent and stable with concepts being measured, a reliability test should be conducted (Sekaran, 2003). According to Churchill (1979), a reliability test is a good way to assess an instrument's quality.

It is therefore important to use reliable scales. An outer loading represents the paths between a factor and its representative indicator variable in reflective models and it is one of the most important indicators of reliability. Data loadings in SmartPLS vary from 0 to 1 since they are automatically standardized. Outer loading should be higher than 0.708 (Hair et al., 2014). There

will be an increase in composite reliability and average variance extracted (AVE) if the indicator with outer loadings between 0.40 and 0.70 is removed. In contrast, indicators with outer loadings below 0.40 should be removed.

Internal consistency is another most important indicator of reliability. It refers to how much each item on a scale assesses the same underlying characteristic (Hair et al., 2014). In many studies, Cronbach's alpha is used to determine a construct's reliability. Basically, this is the most basic method of determining the reliability of a research study (Churchill, 1979). According to Cronbach's alpha, all items are equally reliable (Hair et al., 2014). This study, however, recommends using the PLS-SEM method, which ranks items according to their reliability. As Cronbach's alpha has limitations, this study uses composite reliability as a measure of internal consistency. It ranges from zero to one.

If composite reliability is less than 0.6, the scales have poor reliability. When it is greater than 0.6 but less than 0.7, the scales are considered fair when they are reliable. In addition, the scales have good reliability when composite reliability is greater or equal to 0.7, but less than 0.8 (Hair et al., 2014). Furthermore, the scales are considered very reliable when Composite Reliability is less than 0.95 but greater than 0.8. On the other side, it is not desirable to have a value higher than 0.90, is undesirable (Nunnally & Bernstein, 1994). Thus, composite reliability should be at least 0.6 to ensure the reliability of a scale.

3.6.2.2 Validity Test

In terms of convergence validity, it is an assessment of how closely multiple factors of the same construct correlate with each other. To establish convergent validity, composite reliability, factor loading, and average variance extracted are considered (Hair et al., 2014). AVE extracted of 0.5 or higher is a good (Hair et al. 2010). Nonetheless, if the AVE is less than 0.5, there are errors in the measurements (Hair et al., 2014). Thus, all AVE values must be greater than 0.50, to indicate the convergence validity of the construct.

Furthermore, discriminant validity refers to how empirical constructs differ from one another. In addition, it measures the degree of overlap between the overlapping constructs (Hair et al., 2014). Heterotrait-Monotrait ratio (HTMT) can be used to assess discriminant validity. HTMTs are a new technique for testing discriminant validity used when two constructs have HTMT ratios below 0.9 (Hair et al., 2018),

3.6.3 Structural Model

Following the validation of structural model is assessed. The prediction power and relationships between the model's elements are examined as part of the intern model process. (Hair et al. 2018). An internal model is assessed by evaluating the hypothesized relationship.

3.6.3.1 Collinearity Test

In terms of convergence validity, it is an assessment of how closely multiple factors of the same construct correlate with each other. In order to establish convergent validity, average variance extracted is taken into account (Hair et al., 2014). A variance inflation factor (VIF) can be a useful way to identify multicollinearity issues (Ting et al., 2019). The VIF values should be below the value of 4.0 (Team, 2023).

3.6.3.2 Path Coefficients

The path coefficient assesses the strength and importance of the proposed relationships for the latent component. Estimates are obtained with structural model associations with values between positive 1 and negative 1, a coefficient nearer to positive 1 suggesting a strong positive link, and a coefficient nearer to negative 1 indicating a strong negative relationship (Hair et al., 2016)

3.6.3.3 Coefficient of Determination (R^2)

The R^2value indicates how the independent variable (exogenous construct) affects the dependent variable (endogenous latent variable). The variance explained by all exogenous constructions linked to endogenous constructions is represented by the coefficient. According to studies, R^2 values below 0.2 are considered weak in research. Cohen (1988) suggested the following R2 values for endogenous latent variables: 0.02 (weak), 0.13 (moderate), 0.26 (substantial).

3.6.3.4 Effect Size (f^2)

Variables in a structural model may be affected by a variety of other variables as well. It is possible for the dependent variable to change if an independent variable is removed from the constructs. There is a change in the R-square of the model when an exogenous variable is removed, and this change is called the change in the F-square. Additionally, the size of the effect can range from very small (>=0.02) to medium (>=0.15) to large (>=0.35), as measured by the f-square (Cohen, 1988).

3.6.3.4 Model's Predictive Relevance: Q2

Using Q-square, we can determine whether a model has predictive relevance at all (a score of > 0 indicates a favorable model) (Hair et al. 2014). Having a Q-square greater than zero indicates that values have been recreated accurately when the model is predictively relevant. Hence, the model has predictive relevance when the Q2 is greater than 0 to be considered predictive.

3.6.4 Inferential Analysis

By analyzing observations and analyses of samples, inferential statistics are used to draw conclusions about a population. Hence, by using and analyzing the sample data of 299 private university students in Malaysia, it is possible to understand the purchase intention toward buying

green products in students in private universities. The p-value and t-test are to determine whether the hypothesis is accepted or rejected.

3.7 Conclusion

In summary, chapter three describes the study's methodology. A quantitative research study was conducted in this study. Pilot tests were conducted prior to the real test. By distributing questionnaires to 333 university students from private universities, primary data is collected and after data screen only 299 respondents will run the data. Once the data has been collected, it is processed. Next, both descriptive and inferential analyses are performed on the data.

CHAPTER 4: DATA ANALYSIS

4.0 Introduction

An analysis and interpretation of the data collected via the 299-respondent questionnaire will be presented in this chapter. There are three sections that will be covered in this chapter. The first section is a descriptive analysis of Section A, the demographic profile in the questionnaire and the results will be illustrated by tables and graphs. The second section will show the result of the measurement model and the structural model of the questionnaire constructs obtained using Smart PLS 4.0.. The third section will be an inferential analysis using an analysis of the results of p-values and t-tests from Smart PLS 4.0.

4.1 Descriptive Analysis

4.1.1 Respondent Demographic Profile

The 299 respondents are obtained for the demographic information (Section A) of the questionnaire are interpreted using descriptive analysis, the method used is frequency distribution. The method used for constructs (Section B and Section C) are central tendency.

4.1.1.1 Age Group

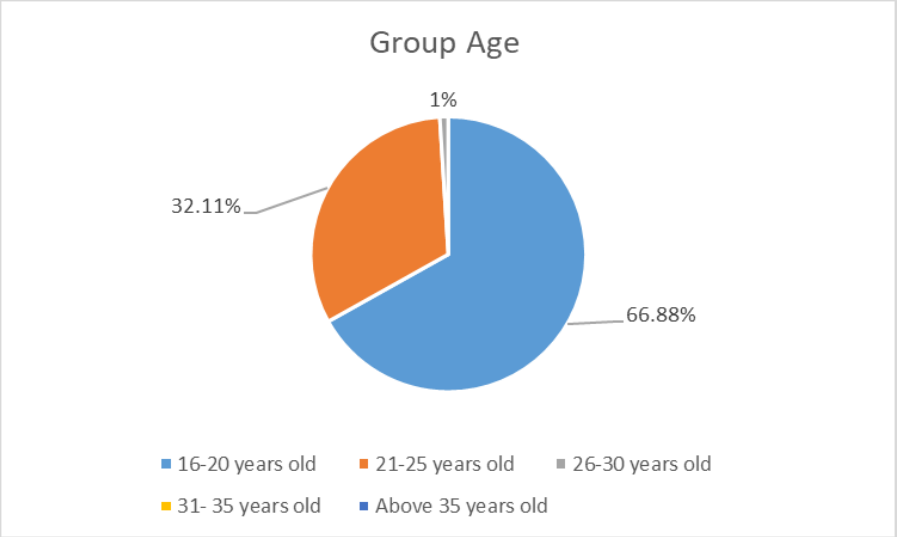
Table 4.1: Age Group

Age Group	Frequency	Percentage
16-20 years old	200	66.88%

21-25 years old	96	32.11%
26-30 years old	3	1%
31- 35 years old	0	0
Above 35 years old	0	0

Source: Developed for the research.

Figure 4.1: Group Age



Source: Developed for the research.

Firstly, the responses are categorised according on the age ranges to which they fall. Table 4.1 and Figure 4.1 show that 200 respondents, or 66.88% of the participants, are between the ages of 16 and 20. Then, 96 or 32.11% of the participants, are between the ages of 21 and 25. Finally, out of all the participants, there 3 or 1% of the participants are between the ages of 26 and 30. Moreover, none of the participants fell over above 31 years old.

