Factors That Influence Green Purchase Behaviour of Malaysian Consumers

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Factors That Influence Green Purchase Behaviour of Malaysian Consumers

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DECLARATION

I hereby declare that:

(1) This MKMA25106 Research Projects 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.

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Dedication

To my family and all my loved ones,

Thanks for being there when I needed you the most.

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PREFACE

This research project is a compulsory subject needed to be done for students of Master of Business Administration in order to complete their Master studies. The research title for this thesis is "Factors that influence working consumers' purchasing behaviour towards green products in Malaysia".

Intensely competitive business environment and rapidly economic development provided more convenient technology to people. However, failure in preservation the use of nature resources may continue expanding the environment issue. Besides, people aware of the deteriorating of the environment in Malaysia but did not behave in an environmentally friendly manner. As such, it is important to understand working consumers' green purchasing behaviour in government and marketing context.

The main purpose of this research project is to investigate the factors that influence working consumers' green purchasing behaviour in Malaysia. Throughout this research project, there are a total of seven variables has been identified which are social influences, environmental attitudes, environmental concern, perceived effectiveness of environmental problems, perceived effectiveness of environmental behaviour, perceived environmental responsibility, and government initiative. This study also can discover what reasons caused consumers less response in green products in Malaysia.

ABSTRACT

Today, rapid development of technology has caused both positive or negative affect and changes in the environment. While enjoying the convenience provided by technology, people should have the right mind-set in keeping and protecting their environment healthy. Therefore, the aim to conduct this study is to examine the factors that influence working consumers' green purchase behaviour. They are seven independent variables were used in this research project to identify the factors that influence working consumers' purchasing behaviour toward green products; social influences, environmental attitudes, environmental concern, and perceived effectiveness of environmental problems, perceived effectiveness of environmental behaviour, perceived environmental responsibility, and government initiative.

Two hundred working consumers are the sole targeted respondents in this study. It is found that there are no significant differences for the gender and race variables whereas monthly income variable was found a significant difference on it. In addition, the study findings also discovered that there is a significant relationship between the factors influence and working consumers' purchasing behaviour towards green products.

Consequently, these research findings have provided some insight and feedback to businesses who basically facing a lot of challenges in convincing consumers to purchase green products. By gathering this information, marketers can understand the route that shifts the environmental factors to green purchase behaviour. They also would be able to formulating their various strategies to effectively attract more consumers to purchase green products.

CHAPTER 1

INTRODUCTION

1.0Introduction

The purpose of this research is to study the factors that influence working consumers' purchasing behaviour towards green products. The main focus areas in this chapter have state the purpose of this study and describe the major problems. After that, set the research questions, and follow by the significant of this study.

1.1 Research Background

Global warming was one of the environmental degradation signals that were a serious worldwide issue encountered by all global people in recent years. The negative impact of global warming includes melting glaciers in Arctic. The thickness of Arctic sea ice was melting decreased by 40% since 1960's and its melting level was now at the alarming rate of 9% per decade. If the melting rate continuously increased without rescue action taken by people, the Arctic could be ice-free in 2040 (Natural Resources Defense Council). It can be predicted that sea level could accelerating rise until an uncontrollable level in future. Many countries will be disappear due to inundated by the sea. On the other hand, global warming will weaker ozone layer and caused about 120,000 people in a southern Chile city exposure to very high level of ultra-radiation due to ozone depletion and cause human suffering from cancer (Njie, 2013). Drastically change in climate also one of the impact of global warming. According to BBC News (2009), Typhoon

Kestana occurred in Vietnam has destroyed or damaged about 170,000 homes and caused around 380,000 people homeless. Meanwhile, the storm also affected nearly 2 million people in Philippine and caused more than 100,000 people homeless (Conde, 2009).

Apart from global warning, rapid industrialization that caused pollution in landfill, water and air also led to another environmental degradation signal. China has undergoes rapid industrialization and successfully become the second-largest economy in the world in year 2012. However, it does exacerbate its environmental deterioration. According to Yang (2012), up to 40% of rivers are polluted in China. The water pollution caused high cancers rates in China due to consumption of contaminated water that polluted by vary types of industrial sewage such as cadmium, lead, indium, zinc and other metals. Besides, air pollution does happen in China and it reached a crisis level. This cause millions of people in China are suffer under the smog every day. According to World Bank study (as cited in Tan, 2009), approximately 460,000 people die prematurely in China annually from those diseases related to the air and water pollution that are highly and continuously exposure to China people. Besides, many others environmental degradation and harmful activities that performed in the modern economy have always led to environmental issues and it always caught the attention of worldwide citizens.

Through the efforts of government and society in education and publicity works, many people around the world are well informed the threats, negative impacts and consequences that endanger their environment are caused by the irresponsibility companies and their irresponsibility behaviour towards their environment. Hence, many environmental issues related terms such as air and water pollution, unexpected and rapidly change in climate, deterioration problem of ozone layers, and so on are quite well known by individuals. After realize the seriousness problems towards environmental issues, people from worldwide are willing to implement their own responsibility to safe and protect their environment because they believe their efforts can improve their quality of life in the future.

Emerson, Esty, Kim, Mara, Sherbinin, & Srebotnjak (2010) stated that Malaysia ranked 54 out of 163 examined countries and performed better in addressing environmental challenges. This indicated that Malaysia has enjoyed one of the least polluted environments in Asia. However, massive industrial development in recent years caused Malaysia still facing a number of environmental problems due to an increase in urbanization and vehicle use. According to Waltraud Mayr (2010), about 56% of waste is recycled in Singapore, whereas Malaysia is projected to only reach 22% by 2020. This shows that Malaysia has low public awareness on recycling as compare with Singapore.