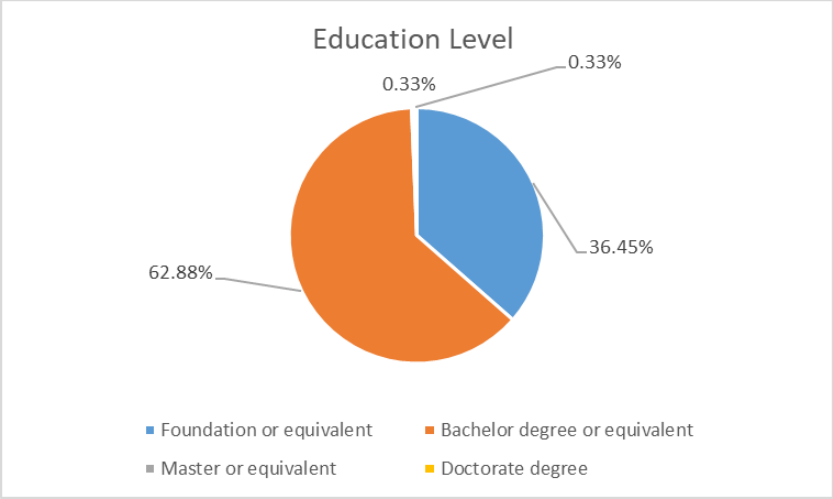
4.1.1.2 Education Level

Table 4.2: Education Level

Education Level	Frequency	Percentage
Foundation or equivalent	109	36.45%
Bachelor's degree or equivalent	188	62.88%
Master or equivalent	1	0.33%
Doctoral degree	1	0.33%

Source: Developed for the research.

Figure 4.2: Education Level



Source: Developed for the research.

Furthermore, the responses are classified according to the education level that they are pursuing. As shown in Table 4.2 and Figure 4.2, 62.88 % or 188 of the participants are perusing bachelor's

degree. Then, 36.45%, or 109 of them, are pursuing foundation or equivalent. Finally, 2 participants are pursuing master's degree and doctoral degree respectively.

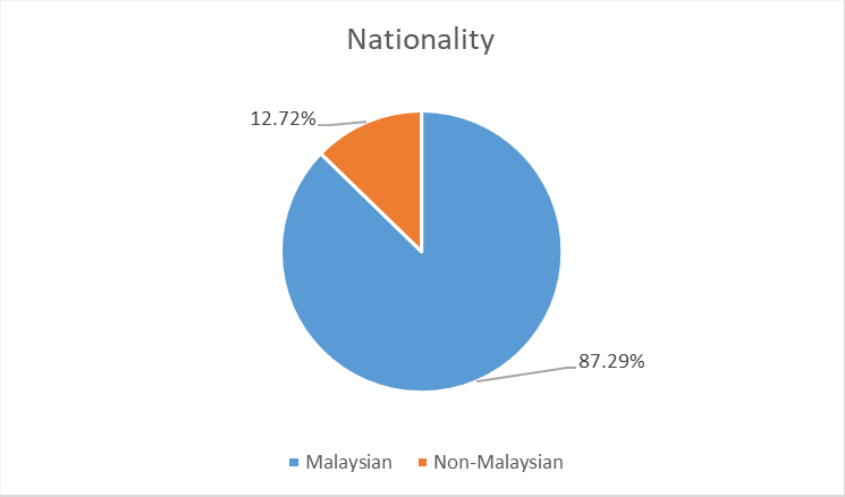
4.1.1.3 Nationality

Table 4.3: Nationality

Nationality	Frequency	Percentage
Malaysian	261	87.29%
Non-Malaysian	38	12.72%

Source: Developed for the research.

Figure 4.3: Nationality



Source: Developed for the research.

According to table 4.3 and figure 4.3, 261 or 87.29% is Malaysian and 38 or 12.72% is non-Malaysian.

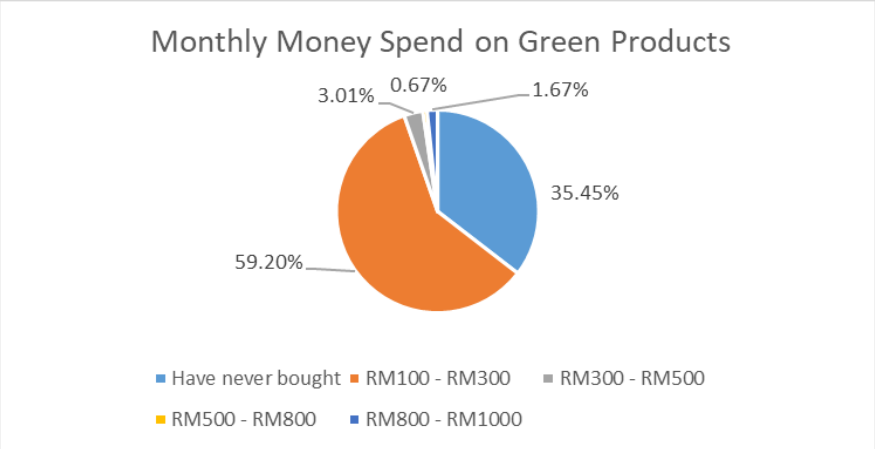
4.1.1.4 Monthly Money Spend on Green Products

Table 4.4: Monthly Money Spend on Green Products

Monthly Money Spend on Green Products	Frequency	Percentage
Have never bought a green product	106	35.45%
RM100 - RM300	177	59.20%
RM300 - RM500	9	3.01%
RM500 - RM800	2	0.67%
RM800 - RM1000	5	1.67%

Source: Developed for the research.

Figure 4.4 Money Spend on Green Products



Source: Developed for the research.

Lastly, table 4.4 and figure 4.4 show that 177 or 59.2% of the participants have spent between RM100 - RM300 on the green products monthly. 9 or 3.01% of the participants have spent between RM300 - RM500 on the green products monthly. 5 or 1.67% of the participants have spent between RM800 - RM1000 and 2 or 0.67% of the participants have spent between RM500 - RM800. However, there are 106 or 35.45% of participants answered never bought green product before.

4.1.2 Central Tendencies Measurement of Construct

4.1.2.1 Green Purchase Intention

Table 4.5: Central Tendencies Measurement of Green Purchase Intention

Questions	Statement	Sample Size, N	Mean	Standard Deviation
GPI1	I will purchase green products for personal use.	299	0.891	0.016
GPI2	I am willing to purchase green products for personal use.	299	0.883	0.016
GPI3	I will make an effort to purchase	299	0.884	0.016

	green products.			
GPI4	I will purchase green products in my next purchase.	299	0.867	0.02

Source: Developed for the research.

First, statements related to green purchase intentions are analysed. The table 4.5 above shows that, GPI1 holds the highest mean value of 0.891, followed by that is GPI3, second highest mean of 0.884. The third highest mean is GPI2 which has a mean value of 0.883, and the smallest mean is GPI4, which has a mean value of 0.867. In addition, all the statements except GPI4 have a standard deviation of 0.016, while GPI4 has a standard deviation of 0.02.

4.1.2.2 Attitude

Table 4.6: Central Tendencies Measurement of Attitude

Questions	Statement	Sample Size, N	Mean	Standard Deviation
A1	Between green and convention products, I prefer green one.	299	0.834	0.022
A2	I think that purchasing green products is	299	0.886	0.016

	favourable.			
A3	I think that purchasing green products is a good idea.	299	0.922	0.011
A4	I think green products that can reduce environmental damage are important.	299	0.835	0.024

Source: Developed for the research.

Secondly, statements related to attitude are analysed. The table 4.6 indicates that A3 holds the highest mean value of 0.922, followed by that is A2, second highest mean of 0.886. The third highest mean is A4 which has a mean value of 0.835. The A1 has the smallest mean which has mean value of 0.867. However, the highest standard deviation, 0.024, is seen in A4. A1, with 0.022, is the second highest, and A2, with 0.11, is the third highest. A3 has the least standard deviation, at 0.011.

4.1.2.3 Subjective Norm

Table 4.7: Central Tendencies Measurement of Subjective Norm

Questions	Statement	Sample Size, N	Mean	Standard Deviation

SN1	Most people who are important to me think that I should purchase green products.	299	0.873	0.018
SN2	Most people who are important to me would support me purchasing green products	299	0.857	0.017
SN3	My family members think I ought to be purchasing green products.	299	0.89	0.018
SN4	My friends think I ought to be purchasing green products.	299	0.897	0.014

Source: Developed for the research.

Thirdly, statements related to subjective norms are analysed. The table 4.7 above shows that SN4 holds the highest mean value of 0.897, follow by that is SN3, second highest mean of 0.89. The third highest mean is SN1 which has the mean value of 0.873. The SN2 has the smallest mean which has mean value of 0.857. Although, SN4 has highest mean value, but it has the lowest standard deviation, which is 0.014. has the highest standard deviation, which is 0.024. The second highest of standard deviation is SN1 and SN3, which have 0.018. Follow by that is SN2, which has standard deviation of 0.017.

4.1.2.4 Perceived Behavioral Control

Table 4.8: Central Tendencies Measurement of Perceived Behavioral Control

Questions	Statement	Sample Size, N	Mean	Standard Deviation
PBC1	I believe I have the ability to purchase green products.	299	0.857	0.023
PBC2	I have resources to purchase green products.	299	0.883	0.016
PBC3	I have time to purchase green products.	299	0.859	0.023
PBC4	Green products are generally available in the shops where I usually do my shopping	299	0.775	0.037

Source: Developed for the research.

Fourthly, statements related to perceived behavioral control are analyzed. According to the table 4.8 above, PBC2 holds the highest mean value of 0.883, follow by that is PBC3, second highest mean of 0.859. The third highest mean is PBC1 which has the mean value of 0.857. The PBC4 has the smallest mean which has mean value of 0.775. Despite, PBC2 has highest mean value, but it has the lowest standard deviation, which is 0.016. Furthermore, PBC4 has the largest standard deviation, which is 0.037. Follow by that is PBC1 and PBC3, which have same standard deviation of 0.023.

4.1.2.5 Environmental Concern

Table 4.9: Central Tendencies Measurement of Environmental Concern

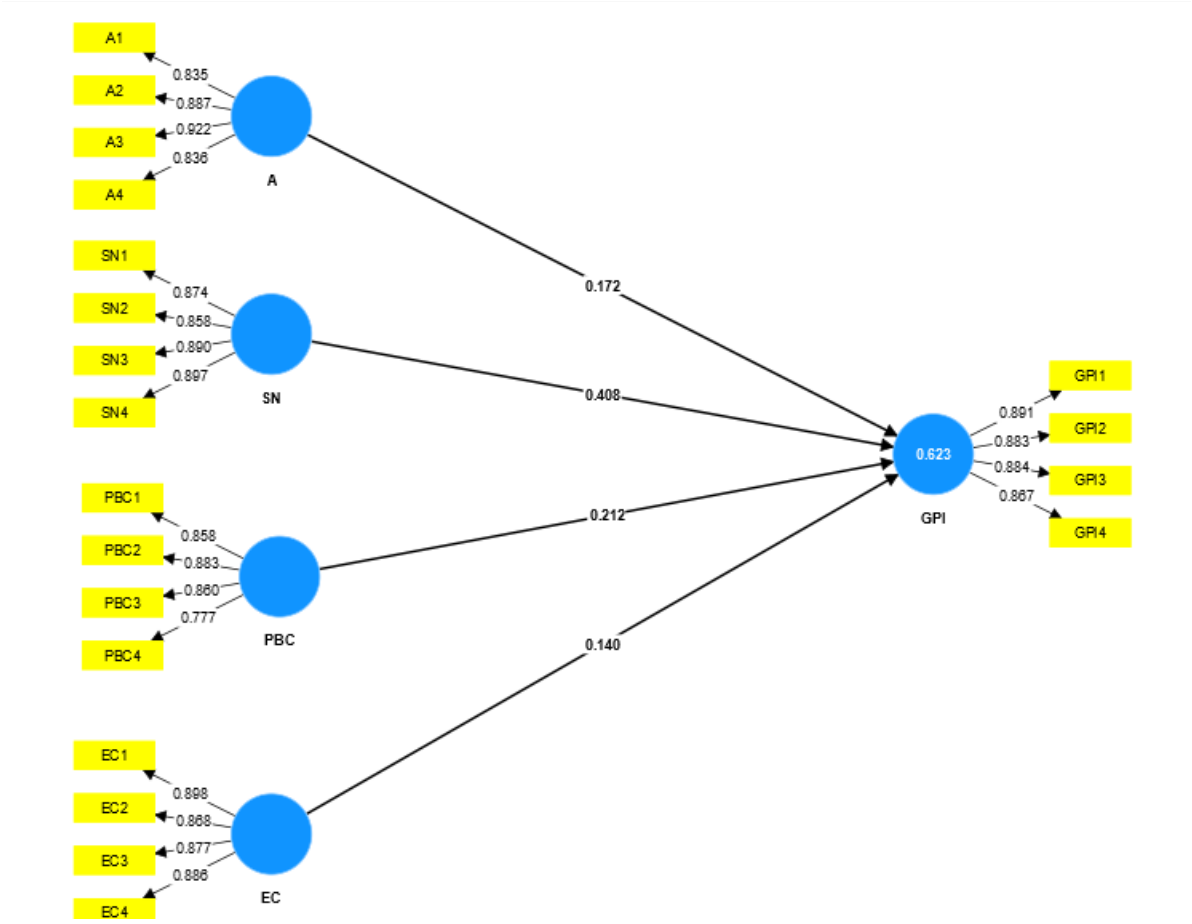
Questions	Statement	Sample Size, N	Mean	Standard Deviation
EC1	Major social changes are necessary to protect the natural environment.	299	0.898	0.013
EC2	I would be willing to reduce my consumption to help protect the environment.	299	0.866	0.024
EC3	Anti-pollution laws should be enforced more strongly.	299	0.875	0.021
EC4	I am concerned about the world's current natural (environmental) situation.	299	0.884	0.020

Source: Developed for the research.

Lastly, statements related to environmental concern are analyzed. According to the table 4.9 above, EC1 holds the highest mean value of 0.898, follow by that is EC4, second highest mean of 0.884. The third highest mean is EC3, which has the mean value of 0.875. The EC2 has the smallest mean which has mean value of 0.775. Although, EC1 has highest mean value, but it has the lowest standard deviation, which is 0.013. Furthermore, despite EC2 has the highest standard deviation, which is 0.024, but it has smallest mean. Follow by that is EC1 and EC3, which have standard deviation of 0.013 and 0.021 respectively.

4.2 Assessment of Measurement Model

Figure 4.5: Measurement Model



Source: Developed for the research.

4.2.1 Reliability and Convergent Validity

Table 4.10: Reliability and Validity Tests

Constructs	Items	Loadings	Composite Reliability	AVE

A	A1	0.835	0.898	0.758
	A2	0.887		
	A3	0.922		
	A4	0.836		
EC	EC1	0.898	0.91	0.779
	EC2	0.868		
	EC3	0.877		
	EC4	0.886		
GPI	GPI1	0.891	0.904	0.777
	GPI2	0.883		
	GPI3	0.884		
	GPI4	0.867		
PBC	PBC1	0.858	0.872	0.715
	PBC2	0.883		
	PBC3	0.86		
	PBC4	0.777		
SN	SN1	0.874	0.904	0.774
	SN2	0.858		
	SN3	0.89		
	SN4	0.897		

Source: Developed for the research.

Factor loadings should be accepted at a level of 0.70, as recommended by (Alolayyan et al., 2018). As shown in the table, AVE and composite reliability were higher than recommended values of 0.70 and 0.50, respectively, by (Alolayyan et al., 2018). As a result, the model met all thresholds of construct validity and reliability, all constructs are valid and reliable. In addition, based on Hair et al. (2014), the constructs are considered very reliable as the table showed is less than 0.95 but greater than 0.8.

4.2.2 Discriminant Validity Assessment

Table 4.11: Discriminant Validity Test (HTMT values)

Constructs	A	EC	GPI	PBC
A				
EC	0.716			
GPI	0.764	0.616		
PBC	0.705	0.61	0.707	
SN	0.8	0.523	0.794	0.641

Source: Developed for the research.

A comparison of the HTMT values in this study, Table 4.11, reveals that all values are less than 0.90 (Hair et al., 2018), indicating that latent variables in the study have good discriminant validity.

4.2.3 Collinearity Test

Table 4.12: Collinearity Test (VIF values)

Constructs	GPI
A	2.902
EC	1.811
PBC	1.828
SN	2.178

Source: Developed for the research.

All VIF values are less than 5 indicates a low correlation of that predictor with other predictors. According to Table 4.12, the constructs have lower than 5.

4.3 Assessment of Structural Model

4.3.1 Coefficient of Determination (R^2)

Table 4.13: R^2 Assessment

Construct	R-Square	Effect
GPI	0.623	Substantial

Source: Developed for the research.