An article in Bernama shows that littering was a common legal offence in Penang. Surprisingly, the main reason caused the river pollution was littering by Penang residents, no longer caused by industrial waste. Thus, it shows that there is a lack of environmental responsible behaviour expressed in Penang residents ("Garbage, Main Cause of River Pollution in Penang," 2009).

Besides, Malaysia realized that investing in environmental protection become increasingly important. Therefore, environmental awareness is building up. Currently, several other initiatives are being implemented by government to encourage consumers and industries to fully practice energy efficiency. For example, phase out incandescent light bulbs in order to reduce the emission of carbon dioxide. Moreover, a scheme set up by government known as Green Technology Financing Scheme was aim to promote industries for utilise low carbon and resource efficient technologies. Therefore, green services will be launched to reduce energy consumption and minimise pollution ("Market Watch", 2012).

Nowadays, environmental problems have caught the attention not only for worldwide citizens, but also worldwide companies and institutions. According to Papadopoulos's study (as cited in Zand Hessami & Yousefi, 2013), consumers have more concern to their environments compare to the past and it will change their purchase behaviour. Thus, from the perspective of consumers, concern for

environmental will greatly influence their decision making in selecting or purchasing goods or products.

According to Polonsky and Rosenberger (2001) indicated that 84% people considered they have the responsibility to the environment. They are willing to purchase products from environmental friendly companies. Besides, environmental issues have change 49 per cent of respondents' purchasing behaviour (Bowee's study as cited in Zand Hessami et al., 2013) and 75% people become more concern on the environmental issues (Baker's study as cited in Zand Hessami et al., 2013).

People become more consciousness and awareness towards environmental issues has led to a green revolution and alters peoples' demands and purchase behaviour. Consumers who purchase those eco-friendly products and services will have positive effect on the environment. A new market was developed which known as green marketing. Those customers who concern about the environment and support green marketing are known as green consumers. Normally, this kind of consumers will practice their consumption behaviour by purchase green products that have less impact to their environment.

In additions, property sector also involved in concerning the environmental development by develop the green building such as Hotel Penage and 1 First Avenue, and Digi Technology Operation Centre Malaysia. Other than that, hypermarket chains such as Carrefour, Giant, and Tesco have implemented "No Plastic Bag Day" practise to minimize the plastic usage. Meanwhile, many corporate sectors in Malaysia have launched their respective green initiatives. For example, Sime Darby held a campaign program known as "Plant a Tree Program". DIGI has launched "Deep Green" and "Mangrove-Saving Project" with the aims to develop a green value chain with the help from its local communities and various stakeholders. Besides, the purpose of the "The Light" project that launched by IJM Land Berhad was to promote green property that includes some green technologies in its construction. Not only that, recently 8TV has actively promoted and educated public regarding the positive behaviour towards

environment via a television programme known as “Let’s Cycle”. In additions, government also encourage all institutions to participate in “Earth Hour” campaign on March 28 every year to turn off the light for one hour in order to promote environmental awareness to public as well as to respond to the support of green activities.

According to Our Green World (2008), an online survey conducted by the global market insight and information group TNS in 2008 shown about 35% Malaysian respondents resulted that “green” promotion launched by companies would influence their purchasing decisions. Meanwhile, about 83% Malaysian respondents replied from online survey shown that their buying decision would be affected based on their perceptions towards how environmental protection was implemented by a company. These finding results are consistence to Abdul Wahid & Abustan (2002) which found that majority consumers indicated that their purchasing intention will affect by the green products’ advertisement.

Besides that, consumers now are more care and aware of their consumption behaviour to the environmental impact. Dagnoli and Klein’s study (as cited in Follows and Jobber, 2000) discovered that more than 60% of consumers were linked their buying behaviour with the impact on the environmental. It shows that consumers now are more prefer on green products. This implies that there is increasing number of green consumers in the market.

Therefore, concern to the environmental issues did change the consumers’ consumption pattern because they are starting to realize that their buying behaviour can actually bring a significant impact to their environmental. Although the green marketing create an opportunity to those marketers, but they still encounter some greatest challenges such as tendency of consumers acceptance towards green products, changes in consumers preferences, unfavourable consumers perception towards green products, high cost investment in developing in green marketing, misgiving of green advertising claim and others challenges. Hence, companies who wish to sustain in this market should resolve all challenges encounter by them, advocate the contribution of consumers towards environment

by purchase green products and deeply analyse on the consumers preferences towards green products. Meanwhile, companies should practice social responsibility by offering environmental friendly products. This can be the competitive advantage for those companies who wish to a leader in the green marketing.

1.2 Research Problem

This research aims to identify the working consumers' purchasing behaviour towards green products. The study also analyses how the factors (social influences, environmental attitudes, environmental concern, perceived effectiveness of environmental problems, perceived effectiveness of environmental behaviour, perceived environmental responsibility, and government initiative) influence working consumers' green purchasing behaviour.

Nowadays, "green" can be considered in the mainstream of the business as it can be seen from the finding that about 83% Malaysian respondents replied from online survey shown that their buying decision would be affected based on their perceptions towards how environmental protection was implemented by a company (Our Green World, 2008). Therefore, businesses that offer eco-friendly products and services would be a very profitable business in the market. The study of Abdul Wahid et al. (2002) stated that consumers who concerning on the environmental will show their purchasing behaviour through supporting on "Green" brand (Oyewole, 2001). In additions, many institutions have actively launched and participated in promoting green programme to community such as EcoKnights. It provides environmental outreach programmes for communities and industry players to advance the cause of environmental issues through better and wider dissemination of environmental news and views. Anugerah Hijau or Green Awards is a programme launched by EcoKnights to address environmental issues with youth through "Sustainable Fashion", "Eco Architecture" and "Environmental Film Making" competition.