Cohen (1988) suggested the following R^2 values for endogenous latent variables: 0.02 (weak), 0.13 (moderate), 0.26 (substantial), The R-square of endogenous variable in the research model has substantial effect shown in Table. This means that 62.3% change in GPI can explained by A,EC, PBC, and SN. The remaining 37.7 % of the variation in purchasing green product among university students in private university is explained by other relevant factors.

4.3.2 Effect Size (f^2)

Table 4.14: F^2 Assessment

Constructs	GPI	Effect
A	0.027	Small
EC	0.029	Small
PBC	0.065	Small
SN	0.203	Medium

Source: Developed for the research.

According to Cohen (1988), the size of the effect of F-sqaure can range from very small (>=0.02) to medium (>=0.15) to large (>=0.35). The table above shown that all exogenous variables have small effect size, except SN, which has medium effect size. This means that A, EC, and PBC have small effect on dependent variable when remove from model. While, SN has medium effect on dependent variable when remove from the model.

4.3.2 Model's Predictive Relevance: Q2

Table 4.15: Q^2 Assessment

Construct	Q^2 Predict	Effect
GPI	0.606	Large

Source: Developed for the research.

A Q-square greater than zero indicates that the model is predictively relevant. The study's model can be considered relevant based on the result above. Hair et al (2014).

4.4 Inferential Analysis

4.4.1 Hypothesis Testing

Table 4.16: Hypothesis Testing Results

Hypothesis	Descriptions	Beta Value	Std_Error	T_values	P_values	Decision
H1	A-> GPI	0.172	0.079	2.1762	0.03	Accepted
H2	SN-> GPI	0.408	0.066	6.177	0	Accepted
H3	PBC-> GPI	0.313	0.059	3.624	0.008	Accepted

H4	EC-> GPI	0.14	0.053	2.633	0.03	Accepted

Source: Developed for the research.

According to Hair et al. (2016), coefficient nearer to positive 1 suggesting a strong positive link, and a coefficient nearer to negative 1 indicating a strong negative relationship. Based on the table 4.16 above, PBC has strongest link with green purchase intention because it has the nearest beta value to positive 1, which is 0.408. The weakest link is environmental concern and green purchase intention, which has beta value of 0.14.

Moreover, to assess the relationships between the variables, six hypotheses were proposed. The t-value should be greater than 1.96, and p-value less than 0.05 (5% significance), the alternative hypothesis should be accepted. Based on the p-value results of this research, hypotheses H1, H2, H3, and H4 were supported. Due to these three findings supported the hypotheses H1 (H1: β = 0.172, t =2.1762, ρ = 0.03), H2 (H2: β = 0.408 t = 6.177 ρ = 0) , H3 (H3: β = 0.313, t =3.624, ρ=0.008) and H4 (H4: β = 0.053, t =2.633, ρ=0.03) as stated in Table 4.16. As a result of the study, perceived behavioral control, attitude, subjective norm, environmental concern positively correlated with green purchase intention.

4.5 Conclusion

In conclusion, to perform data analysis, the study used descriptive analysis to summarize the data from the respondents and assess the measurement model to test out the model has no issue on its reliability and validity. Besides, this study used p-values in descriptive analysis to shows that all hypotheses are accepted.

CHAPTER 5: DISCUSSION, CONCLUSION AND IMPLICATIONS

5.0 Introduction

A more thorough review of the results from chapter four is given in chapter 5. This chapter first addresses the reasoning behind these findings. Second, some recommendations for applications of the findings are provided. Finally, the limitations of this study and recommendations for further research are addressed.

The results of the study are examined and interpreted in this chapter.. The results are analysed and presented in accordance with the study's objectives. This chapter provides a more comprehensive discussion of the findings in chapter four and discusses why these results are obtained. The findings are discussed, and recommendations are provided to help marketers better understand consumer green behavior intentions. Moreover, this chapter discussed the limitations of the study and future research suggestions.

5.1 Discussion on Major Findings

In this section, it summarizes the major findings and analyzes them in more detail. The findings are discussed one by one and a summary of the results of hypotheses testing.

5.1.1 Summary of Statistical Analysis

Table 5.1: Hypothesis Testing Results

Hypothesis	Description	Beta Value	Std_Error	T_values	P_values	Decision

	s					
H1	A-> GPI	0.172	0.079	2.1762	0.03	Accepted
H2	SN-> GPI	0.408	0.066	6.177	0	Accepted
H3	PBC-> GPI	0.313	0.059	3.624	0.008	Accepted
H4	EC-> GPI	0.14	0.053	2.633	0.03	Accepted

Source: Developed for the research.

Based on table 4.16, perceived behavioral control, attitude, subjective norm, environmental concern has positive relationship with green purchase intention.

5.1.2 Attitude towards Green Purchase Intention

H1: There is a positive relationship between attitude and green purchase intention.

A positive relationship was found between attitude and green purchase intention among Malaysian and International university students of the Private universities in Malaysia, according to inferential analysis in this study. As such, this finding is in line with earlier research like Arli et al. (2018), and Chaudhary & Bisai (2018), and Choi & Johnson (2019).

The findings of this study indicate that university students' consumption behavior is influenced by their positive attitude towards the environment. It appears that individuals who are genuinely concerned about the environment will purchase green products with a positive intention to reduce further damage to the environment. In general, a consumer's moral obligation to conserve the environment generates this automatic response. Green product attitudes refer to how individuals evaluate green products positively or negatively (Mamun, Mohamad, et al., 2018).. Positive attitudes are frequently linked to the conviction that green products provide a range of advantages, including reduced environmental impact. If students believe these benefits exist, they are more

likely to plan to purchase green products. In conclusion, they do think that buying environmentally friendly products will benefit them more than buying conventional ones.

5.1.3 Subjective Norm towards Green Purchase Intention

H2: There is a positive relationship between subjective norms and green purchase intention.

Inferential analysis in this study revealed a positive relationship between green purchasing intention and subjective norm among Malaysian and international university students at private universities in Malaysia.. As such, this finding is in line with earlier research like Arli et al. (2018), Paul et al. (2016), and Teng et al. (2018).

The inferential analysis shows that families and friends play an important role in stimulating university purchase decisions toward green products. This could be because students can receive direct recommendations or encouragement to buy green products from their friends and family. They might talk about their positive experiences using these items and provide information about their advantages, building credibility and trust that could affect the student's choice. Furthermore, values and beliefs are largely shaped by a person's family, in particular. Students who grew up in environmentally conscious homes might be more appreciative of green products and more motivated to make sustainable decisions. In conclusion, subjective norms do play an important role in influencing students' purchasing intentions.

5.1.4 Perceived Behavioral Control Towards Green Purchase Intention

H3: There is a positive relationship between perceived behavioral control and green purchase intention.

According to inferential analysis in this study, there was a positive relayionship between perceived behavioral control and green purchasing intention among Malaysian and international university

students at private universities in Malaysia. As such, this finding is in line with earlier research like Arli et al. (2018), Paul et al. (2016), and Teng et al. (2018).

Nowadays, online shopping is convenient and it's easy to access from different countries. Students can find any kind of green products with different prices on online platforms, and they can easily pay by simply clicking. Therefore, if people think it's easy to buy green products, they're more likely to plan to buy them. Apart from that, many university students would do part-time jobs to get extra pocket money. Thus, this gives them ability to purchase green products.

5.1.5 Environmental Concern towards Green Purchase Intention

H4: There is a positive relationship between environmental concern and green purchase intention.

A positive relationship was found between environmental concern and green purchase intention among Malaysian and International university students of Private universities in Malaysia, according to inferential analysis in this study. As such, this finding is in line with earlier research like Choi & Johnson (2019), Maichum et al. (2016), and Prakash and Pathak (2017). In addition, consumers who have concerns about environmental problems are more likely to pay more (Bang et al., 2000) as well as to purchase green products (Kim & Choi, 2005). According to Choi & Johnson (2019), environmentally conscious students believe their purchase decisions can have a positive impact on the environment, and also have a positive attitude toward green products.

5.2 Implications of the Study

5.2.1 Managerial Implication

The findings of this study can be useful for marketers who attempt to promote green products. Subjective norms have proved that it has a positive relationship with green purchase intention.

Marketers can create positive customer perceptions about green products and consumption by utilising celebrity endorsements in their green initiatives. For example, celebrities are often active on social media and online communities, where they can discuss about the importance of environmental sustainability and the benefits of green products. These platforms can serve as sources of subjective norms, as students may be influenced by the attitudes and behaviors of influencers and celebrities who promote green products. Thus, applying green marketing in advertising and promotion is necessary to increase the level of subjective norms and attitudes, increasing the possibility of consumers choosing to buy green products.