Although studying those determinates that affects consumers purchase behaviour towards green products could definitely provide important information and foresight even benefits to green marketer in this high competitive business world. However, the findings from numerous studies that have been carried out by former researchers regarding to the green purchase behaviour are often clash with each other. This may because the research outcome may be only relevant in certain period, geographical, demographical or culture context due to changeable in consumers purchasing behaviour towards green products.

Furthermore, many people believe that introduce green products to public are one of the market means to grow their consumers consumptions rate and boost their sale rate rather than to satisfy consumers' needs and wants. According to Grunert (1993), only few customers insist on the environmental concerns and show it in the actual purchase behaviour. Despite many environmental friendly products with green attribute and features have been introduced in the markets, yet consumers have not totally changed their taste and old habits. Even though many people aware about the environment issues and willing to respond in environmental friendly products or services, yet there have a survey result shown that only 8% respondents changed their purchasing behaviour to benefit the environment (Our Green World, 2008).

Besides, study conducted by Nik Abdul Rashid (2009) shows that consumers may not necessarily would purchase green products or services although they have plenty knowledge on green products and eco-labels. Moreover, a research found that although consumers are care for their environmental but they still did not buying the green products or services (Alwitt & Bergers's study as cited in Yam-Tang and Chan, 1998). This means that they did not perform in green manner although they realized on the environmental degrading. Therefore, it was worth to found out what cause consumers did not behave in environmental friendly manner even though they are aware the environmental issues.

On the other hand, there have few studies regarding green purchasing behaviour were conducted by former researchers such as Chan and Lau, 2000; Soonthonsmai,

2001; Tanner and Kast, 2003; Kamal & Vinnie, 2007; Lee, 2008; Cheah, 2009. Most of the researchers are focused on youth or general consumers than working consumers. Apart from this, the results are varies due to the origin or different samples were used in different countries. In this study, researcher decided to focuses on working consumers because high purchasing power caused them having the final decision in all purchasing activities. Therefore, the factors that affected working consumers' green purchase behaviour are worth to find out.

1.3 Research Questions

The research questions in this study are generated as the following:

i. Is demographic factors would influence working consumers' green purchasing behaviour?

ii. Is there any relationship between factors influence (social influences, environmental attitudes, environmental concern, perceived effectiveness of environmental problems, perceived effectiveness of environmental behaviour, perceived environmental responsibility, and government initiative) and working consumers' green purchasing behaviour?

1.4 Research Objectives

This study is aim to identify factors that influence working consumers' green purchasing behaviour. The research objectives are generated as the following:

i. To investigate whether demographic factors would influence working consumers' green purchasing behaviour.

ii. To identify whether there is a relationship between factors influence (social influences, environmental attitudes, environmental concern, perceived effectiveness of environmental problems, perceived effectiveness of environmental behaviour, perceived environmental responsibility, and government initiative) and working consumers' green purchasing behaviour.

1.5 Significance of the study

As we known that "green" was the mainstream in business due to awareness of environmental issues. However, only few researches have related to the topic of green purchase behaviour in Malaysia context. Therefore, deeply examine in this related topic will provide a clear understanding for marketers on working consumers' purchasing behaviour towards green products.

Apart from this, this study also assists marketers to better understand the potential of green market as well as the green purchase tendency of consumers. Normally, what was prefers by consumers now may not remain the same in the future due to dynamic change in the competitive business world. Consumers' green purchasing behaviour is constantly changed. Therefore, continuously exploring in the green consumption pattern and preference of green purchase is a must for all green marketers who wish to improve and sustain their competitive advantage. Cheah (2009) and Chen and Lau (2010) stated that the demand of green products in Malaysia market was increasingly. Besides, about 83% Malaysian respondents replied from online survey shown that their buying decision would be affected based on their perceptions towards how environmental protection was implemented by a company. According to Lung (2010) found that around 95% consumers from Thai, more than 80% Korean and Malaysian consumers are willing to pay more for green products. It is worth to discover what actually drives consumer from emerging market to buy green products and provide foresights to green marketers who wish to target in the market segment.

In additions, this study also can help marketers well known on the consumers' willingness to buy green products. According to Bui (2005), there have a significant amounts of studies has been conducted on topics regarding to the purchasing of environmental friendly products or consumers behaviour towards environmental friendly products since 1970's. However, a study conducted by Abdul Wahid et al. (2002) concluded that respondents who possess high awareness of environmental issues not so willing to purchase environmental friendly products. According to Ohtomo & Hirose's study (as cited in Ooi, Kwek, & Keoy 2012) said that although a person was concerned and appreciated to her or his environment will not necessarily perform in a green manner or buy green products. This state of affairs was known as value-action gap.

Dickson (2001) explained that value-action gap is "a gap between the high value people place on the nature environment and relatively low level of action taken by individuals to counter environmental problems". Blake (1999) also defined value-action gap was "the gap occur when the values or attitudes of an individual do not correlate with their actions". It means that consumers will only support and buy green products when their environmental awareness and consciousness align with their purchase behaviour (Ajzen, 1991). Hence, a study proves that people who are aware of the environment do not necessarily behave in green manner (Ooi et al, 2012). Therefore, researcher need to have a deep investigation on the factors influencing that caused the situation above and fully understanding what factors will mainly and exactly influence and affect consumers purchasing behaviour towards green products.

Furthermore, this research can assists and benefit marketers in promoting and increasing the awareness of working consumers towards green products. It also can provide useful foresight to manufacturers who wish to target on working consumers. On the other hand, government would like to encourage more Malaysia entrepreneurs to participate in production, promotion and marketing of the green products in order to promote and increase green consumptions among Malaysian consumers. These enable consumers to found that green products would be better met their needs and wants in the near future. Green consumption

is a way to support for sustainable development which can provide a better and improved natural environmental to society. According to Ward (2010), sustainable development means "development that meets the needs of the present without compromising the ability of future generations to meet their own needs". Consequently, this study can provide an overview of the green marketing to marketers who have interest to penetrate on it. It also provide beneficial to commercial sector that targeted on green consumers to have a better understand in the green market abilities and capabilities.