As perceived behavior control has proved that it has a positive relationship with green purchase intention Moreover, to make green products more appealing to consumers, marketers and firms need to provide them with reliable information. Effective information can enhance consumers' confidence in their buying abilities and help them make better decisions. In the future, consumers are more likely to make green purchases if they are aware of the benefits that green purchasing practices have for the environment.

Furthermore, environment concern proved to have positive relationship with green purchase intention.

5.3 Limitations of the Study

Some limitations exist in this study. Firstly, in this study, data is collected using a questionnaire. However, questionnaire often use closed-ended questions with predetermined response options. This structure might restrict the breadth of knowledge, making it difficult for researchers to understand the intricate and subtle nuances of participants' views and behaviours. In addition, this study is based on self-reports of current behaviour and perceptions from university students. As a result, it might cause perception to be overestimated or underestimated, which would have a significant effect on the outcomes. The findings may yet provide an analytical generalisation that will guarantee a noteworthy contribution to the field.

Secondly, findings from this study are only generalizable within the context of this population. It may not really reflect the general situation of all Malaysians and international university students in Malaysia. Moreover, the findings do not reflect other demographic like fully employed citizens.

Thirdly, green purchase intentions can also be influenced by other variables, such as environmental initiatives or green marketing. Potential confounding variables could result from the study's failure to account for these outside influences. Environmental sustainability-focused university curricula may also have outside influences on students. These programs could improve students' understanding of environmental issues and have an impact on their attitudes and intentions towards making green purchases.

5.4 Recommendations for Future Research

The quantitative technique was able to analyze how factors affected customers' intentions to buy green products, but it was unable to provide a satisfactory explanation for the occurrence. To better understand the factors that underlie the correlations between variables and green purchasing behavior, a qualitative study technique is helpful.

Furthermore, the research could use a larger sample size, and select specific green products like sustainable shoes and metal straws in the future. Moreover, the research can compare two occurring in different regions of Malaysia will allow the researcher to gain a deeper understanding of the impact of environmental attitudes on certain green product purchases.

5.5 Conclusion

In conclusion, this chapter has covered the major findings and their implications for the marketing sector. Furthermore, the chapter has addressed the limitations of this study and suggested recommendation for further research.

REFERENCES

Ajzen, I. (1985). From Intentions to Actions: A theory of planned behavior. *In Springer eBooks* (pp. 11–39). https://doi.org/10.1007/978-3-642-69746-3_2

Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes, 50*(2), 179–211. https://doi.org/10.1016/0749-5978(91)90020-t

Aldrich, J. O. (2019). Using IBM SPSS statistics (3rd ed.). Los Angeles, CA: SAGE Publications, Inc.

Al-Kumaim, N. H., Shabbir, M. S., Alfarisi, S., Hassan, S. H., Alhazmi, A. K., Hishan, S. S., Al-Shami, S. A., Gazem, N. A., Mohammed, F., & Abualrejal, H. M. (2021). Fostering a Clean and Sustainable Environment through Green Product Purchasing Behavior: Insights from Malaysian Consumers' Perspective. *Sustainability, 13*(22), 12585. https://doi.org/10.3390/su132212585

Almohammadi, H. G., & Abdulghaffar, N. A. (2022). The Influencing Factors of Consumers' Purchase Intention toward Green Products: A Case of Consumers in Saudi Arabia. Journal of Sustainable Development, 15(4), 136. https://doi.org/10.5539/jsd.v15n4p136

Alolayyan, M. N., Al-Hawary, S. I. S., Mohammad, A. a. S., & Al-Nady, B. a. A. (2018). Banking service quality provided by commercial banks and customer satisfaction. A structural equation modelling approaches. *International Journal of Productivity and Quality Management*. https://doi.org/10.1504/ijpqm.2018.10014459

Aman, L. A. H., Harun, A., & Hussein., Z. (2012). The Influence of Environmental Knowledge and Concern on Green Purchase Intention the Role of Attitude as a Mediating Variable. British Journal of Arts & Social Sciences, 7(2), 145.

Apuke, O. D. (2017). Quantitative Research Methods : A Synopsis approach. *Kuwait Chapter of Arabian Journal of Business & Management Review*, *6*(11), 40–47. https://doi.org/10.12816/0040336

Arli, D., Tan, L. P., Tjiptono, F., & Lin, Y. (2018). Exploring consumers' purchase intention towards green products in an emerging market: The role of consumers' perceived readiness. *International Journal of Consumer Studies*, *42*(4), 389–401. https://doi.org/10.1111/ijcs.12432

Arli, D., Tan, L. P., Tjiptono, F. (2018). God and green: Investigating the impact of religiousness on green marketing. International Journal of Nonprofit and Voluntary Sector Marketing, 22(3), 1-11.

Auliandri, T. A., Armanu, Rohman, F., & Rofiq, A. (2018). Does green packaging matter as a business strategy? Exploring young consumers' consumption in an emerging market. *Problems and Perspectives in Management*, *16*(2), 376–384. https://doi.org/10.21511/ppm.16(2).2018.34

Azevedo, S. G., Carvalho, H., & Cruz-Machado, V. (2011). The influence of green practices on supply chain performance: A case study approach. *Transportation Research Part E-logistics and Transportation Review*, *47*(6), 850–871. https://doi.org/10.1016/j.tre.2011.05.017

Azmi, A., & Hafiez, M. A. (2018). *Faktor yang mempengaruhi niat pembelian produk hijau dalam kalangan pengguna di Lembah Klang, Malaysia*. http://psasir.upm.edu.my/id/eprint/76145/

Baker, E. W., Al-Gahtani, S. S., & Hubona, G. S. (2007). The effects of gender and age on new technology implementation in a developing country. *Information Technology & People*, *20*(4), 352–375. https://doi.org/10.1108/09593840710839798

Babakus, E., & Mangold, G. (1992). Adapting the SERVQUAL Scale to Hospital Services: An Empirical Investigation. *Health Service Research*, 26, 767-780.

Bang, H., Ellinger, A. E., Hadjimarcou, J. & Traichal, P. A. (2000). Consumer concern, knowledge, belief, and attitude toward renewable energy: An application of the reasoned action theory. *Psychology and Marketing*, 17, 6-26.

Bhutto, M. Y., Zeng, F., Soomro, Y. A., & Khan, M. A. (2019). Young Chinese consumer decision making in buying green products: An application of theory of planned behavior with gender and price transparency. *Pakistan Journal of Commerce and Social Sciences,* 13(3), 599-619.

Biswas, A., Licata, J. W., McKee, D., Pullig, C., & Daughtridge, C. (2000). The Recycling Cycle: An empirical examination of consumer waste recycling and recycling shopping behaviors. *Journal of Public Policy & Marketing*, *19*(1), 93–105. https://doi.org/10.1509/jppm.19.1.93.16950

Bratt, C. (1999). The impact of norms and assumed consequences on recycling behavior. *Environment and Behavior, 31*(5), 630–656. https://doi.org/10.1177/00139169921972272

Burns, A.C., & Bush, R.F. (2012). Basic marketing research: Using Microsoft excel data analysis (3ed.): New Jersey, Pearson.

Butt, A. (2017). Determinants of the consumers green purchase intention in developing countries. *Journal of Management Sciences*, *4*(2), 217–236. https://doi.org/10.20547/jms.2014.1704205

Cant, M. & Van Heerden, C. (2013). Marketing management: A South African perspective. Second edition. Cape Town: JUTA and Company Ltd.

Chaudhary, R., & Bisai, B. (2018). Factors influencing green purchase behavior of millennials in India. *Management of Environmental Quality: An International Journal*, 29(5), 798-812.

Chen, K., & Deng, T. (2016). Research on the Green Purchase Intentions from the Perspective of Product Knowledge. *Sustainability*, *8*(9), 943. https://doi.org/10.3390/su8090943

Chen, S., & Hung, C. (2016). Elucidating the factors influencing the acceptance of green products: An extension of theory of planned behavior. *Technological Forecasting and Social Change*, *112*, 155–163. https://doi.org/10.1016/j.techfore.2016.08.022

Chen, Y. and Chang, C. (2012), "Enhance green purchase intentions: The roles of green perceived value, green perceived risk, and green trust", *Management Decision*, Vol. 50 No. 3, pp. 502-520

Cherrier, H., Black, I., & Lee, M. S. (2011). Intentional non-consumption for sustainability. *European Journal of Marketing*, *45*(11/12), 1757–1767. https://doi.org/10.1108/03090561111167397

Choi, D., & Johnson, K. K. P. (2019). Influences of environmental and hedonic motivations on intention to purchase green products: An extension of the theory of planned behaviour. Sustainable Production and Consumption, 18, 145-155.

Choi, S., & Cho, Y. C. (2015). Exploring the effects of customer attitude and purchase intention on green products: Implications for corporate environment strategies and public policy. Journal of Marketing Thought, 2(3), 20-31.

Choshaly, S. H. (2017). Consumer Perception of Green Issues and Intention to Purchase Green Products. *International Journal of Management, Accounting and Economics,* 4(1), 66-79.

Churchill, G. A. (1979). A paradigm for developing better measures of marketing constructs. *Journal of Marketing Research*, 16(1), 64–73.

Cohen, J. (1988). Statistical power analysis for the behavioral sciences (2nd Ed.). New York: Routledge.

Dangelico, R. M., & Pujari, D. (2010). Mainstreaming Green Product Innovation: Why and How Companies Integrate Environmental Sustainability. *Journal of Business Ethics*, *95*(3), 471–486. https://doi.org/10.1007/s10551-010-0434-0

Santos, V., Gomes, V., . Nogueira, M. (2021). Sustainable packaging: Does eating organic really make a difference on product-packaging interaction? *Journal of Cleaner Production*.

Durif, F., Roy, J., & Boivin, C. (2012). Could Perceived Risks Explain the 'Green Gap' in Green Product Consumption? *Electronic Green Journal*, *1*(33). https://doi.org/10.5070/g313310923

Dunlap, R. & Jones, R. (2002). Environmental Concern: Conceptual and Measurement Issues. 484-524.

Fishbein, M., & Ajzen, I. (1975). *Belief, Attitude, Intention, and Behavior: An Introduction to Theory and Research.* Reading, MA: Addison-Wesley.

Fishbein, M., & Ajzen, I. (2010). Predicting and Changing Behavior: The Reasoned Action Approach. *Psychology Press.*

Gil, M. T., & Jacob, J. (2018). The relationship between green perceived quality and green purchase intention: a three-path mediation approach using green satisfaction and green trust. *International Journal of Business Innovation and Research*, *15*(3), 301. https://doi.org/10.1504/ijbir.2018.089750

Goh, S. K., & Balaji. (2016). Linking green skepticism to green purchase behavior. *Journal of Cleaner Production*, *131*, 629–638. https://doi.org/10.1016/j.jclepro.2016.04.122

Gurau, C., & Ranchhod, A. (2005). International Green Marketing: A Comparative Study of British and Romanian Firms','' *International Marketing Review*, *22*(5), 547–561. https://doi.org/10.1108/02651330510624381

Hair, J., Black, W., Babin, B., Anderson, R., & Tatham, R. (2006). Multivariate Data Analysis (6th ed.). Upper Saddle River, NJ: Pearson Prentice Hall.

Hair, J. F., Sarstedt, M., Hopkins, L. & Kuppelwieser, V. G. (2014). Partial least squares structural equation modeling (PLS-SEM): an emerging tool in business research. European Business Review, Vol. 26 No. 2, pp. 106-121

Hair Jr., J. F., Hult, G. T. M., Ringle, C., & Sarstedt, M. (2016). A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM). Thousand Oaks, CA: Sage Publications.

Hair, J. F., Risher, J. J, Sarstedt, M. & Ringle, C. M. (2018). The results of PLS-SEM article information. *Eur. Bus. Rev. 31,* 2–24.

Hair, J. F., Risher, J. J., Sarstedt, M. & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM, *European Business Review*, Vol. 31 No. 1, pp. 2-24. https://doi.org/10.1108/EBR-11-2018-0203

Handriana, T. (2016). The role of relationship marketing in small and medium enterprises (SMEs). *Jurnal Pengurusan*, *48*, 137–148. https://doi.org/10.17576/pengurusan-2016-48-11

Hasan, A., Irfan, R., Shaari, Z. H., & Sharif, M. a. M. (2018). Consumers' Perception of Barriers Effecting Green Purchase Behavior: Instrument assessment. *SHS Web of Conferences*, *56*, 02008. https://doi.org/10.1051/shsconf/20185602008

He, X., Zhan, W., & Hu, Y. (2018). Consumer purchase intention of electric vehicles in China: The roles of perception and personality. Journal of Cleaner Production, 204, 1060-1069.

Hines, J. M., Hungerford, H. R., & Tomera, A. N. (1987). Analysis and Synthesis of Research on Responsible Environmental Behavior: A Meta-Analysis. *The Journal of Environmental Education*, *18*(2), 1–8. https://doi.org/10.1080/00958964.1987.9943482

Hsu, C., Chang, C., & Yansritakul, C. (2017). Exploring purchase intention of green skincare products using the theory of planned behavior: Testing the moderating effects of country of origin and price sensitivity. Journal of Retailing and Consumer Services, 34, 145-152.

Iyer, R., Khwaja, A. I., Luttmer, E. F., & Shue, K. (2016). Screening peers softly: Inferring the quality of small borrowers. *Management Science*, *62*(6), 1554-1577.

Jain, V. K., & Agarwal, S. (2017). Understanding purchasing behaviour towards environmentally sustainable products using Theory of Planned Behaviour: An Structural Equation Modeling approach. *IOSR Journal of Business and Management,* 19(8), 14-23.

Jaiswal, D., & Kant, R. (2018). Green purchasing behaviour: A conceptual framework and empirical investigation of Indian consumers. *Journal of Retailing and Consumer Services*, *41*, 60–69. https://doi.org/10.1016/j.jretconser.2017.11.008

Jing, W., Wang, S., Yu, W., Li, J., & Zhao, D. (2018). Extending the theory of planned behavior to understand consumers' intentions to visit green hotels in the Chinese context. *International Journal of Contemporary Hospitality Management*, *30*(8), 2810–2825. https://doi.org/10.1108/ijchm-04-2017-0223

Johnson, S. E., & Hall, A. (2005). The prediction of safe lifting behavior: An application of the theory of planned behavior. *Journal of Safety Research*, *36*(1), 63–73. https://doi.org/10.1016/j.jsr.2004.12.004

Joshi, Y., & Rahman, Z. (2015). Factors affecting green purchase behaviour and future research directions. *International Strategic Management Review*, *3*(1–2), 128–143. https://doi.org/10.1016/j.ism.2015.04.001

Joshi, G. Y., Shoerey, P. A., & Gandhi, A. V. (2019). Analyzing the barriers to purchase intentions of energy efficient appliances from consumer perspective. Benchmarking: An International Journal, 26(5), 1565-1580.

Kai, C., & Haokai, L. (2016). Factors Affecting Consumers' Green Commuting. *Eurasia Journal of Mathematics, Science and Technology Education*, *12*(3). https://doi.org/10.12973/iser.2016.2001a

Karimy, M., Zareban, I., Araban, M., & Montazeri, A. (2015). An Extended Theory of Planned Behavior (TPB) Used to Predict Smoking Behavior Among a Sample of Iranian Medical Students. *International Journal of High Risk Behaviors and Addiction*, *4*(3). https://doi.org/10.5812/ijhrba.24715

Khaola, P. (2014). The relationships among students' commitment, self-esteem, organisational citizenship behaviour and academic performance. *Africa Education Review*, *11*(2), 119–132. https://doi.org/10.1080/18146627.2014.927144

Khor, K. S., & Hazen, B. T. (2017). Remanufactured products purchase intentions and behaviour: Evidence from Malaysia. *International Journal of Production Research*, 55(8), 2149-2162.

Khoiriyah, S., & Toro, M. J. S. (2018). Attitude toward green product, willingness to pay and intention to purchase. *International Journal of Business and Society*, 19(4), 620-628.

Kim, Y., & Choi, S. M. (2005). Antecedents of green purchase behavior: An examination of collectivism, environmental concern, and PCE. *Advances in Consumer Research*, 32, 592-599

Ko, S. H., & Jin, B. (2017). Predictors of purchase intention toward green apparel products. *Journal of Fashion Marketing and Management*, *21*(1), 70–87. https://doi.org/10.1108/jfmm-07-2014-0057

Kong, W., Harun, A., Sulong, R. S., & Lily, J. (2014). The Influence of Consumers Perception of Green Products on Green Purchase Intention. *International Journal of Asian Social Science*, *4*(8), 924–939. Retrieved from https://archive.aessweb.com/index.php/5007/article/view/2688

Konuk, F. A., Rahman, S. U., & Salo, J. (2015). Antecedents of green behavioral intentions: a cross-country study of Turkey, Finland and Pakistan. *International Journal of Consumer Studies*, *39*(6), 586–596. https://doi.org/10.1111/ijcs.12209

Kumar, G. A. (2021). Framing a model for green buying behavior of Indian consumers: From the lenses of the theory of planned behavior. *Journal of Cleaner Production*, *295*, 126487. https://doi.org/10.1016/j.jclepro.2021.126487

Lackey, N.R., & Wingate, A.L. (1998). The pilot study: One key to research success. In P.J. Brink & M.J. Wood (Eds.), Advanced design in nursing research (2nd ed.). Thousand Oaks, CA: Sage

Laroche, M., Bergeron, J., & Barbaro-Forleo, G. (2001). Targeting consumers who are willing to pay more for environmentally friendly products. *Journal of Consumer Marketing*, *18*(6), 503–520. https://doi.org/10.1108/eum0000000006155

Larson, M. G. (2006). Descriptive statistics and graphical displays. Circulation, 114(1), 76-81.