1.6 Conclusion

This chapter provide an overview study on the factors influence on working consumers' purchasing behaviour. Next chapter will be discussed on the variables and developed a proposed conceptual framework that descripted the relationships between variables and working consumers' green purchasing behaviour. All the former researchers' statements or results are provided and explained in next chapter.

CHAPTER 2

LITERATURE REVIEW

2.0 Introduction

This chapter provides a literature review of factors that influence working consumers' purchasing behaviour towards green products. The purpose to conducted literature review is to further define the term and the characteristics of the topic related in respectively. After that, a good conceptual framework will be developed to summaries the variables' relationship in a graphical way, follow by hypotheses development. This chapter will end with conclusion of this chapter.

2.1 Literature Review

2.1.1 Green Consumer and Green Products

Green consumers are defined as consumers who are concern, care and pay close attention to the environmental issues (Soonthonsmai, 2007). Green consumers always have a clear mindset that they have the responsibility to the environmental protection and concern for the environment issues. Therefore, green consumers always purchase products that have less environmental impact. Green consumers also defined by Renfro (2010) as the people who support businesses that trade in the environmental friendly or green manner. Therefore, not only organic product will be buy by green consumers, those products that have eco-label or eco-friendly packing will always being chosen by green consumers. In addition, corporates or

companies such as Starbucks and The Body Shop are actively participate in the fair trade or environmental save programme. This practice will be always supported by green consumers. Table 1 show the different types of green consumers and their implications for the green marketers. For better understanding of the green consumers, it was essential to have some knowledge and understandable about the green products.

Table 1: Type of Green Consumers and the Implication for the Green Marketers

Attributes of environmentally conscious consumers	Implications for the green marketers
Will most likely be well-educated, young adult women who have more money to spend.	• Target products to women who generally buy behalf of men and families. • Use the influence of children to encourage parents to try green products. They are green consumers of the future and are generally knowledgeable about environmental issues thanks to school and community education programs. • Offer samples and incentives to try products.
Will expect green products to function as effectively as non-green products and won't pay much extra or sacrifice quality for greener products.	• Effectively communicate assurances of quality, for example, quality of performance, look, feel, fit, comfort, durability, etc. • Will not buy green products on the basis of environmental benefits alone. Product choice is still based on whether it meets their basic want and need. Environmental features are added selling points. • Link environmental attributes such as energy efficiency or toxic substance reduction with other benefits such as lower price, convenience or quality of life improvements
Will be more likely to respond to product attributes that will personally benefit them.	• Emphasise personal benefits by using terms such as 'safe', 'non-toxic', 'cost effective' rather than more generalised green messages such as 'biodegradable' or 'ozone friendly'.

Will tolerate only minimal inconvenience in using green products and don't want to have to go out of their way to buy them.	• Make using the product simple, for example, minimise or eliminate refilling bottles. • Select mainstream distributors where possible. • Offer one-stop shopping and eye-appealing displays.
Will be analytical, eager to learn, and can be cynical about corporate claims for green product unless they have independent verification.	• Reinforce product benefits with evidence of corporate environmental performance and improvements. • Educate consumers about environmental issues and your efforts through a variety of means. • Provide credible environmental endorsements. • Use labels, in compliance with government labelling guidelines, to convey precise, detailed information about your product and its packaging.
Will not expect companies to have perfect green credentials, but will look for a commitment to improve and evidence backed by facts.	• Communicate your steps towards sustainability and commitment to improvement. • Seek feedback and promote your efforts to respond to customer concerns.

Note: Government, Q. (2009). *Fact Sheet Green Marketing*. E. P. Agency.

Many researchers have defined green product in various definitions. Ottman (1998), Nimse, Vijayan, Kumar, and Varadarajan (2007) and Pavan (2010) defined green products as products that made from recyclable materials, least wastage or minimum packaging, less or non-toxic substance, and reduce the wastage of energy and water. Generally, green products also known as environmental friendly products or ecological products which enhance or protect the environment and brings less negative impact or harmful effect to environment as well as human. According to Baker and Ozaki (2008), it was difficult to define environmentally sustainable products because there is unable to find a green product that is genuinely green or sustainable. All the goods or products that we purchase, use or throw away will have some negative impacts and consequences to the environment at its lifecycle stage. Therefore, Baker et al. (2008) concluded that environmentally sustainable products were those products that have less or low impact to the environmental.

Moreover, Schlegelmilch, Bohlen, and Diamantopoulos (1996), Lee (2008) and Pavan (2010) had classified green products into several categories which are contain natural ingredients, original grown, do not pollute environment, not test on animals, contain recycled content, recyclable and reusable, and contain approved chemical. Examples of green products include organic agricultures or food, green (lead-free) electronics products, alternative fuel vehicles and hybrids, eco-friendly garments, and other green products.

Takafumi (2002) stated that green products can provide direct and indirect value to consumers. Direct value means the value will be immediate effect to consumers such as increase in safety or reduce in capital if consumers use green products. Whereas, indirect value means that consumers believe utilizing green products will benefits and protect the environment although they cannot determine an immediate benefits from utilizing the green products.

2.1.2 Green Marketing

Green can be defined and indicated in many different meanings. Green defined by Prem and Daleen (1993) as environmental and ecological awareness or consciousness, corporate social responsibility (CSR), sustainable development, environmental protection or conservation, and new consumerism.

Polonsky (1994) stated that "green or environmental marketing consists of all activities designed to generate and facilitate any exchanges intended to satisfy human needs or wants, such that the satisfaction of these needs and wants occurs with minimal detrimental impact on the natural environment". In other words, green marketing was a path for companies to introduce and promote environmental friendly or green products to customers in order to satisfy its customers' needs and wants. Generally, companies or organizations that penetrated in green marketing will vigorously promote its environmental friendly policies and achievements to its target customers as well as potential target customers. It means that companies or organizations need to advertise and promote its products or services that composite with environmental or green characteristics like organic, environmental friendly and recycle that applied in producing consumer products or goods. Besides, the difference between conventional marketing and green marketing lead to a variety of activities needed in green marketing which includes modification on the products, changes in the productions process, change in the products distribution, new style and decoration in products packaging, and change in the way of marketing communications. Table 2 explained the better way to understand the concept of green marketing.

Table 2: Comparison between Green Marketing and Conventional Marketing

Categories	**Green Marketing**	**Conventional Marketing**
Consumer	Human beings with lives	Consumer with lifestyle
Products	"Cradle-to-cradle" flexible services	"Cradle-to-gave" one size fits for all products
Marketing and Communication	Educational values	Selling oriented and benefits
Corporate	Proactive, interdependent, cooperative, holistic, long term	Receptive, independent, competitive, short term oriented, profit maximizing

Note: Prem & Daleen (1993). *Consumer Awareness towards Green Marketing*, 2011.

According to the Dagnoli (1991), there were a growing number of people that prefer to purchase environmental friendly products will lead to increasingly in the number of green customers. In other words, consumers now are more concern to business that play more environmental efforts and they will support companies that excellent in and master with their green marketing. However, green consumers not really will buy green products although they have plenty knowledge on green products (Nik Abdul Rashid, 2009), possess high awareness of environmental issues (Abdul Wahid et al., 2002) or concerned and appreciated to her or his environment (Ohtomo & Hirose's study as cited in Ooi et al., 2012) will not necessarily behave in green manner or take responsibility to purchase environmental friendly or green products. This circumstance may due to some wrong green marketing practices implemented by companies which led to the failure of green marketing. Table 3 illustrates in details about the practices of green marketing that led to the failure of green marketing.

Table 3: Practices Lead to the Failure of Green Marketing

Practices that led to the failure of green marketing	Definition
Green spinning	Taking a reactive approach by using public relations to deny or discredit the public's criticisms against the company's practices.
Green selling	Taking an opportunistic approach by adding some green claims to existing products with the intention to boost sales.
Green harvesting	Becoming enthusiastic about the environment only when greening could result in cost savings (e.g., in terms of energy and material input inefficiencies, package reductions, etc.).
Entrepreneur marketing	Developing innovative green products to market without really understanding what the consumers actually want.
Compliance marketing	Using simple compliance with implemented or expected environmental legislation as an opportunity to promote the company's green credentials without taking initiatives to go beyond responding to regulations.

Note: Peattie, K., & Crane, A. (2005). *Green marketing: Legend, myth, farce or prophesy?* Qualitative Market Research: An International Journal, 8(4), 357–370.

According to Peattie and Crane (2005), 'green selling' is one of the practices that commonly led to the failure of green marketing. To seize the business opportunities of green marketing trend, many companies blindly follow the trend by adding some green characteristic into the original products in order to boost their sales without conducts a thoroughly research and plenty knowledge on concept of green marketing and green consumerism. Moreover, some companies who implements green harvesting practices will become enthusiastic to the environment only when this practice could led to cost savings such as package reductions (Peattie et al., 2005). In addition, according to Peattie et al. (2005), some firms also practice entrepreneur marketing by developing an innovative

green products to market without clearly understand the actual needs and wants of consumers. In other words, it produces useless products to market because the products didn't meet the needs and wants of consumers. To avoid misuse on marketing practices, marketing practitioners should thoroughly understand the green marketing concept in order to help them select and implement the right green marketing practices which in return can bring a lot of benefits to companies.

Besides, there are some international companies that implement their green practices and strategies successfully in green marketing. For example, according to Petrecca & Howard (2007), Timberland implement green packaging in its shoeboxes by using 100% recycled material. A new label that draws up the shoes consisted of organic, recycled, and renewable materials contents was introduced to market in 2007. The company's green effort can be recognized by consumers through the new label of its products. Therefore, Timberland was successfully improved the environment (Petrecca et al., 2007). In additions, according to Petrecca et al. (2007), PepsiCo also successfully improve the environment through its business operations. In 2007, solar energy was staring to implement into PepsiCo's building and water are recycles from its own factory.

2.1.2.1 Green Marketing in Malaysia

Apart from this, according to Sinnappan et al. (2011), Malaysia has enacted the Environment Quality Act since 1974. This indicated that Malaysia is one of the countries that have seriously considered the environment impact and issues. Except enacting legislation to protect environment and beware of environmental deterioration, government recently have established the "Ministry of Energy, Green Technology and Water" to meets the sustained increase in demand and improvement of green technology towards sustainable development.

Ahmed, Kamalanabhan & Chih (2001) revealed some green corporations in Malaysia have contributed to the environment by implemented green marketing strategies. For example, Canon Corporation emphasize on the using the recycle

cartridge in its "Clean Earth Campaign" to reduce the environmental pollution. Besides, 3M Company deemed that prevention is better than cure. Hence, they are focus on and struggle in preventing the pollution sources rather than remove it. In addition, Monark is stressed on green manufacturing processes by using the recycle bottle in order to lessen the waste and control the pollution rate. Furthermore, Rampai Niaga Sdn Bhd emphasized its cosmetic and toiletries products of are no animal testing. It used this competitive advantage to distinguish itself from competitors.

2.1.3 Green Purchase Behaviour (GPB)

Green purchase behaviour defined by Chan (2001) as a particular types of environmental friendly behaviour that consumers express their caring and attention to the environment. In addition, green purchase behaviour also refers to the consumption of products that are recyclable or conservable, beneficial or benevolent to the environment, and sensitive or responsive to ecological concern (Mostafa, 2007). Increasing the awareness of consumers towards environmental issues will increased the demand for ecological products.