Lee, M. D. P. (2008). A review of the theories of corporate social responsibility: Its evolutionary path and the road ahead. *International Journal of Management Reviews*, *10*(1), 53–73. https://doi.org/10.1111/j.1468-2370.2007.00226.x

Leguina, A. (2015). A primer on partial least squares structural equation modeling (PLS-SEM).

Lin, P. C., & Huang, Y. H. (2012). The Influence Factors on Choice Behaviour Regarding Green Products Based on the Theory of Consumption Values. *Journal of Clean Production*, 22, 11-18. https://doi.org/10.1016/j.jclepro.2011.10.002

Ma, J., & Wang, S. (2019). Understanding consumers' intentions to purchase green products in the social media marketing context. *Asia Pacific Journal of Marketing and Logistics*, *32*(4), 860–878. https://doi.org/10.1108/apjml-03-2019-0178

MacKenzie, S. (2013). Human-computer interaction: An empirical research perspective. Retrieved from https://www.sciencedirect.com/book/9780124058651/human-computerinteraction#book-info

Maichum, K., Parichatnon, S., & Peng, K. (2016). Application of the Extended Theory of Planned Behavior Model to Investigate Purchase Intention of Green Products among Thai Consumers. *Sustainability*, *8*(10), 1077. https://doi.org/10.3390/su8101077

Mainieri, T., Barnett, E. G., Valdero, T., Unipan, J. B., & Oskamp, S. (1997). Green buying: The influence of environmental concern on consumer behavior. *The Journal of Social Psychology, 137*(2), 189–204. https://doi.org/10.1080/00224549709595430

Malhotra, N. (2010). Marketing Research: An Applied Orientation. 6th Edition. *Pearson Education, Inc.*

Mamun, A. A., Fazal, S. A., Ahmad, G. B., Yaacob, M. R., & Mohamad, M. R. (2018). Willingness to pay for environmentally friendly products among low-income households along Coastal Peninsular Malaysia. Sustainability, 10(5), 1-19

Mamun, A. A., Mohamad, M. R., Yaacob, M. R. B., & Mohiuddin, M. (2018). Intention and behavior towards green consumption among low-income households. Journal of Environmental Management, 227, 73-86.

McDaniel, C. & Roger, G., 2010. Marketing research. Eight ed. Hoboken, *NJ: John Wiley and Sons Inc.*

Mistrik, I., Soley, R. M., Ali, N., Grundy, J., & Tekinerdogan, B. (2016). *Software Quality Assurance: In Large Scale and Complex Software-Intensive Systems*. Morgan Kaufmann Publishers. https://doi.org/10.1016/C2014-0-01795-9

Moura, A. P., Cunha, L. M., Castro-Cunha, M., & Lima, R. (2012). A comparative evaluation of women's perceptions and importance of sustainability in fish consumption. *Management of Environmental Quality: An International Journal*, 23(4), 451–461. https://doi.org/10.1108/14777831211232263

Moon, M. A., Mohel, S. H., Farooq, A. (2019). I green, you green, we all green: Testing the extended environmental theory of planned behavior among the university students of Pakistan. The Social Science Journal, 1-12.

Mostafa, M. M. (2007). Gender differences in Egyptian consumers? green purchase behaviour: the effects of environmental knowledge, concern and attitude. *International Journal of Consumer Studies*, *31*(3), 220–229. https://doi.org/10.1111/j.1470-6431.2006.00523.x

Nadiah, M., & Norashikin, B. (2019). "Exploring relationship between individual product decision towards customer purchase intention in buying eco-green products". *International Tourism and Hospitality Journal,* 2(1), 1-9

Newberry, C. R., Klemz, B. R., & Boshoff, C. (2003). Managerial implications of predicting purchase behavior from purchase intentions: a retail patronage case study. *Journal of Services Marketing*, *17*(6), 609–620. https://doi.org/10.1108/08876040310495636

Nguyen, T. N., Lobo, A., & Greenland, S. (2016). Pro-environmental purchase behaviour: The role of consumers' biospheric values. Journal of Retailing and Consumer Services, 33, 98-108.

Nunnally, J. C., & Bernstein, I. H. (1994). Psychometric theory (3rd ed.). New York: McGraw-Hill.

Ottman, J., Stafford, E. R., & Hartman, C. L. (2006). Avoiding Green Marketing Myopia: Ways to Improve Consumer Appeal for Environmentally Preferable Products. *Environment*, *48*(5), 22–36. https://doi.org/10.3200/envt.48.5.22-36

Park, H. J., & Li, L. (2020). Exploring attitude–behavior gap in sustainable consumption: comparison of recycled and upcycled fashion products. *Journal of Business Research*, *117*, 623–628. https://doi.org/10.1016/j.jbusres.2018.08.025

Patch, C. S., Tapsell, L. C., & Williams, P. (2005). Attitudes and Intentions toward Purchasing Novel Foods Enriched with Omega-3 Fatty Acids. *Journal of Nutrition Education and Behavior*, *37*(5), 235–241. https://doi.org/10.1016/s1499-4046(06)60277-7

Paul, J., Modi, A. G., & Patel, J. B. (2016). Predicting green product consumption using theory of planned behavior and reasoned action. *Journal of Retailing and Consumer Services*, *29*, 123–134. https://doi.org/10.1016/j.jretconser.2015.11.006

Prakash, G., & Pathak, P. (2017). Intention to buy eco-friendly packaged products among young consumers of India: A study on developing nation. *Journal of Cleaner Production*, *141*, 385–393. https://doi.org/10.1016/j.jclepro.2016.09.116

Rashid, N. R. N. A. (2009). Awareness of eco-label in Malaysia's green marketing initiative. *International Journal of Business and Management*, *4*(8). https://doi.org/10.5539/ijbm.v4n8p132

Roscoe, J.T. (1975) Fundamental Research Statistics for the Behavioral Sciences [by] John T. Roscoe. Holt, Rinehart and Winston, New York.

Saxena, R. K., & Khandelwal, P. K. (2010). Can Green Marketing be used as a tool for Sustainable Growth?: A Study Performed on Consumers in India- An Emerging Economy. *The International Journal of Environmental, Cultural, Economic, and Social Sustainability: Annual Review*, *6*(2), 277–292. https://doi.org/10.18848/1832-2077/cgp/v06i02/54702

Sdrolia, E., & Zarotiadis, G. (2018). A COMPREHENSIVE REVIEW FOR *GREEN PRODUCT* TERM: FROM DEFINITION TO EVALUATION. *Journal of Economic Surveys*, *33*(1), 150–178. https://doi.org/10.1111/joes.12268

Sekaran, U. (2003). Research Methods for Business: A Skill-building Approach. 4th edition. *John Wiley & Sons.*

Sekaran, U. and Bougie, R. (2013). Research Methods for Business: A Skill-Building Approach. 6th Edition. *John Wiley & Sons* eBooks.

Sekaran, U., & Bougie, R. (2016). Research Methods for Business : A Skill-Building Approach 7th edition. *John Wiley & Sons eBooks*.