Many past researcher have conducted research on consumers' behaviour towards green products since 1970's. Therefore, there have many different variables such as attitudes, values, beliefs or knowledge are used to test which factors will drive consumers' choice to purchase environmental friendly products (Bui, 2005). Follows and Jobber (2000) confirmed that their study existence the hierarchical relationship of values-attitudes-intention-behaviour when they conducted a research on prediction of buying eco-friendly and unfriendly products on a different consumer model.

Some studies on green segmentation have been conducted by past researchers. Laroche, Bergeron & Barbaro-Forleo (2001) were investigated on the North America consumers' willingness to pay more for eco-friendly products based on the consumers' demographics, psychological and behavioural. They found that

women who are married with at least one child were supported to its result. Besides, the analysis has been done by Paco et al. (2009) regarding to the demographic and environmental criteria in Portuguese consumers was found that they were reluctant to buy green products even though they are aware of the environmental issues. For Straughan et al. (1999), they study had shown that psychographic criteria was more accurate and useful than demographic criteria in analyse consumers purchasing behaviour.

Furthermore, numerous studies regarding factors that influence green consumers' purchase behaviours have been conducted by former researchers such as Chan and Lau (2000), D'Souza, Taghian, Lamb and Peretiatkos (2006), and Lee (2008). To testing on the consumers' green purchase intention, target respondent of Lee (2008) was adolescent consumers whereas the respondents of D'Souza et al. (2006) were majority Australian female consumers with aged around 35 to 54 years old. Chan et al. (2000) were studying on Chinese consumers' green purchase behaviour through the influence of three independent variables. According to Lee (2009), a further study conducted to survey on how different in gender in various factors would influence Hong Kong adolescent consumers' green purchase behaviour.

According to Gupta and Ogden (2009), "trust", "in-group identity", "expectation of others' co-operation" and "perceived efficacy" was useful individual characteristics to differentiate buyers from "green" or "non-green". Their research also helpful in understanding the reasons caused the gap between attitude and behaviour in green consumerism.

In recent years, researchers only start carries out studies on environmental labels. D'Souza (2004) had developed a model to classified consumers into four categories, namely "environmentally green consumers", "emerging green consumers", "price sensitive green consumers" and "conventional consumers". D'Souza et al. (2006) were further investigated on the different environmentalism level of Australian consumers through the influence of environmental labels. They study found that consumers can be grouped into either they found environmental

labels are difficult to understand or they can read the labels and willing to buy green products although the products are in low quality (D'Souza et al, 2006).

However, there has only few researchers conducted qualitative research related to green purchase behaviour and green strategy. After discover this research gap, Tadajewski and Tsukamoto (2006) conducted a qualitative research to study on the complexity behavioural of UK and Germany consumers towards green products by using life-cycle analysis. Their study shows that looking for the products' brand name was the simplest way for consumers to evaluate the "greenness" of a product (Tadajewski et al., 2006). Besides, Pujari and Wright (1996) also conducted a qualitative study in analysing the product development strategies for eco-friendly products on the selected companies in Britain and Germany. Their study revealed that effectiveness of environmental strategy on product development can create a competitive advantage to company itself (Pujari et al., 1996).

Besides, differences in a country's cultural and socio-economic conditions would cause different factors are being tested on consumers' green purchase behaviour in that country. Thus, variables use by researches to determine the consumer's green purchase behaviour also varies among them. For example, Sinnappan et al. (2011) and Lee (2008) used Theory of Reasoned Actions model to determine the Malaysian consumers' green purchasing behaviour. The variables used in their studies were "environmental attitude", "government initiative", "peer pressure", "green purchase intention" and et cetera.

2.1.3.1 Theory of Reasoned Actions (TRA)

Theory of Reasoned Actions (TRA) was a theory use to study consumers' attitudes regarding to how these attitudes are formed and how other people could influence their behaviour. Hence, TRA model is used to discuss on how the consumers' attitudes towards the environmental issues can affect their green buying behaviour and action (Fishbein and Ajzen, 1975). Many researchers such

as Baker and Ozaki (2008), Gupta and Ogden (2009), and Kalafatis, et al. (1999) have applied this theory in different field to analyse human's behaviour. Besides, TRA also extensively discussed and used to explore consumers' purchasing intention (Lee and Green, 1990) or consumers' purchasing behaviour (Mostafa, 2007; Cheah, 2009).

TRA assumed that "People consider the implications of their actions before they decide to engage or not engage in certain behaviours" (Fishbein et al., 1975; 1980). Ajzen (2005) stated that an individual's intention consist of behavioural character, when an individual have decide to engage in certain behaviour will convert his or her intention into action in an appropriate opportunity and right time. On the other hand, Theory of Planned Behaviour (TPB) model also useful in predicting and explaining consumers' green purchasing behaviour (Sparks and Shepherd, 1992).

2.1.3.2 Theory of Planned Behaviour (TPB)

According to Ajzen (1991), "the theory of planned behaviour is an extension of the theory of reasoned action (Ajzen && Fishbein, 1975; 1980) made necessary by the original model's limitations in dealing with behaviours over which people have incomplete volitional control".

Azjen (1991) explained that "intentions to perform behaviours of different kinds can be predicted with high accuracy from attitudes toward the behaviour, subjective norms, and perceived behavioural control; and these intentions, together with perceptions of behavioural control, account for considerable variance in actual behaviour."

TPB model also been used by many former researchers in studying on organic foods such as Aertsens, Verbeke, Mondelaers & Van Huylenbroeck (2009), Tarkiainen and Sundqvist (2005), Vermeir and Verbeke (2006). Thus, this theory can be used to investigate the purchasing behaviour of green products since organic foods were categories as one of the green products. Chan (2001) stated

that consumers who concern to their environmental will show environmental friendly behaviour and support green purchasing. However, the study of Ohtomo and Hirose (2007) revealed that green consumers will not necessary behave in green manner or supporting and buying green products even though they are care and aware to the environmental issue. It meant that consumers did not transform into actual performance although they have the intention to do so.

This study is to understand the various determinates of the green purchase behaviour in order to provide the insights of the green consumerism and serve as a guideline for companies to formulate and implement their green and sustainable marketing strategies accurately and effectively. The determinate includes social influences, environmental attitudes, environmental concern, perceived effectiveness of environmental problems, perceived effectiveness of environmental behaviour, perceived environmental responsibility, and government initiative.

2.1.4 Social Influence (SI)

Information provided by people can have a great effects or tremendous impact on consumers are known as social influence. According to Ryan (2001), social dynamic refers to association among an individual with other people. It means that an individual shares their beliefs, thoughts and values with other people that he or she communicated with. For example, how much the person gain knowledge about green products through his or her family, how much she or he discusses in the field of environmental products with his or her friends and how much he or she shares the information about green products with family (Finisterra do Paço & Raposo, 2008).

Kalafatis et al. (1999) further defined that "social norm is whether an action should or should not be performed by a respondent in a referent's point of view". The referent's point of view in here could be defines as the perspective of friends, colleagues, neighbours, organizations, family members or other referents.

According to Daido (2004), change in the environmental can change the mindset and influences the behavioural of people. When people were complying to do some things that they were not required to comply with, the social influence can led to a big shifting in people behavioural. This meant that people will buy green products when their social context is encouraging them to behave in green manner.

It is clearly to show that providing people with information are not enough to change their behaviour. Bearden and Etzel (1982), Moore, Wilkie, and Lutz (2002), Price, Feick, and Higie (1987), and Ward and Reingen (1990) have mentioned that the importance of social influence on consumers' products evaluation and products choice. According to Coulter, Price & Feick (2003), social network and product involvement are co-related. Social context of consumers, for instance friends, co-workers, and family which provide essential influence and feedback on their consumption will finally affected their decision on product and brand choice.

According to Business Wire (2009), a survey conducted by Ad-ology Research found that social media or social networking such as Facebook, Twitter, LinkedIn, YouTube, Flickr and others social media have significant impact on consumers purchasing behaviour. For instance, people are widely share the information related to environmental activities such as Earth Hour in social media. Thus, social media played an importance role in coaching people in learning about environmental activities. When they transfer the received information into practices and in the end, social media can affect consumers' buying behaviour towards green products.

2.1.5 Environmental Attitude (EA)

Attitude refers to "a mental and neural state of readiness, which exerts a direct influence upon the individual's response to all objects and situations with which it is related" (Allport, 1935). Attitude also can be defined as desirable or undesirable

evaluations (Ajzen, 1991) and continuous positive or negative feelings (Newhouse (1991) that a particular people have towards objects, issues or other people.

Nik Abdul Rashid (2009) defined environmental attitude as "a learned predisposition to respond consistently favourable or unfavourable manner with respect to the environment". While, Schulz, Shriver, Tabanico and Khazian (2004) defined environmental attitude as "the collection of beliefs, affect, and behavioural intentions a person holds regarding environmentally related activities or issues". In additions, environmental attitude was further defined by Lee (2008) based on an individuals' cognitive assessment of the value of environmental protection. In other words, environmental attitude would affect consumers' attitude and buying decisions (Schwepker and Cornwell, 1991).

Peattie (2001) proposed that the degree of compromise involved and confidence of a particular purchasing choice towards green products may vary accordingly. According to Laroche et al. (2001) and Chyong et al. (2006), attitudes is the most significant factor in predicting consumers' willingness to pay more for environmental friendly products. This means that price is not an obstacle for consumers who are voluntary participate in pro-environment activities or to buy green products. Environment degradation will decrease if consumer possess a positive attitude towards environmental protection will eventually transfer it into a real practice by being a green consumerism (Tanner and Kast, 2003). However, many people feel that government have the fundamental and essential responsibility in preserving the environment although people have high conscious and concern on their environment.

Schultz (2000) stated that environmental attitudes can be classified in three types which are altruistic attitudes, self-centered attitudes, and eco-centric attitudes. Altruistic attitudes include the concerns over others. Self-centered attitudes include their concerns. Eco-centric attitudes include concern for the environment. Based on research result, Schultz (2000) founded that self-centered attitudes are causing the behaviour of consumers.

In additions, Abdul Wahid et al. (2002) discovered that young Malaysian willing to behave in more green manner to improve the quality of their environment. According to Abdul Wahid, Abustan and Karwi (2000) revealed that individual, industries, government and finance have equal important roles in build up a positive attitude of individual towards environmental protection. Therefore, many companies recently started to emphasize their responsibility towards environment by produced environmental friendly products and keep track with the changes of environment.

2.1.6 Environmental Concern (EC)

According to Chan and Lau (2004), environmental concern has variety definitions which depend on perspective and its complicated and unstable nature. Environmental concern defined by Dunlap and Jones (2002) as people awareness of environmental problems and attempts to solve it. However, the early definition of environmental concern was the degree of protective attitude towards environment (Crosby, Taylor & Gill, 1981), but later was defined as a general attitude which has an indirect influence on attitude through behavioural intent (Gill, Crosby & Taylor, 1986).

In addition, environmental concern refers to an individual's emotional feature such as like or dislike, worries and consideration (Yeung, 2004) and the belief, attitude, and degree of concern (Said, Ahmadun, Paim & Masud, 2003) towards the environment. Hence, environmental concern can be concluded that an individual was emotionally involved to environmental related issues.