Setyawan, A., Noermijati, N., Sunaryo, S., & Aisjah, S. (2018). Green product buying intentions among young consumers: extending the application of theory of planned behavior. *Problems and Perspectives in Management*, *16*(2), 145–154. https://doi.org/10.21511/ppm.16(2).2018.13

Sharaf, M. A., Isa, F., & Alqasa, K. (2015). Factors Affecting Young Malaysians' Intention to Purchase Green Products. *Merit Research Journals*. http://meritresearchjournals.org/bm/content/2015/May/Sharaf%20et%20al.pdf

Shukla, S. (2019). A study on millennial purchase intention of green products in India: Applying Extended Theory of Planned Behavior Model. *Journal of Asia-pacific Business*, *20*(4), 322–350. https://doi.org/10.1080/10599231.2019.1684171

Sousa, S., Correia, E., Viseu, C., & Larguinho, M. (2022). Analysing the influence of companies' green communication in college students' green purchase behaviour: An application of the Extended Theory of Planned Behaviour Model. *Administrative Sciences*, *12*(3), 80. https://doi.org/10.3390/admsci12030080

Sreen, N., Purbey, S., & Sadarangani, P. H. (2018). Impact of culture, behavior and gender on green purchase intention. *Journal of Retailing and Consumer Services*, *41*, 177–189. https://doi.org/10.1016/j.jretconser.2017.12.002

Srivastava, S. K. (2007). Green supply-chain management: A state-of-the-art literature review. *International Journal of Management Reviews*, *9*(1), 53–80. https://doi.org/10.1111/j.1468-2370.2007.00202.x

Sun, X., Su, W., Yamauchi, Y., & Tian, Z. (2021). The Impact of Awe Induced by COVID-19 Pandemic on Green Consumption Behavior in China. *International Journal of Environmental Research and Public Health*, *18*(2), 543. https://doi.org/10.3390/ijerph18020543

Tan, C. N. L., Ojo, A. O., Cheah, J., & Ramayah, T. (2019). Measuring the influence of service quality on patient satisfaction in Malaysia. *The Quality Management Journal*, *26*(3), 129–143. https://doi.org/10.1080/10686967.2019.1615852

Taylor, S., & Cosenza, R. M. (2002). Profiling later aged female teens: mall shopping behavior and clothing choice. *Journal of Consumer Marketing*, *19*(5), 393–408. https://doi.org/10.1108/07363760210437623

Team, C. (2023, November 22). Variance Inflation Factor (VIF). Corporate Finance Institute. https://corporatefinanceinstitute.com/resources/data-science/variance-inflation-factor-vif/

Teng, P. K., Ow, M. W., Sandhu, S. K., & Kassim, U. K. (2018). Green attitude and purchase intention towards environmental friendly product. Journal of Emerging Economies and Islamic Research, 6(1), 17-25.

Teo, T., Zhou, M., & Noyes, J. (2016). Teachers and technology: development of an extended theory of planned behavior. *Educational Technology Research and Development*, *64*(6), 1033–1052. https://doi.org/10.1007/s11423-016-9446-5

Ting, H., Fam, K., Hwa, J. C. J., Richard, J. E., & Xing, N. (2019). Ethnic food consumption intention at the touring destination: The national and regional perspectives using multi-group analysis. *Tourism Management*, *71*, 518–529. https://doi.org/10.1016/j.tourman.2018.11.001

Usmani, S., Kumari, K., Husain, J., & Jamal, S. (2015). CONSUMER'S PERCEPTION AND PURCHASE INTENTIONS TOWARDS GREEN PRODUCTS: EXPLORING THE ATTITUDE AMONG PAKISTANI CONSUMERS.

Varshneya, G., Pandey, S. K., & Das, G. (2017). Impact of social influence and green consumption values on purchase intention of organic clothing: A Study on Collectivist Developing Economy. *Global Business Review*, *18*(2), 478–492. https://doi.org/10.1177/0972150916668620

Wang, J., Tao, J., & Chu, M. C. (2020). Behind the label: Chinese consumers' trust in food certification and the effect of perceived quality on purchase intention. *Food Control*, *108*, 106825. https://doi.org/10.1016/j.foodcont.2019.106825

Wang, S., Fan, J., Zhao, D., Yang, S., & Fu, Y. (2014). Predicting consumers' intention to adopt hybrid electric vehicles: using an extended version of the theory of planned behavior model. *Transportation*, *43*(1), 123–143. https://doi.org/10.1007/s11116-014-9567-9

Williams, S. (2010). Welcome to Generation Z. *B&T Magazine*, 60(2731): 12-12.

Xu, X., Hua, Y., Wang, S., & Xu, G. (2020). Determinants of consumer's intention to purchase authentic green furniture. Resources, Conservation and Recycling, 156, 1-8.

Xu, X., Wang, S., & Yu, Y. (2020). Consumer's intention to purchase green furniture: Do health consciousness and environmental awareness matter? Science of the Total Environment, 704, 1-9.

Yadav, R., & Pathak, G. (2017). Determinants of Consumers' Green Purchase Behavior in a Developing Nation: Applying and Extending the Theory of Planned Behavior. *Ecological Economics*, *134*, 114–122. https://doi.org/10.1016/j.ecolecon.2016.12.019

Yang, M., Al-Shaaban, S., & Nguyen, T. B. (2014). Consumer attitude and purchase intention towards organic food: A quantitative study of China.

Zikmund, W. G. (2003). Basic data analysis: Descriptive statistics [PowerPoint presentation]. Retrieved from http://pioneer.netserv.chula.ac.th/~ppongsa/2900600/LMRM02.pdf

Zikmund, W. C., Babin, B. J., Carr, J. C., & Griffin, M. (2013). Business Research Methods. Boston, MA: Cengage Learning Custom Publishing.

Zorn, M. (2017). Natural disasters and less developed countries. In S. Pelc & M. Koderman (Eds.), *Nature, tourism and ethnicity as drivers of (de)marginalization: Insights to marginality from perspective of sustainability and development.* New York City: Springer

APPENDICES

Appendix A: Survey Questions

Dear Respondent,

I am Lim Rui Wen, a final year student from Universiti Tunku Abdul Rahman (UTAR), pursuing Bachelor of International Business (Honours) and currently conducting my final year research project. The aim of the research questionnaire is to study the factors affecting purchase intention towards green products among the private universities' students.

This questionnaire consists of three sections which are Section A, Section B, and Section C. Please answer all the questions. It should take around 5 minutes to complete this survey. All the answers will be kept strictly private and confidential. Thank you for your kind co-operation.

Please be informed that in accordance with Personal Data Protection Act 2010 (PDPA) which came into force on 15 November 2013, Universiti Tunku Abdul Rahman (UTAR) is hereby bound to make notice and require consent in relation to collection, recording, storage, usage and retention of personal information. If you have any enquiries, please do not hesitate to contact: Lim Rui Wen (ruiwen110@1utar.my.)

Acknowledgment of Notice

- o I have been notified by you and that I hereby understood, consented and agreed per UTAR.
- o I disagree, my personal data will not be proceed.

Data Screening

Are you a university student?

- o Yes
- o No (End of the Survey)

SECTION A: Demographic Information

1.Age

( ) 16-20 years

( ) 21-25 years

( ) 26-30 years

( ) 30-35 years

( ) Above 35 years

2. Education Level

( ) Foundation or equivalent

( ) Bachelor degree or equivalent

( ) Master degree or equivalent

( ) Doctoral degree

3. Nationality

( ) Malaysian

( ) Non-Malaysian

4. How much money do you spend on green products per month

( ) I have never bought a green product before

( ) Less than RM100

( ) RM100 – RM300

( ) RM300 – RM500

( ) RM500 – RM800

( ) RM800 – RM1000

( ) Above RM1000

SECTION B: Construct Measurement - Dependent Variable

This section is seeking your opinion regarding the factors that affect purchase intention toward green products. Please indicate the extent to which you agree or disagree with each of the following statements. Kindly choose the most appropriate option.

Strongly Disagree (SD)	Disagree (D)	Neutral (N	Agree (A)	Strongly Agree (SD)
1	2	3	4	5

Green Purchase Intention	SD	D	N	A	SD
	1	2	3	4	5
1. I will purchase green products for personal use.					
2. I am willing to purchase green products for personal use.					
3. I will make an effort to purchase green products.					
4. I will purchase green products in my next purchase.					

SECTION C: Construct Measurement – Independent Variables

Attitude	SD	D	N	A	SD
	1	2	3	4	5
1. Between green and conventional products, I prefer green one.					
2. I think that purchasing green products is favourable.					
3. I think that purchasing green products is a good idea.					
4. I think green products that can reduce environmental damage are important.					

Subjective Norm	SD	D	N	A	SD
	1	2	3	4	5
1. Most people who are important to me think that I should purchase green products.					
2. Most people who are important to me would support me purchasing green products.					
3. My family members think I ought to be purchasing green products.					
4. My friends think I ought to be purchasing green products.					

Perceived Behavioural Control	SD	D	N	A	SD
	1	2	3	4	5
1. I believe I have the ability to purchase green products.					

2. I have resources to purchase green products.					
3. I have time to purchase green products.					
4. Green products are generally available in the shops where I usually do my shopping.					

Environment Concern	SD	D	N	A	SA
	1	2	3	4	5
1. I am concerned about the world's current natural (environmental) situation.					
2. Major social changes are necessary to protect the natural environment.					
3. I would be willing to reduce my consumption to help protect the environment.					
4. Anti-pollution laws should be enforced more strongly.					