Schultz and Zelezny (2000) stated that "attitudes of environmental concern are rooted in a person's concept of self and the degree to which an individual perceives him or herself to be an integral part of the natural environment". Some of the environmental sociologists have referred environmental attitudes as "environmental concern" (Vining & Ebreo, 1992; Fransson & Gärling, 1999; Dunlap et al, 2002). It meant that environmental concern is synonymous with

environmental attitude. Therefore, this two terms can used interchangeable in many studies (Dunlap et al., 2002). However, some of the studies have separated them into two different terms (Stern and Dietz, 1994; Schultz et al., 2000; Sinnappan et al., 2011; Zank Hessami et al., 2013).

Moreover, different segments of the workforce react differently towards the green issues (Ahmed et al., 2001). Walter (1990) found that consumers concern on environmental issues does not always translate into purchasing decisions. However, Dagnoli (1990) and Bang, Ellinger, Hadjimarcou, & Traichal (2000) found that consumers who are more concern towards environment issues will still switched to purchase green products even its price much higher than non-green or less eco-friendly products. Kim and Choi (2005) pointed out that people with high concerning to the environmental issues are willing to buy green products and vice versa.

2.1.7 Perceived Seriousness of Environmental Problems (EP)

Amyx, DeJong, Chakraborty and Wiener (1994) defined perceived seriousness of environmental problems as a degree of personal concern and considerable towards ecological issues. When people encounter those environmental issues, the amount of inconveniences and troubles that people need to deal with and the attitude and behaviour that they should have towards the environmental issues was difficulty to know. For instance, easy and convenience for consumption may cause consumers to purchase a product or food even they know the packaging of the product or food will hazardous or damage for the nature and environment.

Banerjee and Mckeage (1994) stated that the perception of an individual to the intensity, dangerous and seriousness of environmental issues and problems could affect his or her green purchasing behaviour. In other words, non-green consumers that do not behave in green manner believe that the environment problems will be solved by themselves automatically and vice versa.

Besides, Moser and Uzzell (2003) stated that the mass media play an essential role in educating consumers to understand the importance of environmental problems. For example, marketers convey the message regarding to how their product can reduce the environmental problems and how consumers can contributed to environment through buying the green products. Through this, people will aware the environmental problems and their responsibility towards the environment.

2.1.8 Perceived Environmental Responsibility (ER)

According to Sukhdial and Venice (1990), perceived environmental responsibility refers as the degree of an individual's perception of self-employment in protecting the environment. In other words, perceived environmental responsibility was the level of concern belongs to an individual towards the environmental and social responsibility to save the environment from continuously deterioration by using not eco-friendly products.

Lai (2000) further defined perceived environmental responsibility as a degree of emotional involvement in environmental issues. However, perceived environmental responsibility was defined by Zank Hessami et al. (2013) as a behaviour and attitude of a person that he or she is responsible for his or her consumption behaviour and its effects towards the nature and environment.

Generally, people expect and believe government have the ability and can eliminate the environmental problems. However, Lai (2000) found that people are hesitate or unwilling to make one-side sacrifices with the government's policy. Therefore, even many people have ecological concern, but they feel that the environmental protection is the responsibility of the government or huge corporations instead of themselves.

Furthermore, according to Strong (1996) revealed that the major damage to the environment was caused during the manufacturing process. Thus, consumers who support green products will avoid those not eco-friendly products which will

endanger and damage their health. The norm activation model that suggested by Schwartz (1977) found that when individual aware and conscious of adverse consequences and feel responsible for these consequences will inspire the individual's helping behaviour. Johri and Sahasakmontri (1998) verified that Asian citizen's societies are becoming conscious of alarming environmental problems. To create green purchase behaviour among individuals cannot be short of their own perceived responsibility. Hence, perceived environmental responsibility is a determinant of purchasing behaviour towards green products

2.1.9 Perceived Effectiveness of Environmental Behaviour (EB)

According to Lee (2008), perceived effectiveness of environmental behaviour is closely related to the perception of an individual. An individual who are actively participated into pro-environmental activities and possess of pro-environmental behaviour will like to contribute more to the environmental. Kollmuss and Agyeman (2002) and Jensen (2002) define "pro-environmental behaviour as conscious actions taken by an individual so as to minimize the negative impact of human activities on the environment or to improve the environment".

The effectiveness perceived by consumer also defined by Kenneth & Sanjay (1998) as a consumer's confidence in their ability to improve the environment. Kim and Choi, (2005) mentioned that the level of effectiveness which is perceived by the consumer is varies from person to person and this was determined by direct and indirect knowledge and experience. In other words, people from dissimilar background possess different life experience and personal knowledge. Thus, people who are confidence in their abilities believed their contributions and actions can led to positive and great changes in the future and vice versa.

2.1.10 Government Initiative (GI)

Government initiative refers to support given or initiative actions taken by the national government (Diekmeyer, 2008). This means that government play an important part in environmental protection and all the initiative efforts taken by government is undeniable. Therefore, government should 'walk the talk' in organizing and executing environmental sustainable development plans.

Governments should play more efforts in promoting the environment sustainable programmes to people in order to continuously raise their awareness towards environmental issues. Normally, the purposes of national government campaigns are encourage green products consumption habits of its community. According to OECD (2008), Japan government implemented 3R campaign to promote sustainable packaging and recycling. Besides, the Ministry of Environment and Ministry of Energy and Transport in Denmark were jointly launched the "One Tonne Less" campaign in order to reduce the greenhouse gas emissions by its citizen. Furthermore, government in France used a television campaign known as "Let us reduce our garbage: We're overflowing" to reduce littering such as single-use throwaway products, excessive paper printing, and bottled water (OECD, 2008).

As the role model to all people in the country, Tan et al. (2010) indicated that Malaysian government has implemented various strategies for sustainable consumption and development. Initiated policies such as encouraging car-pooling, providing incentives to green product producers and manufacturers, and encourage consumers to behave in green manner or purchase green products that initiated by Malaysia government in order to enhance environmental sustainability.

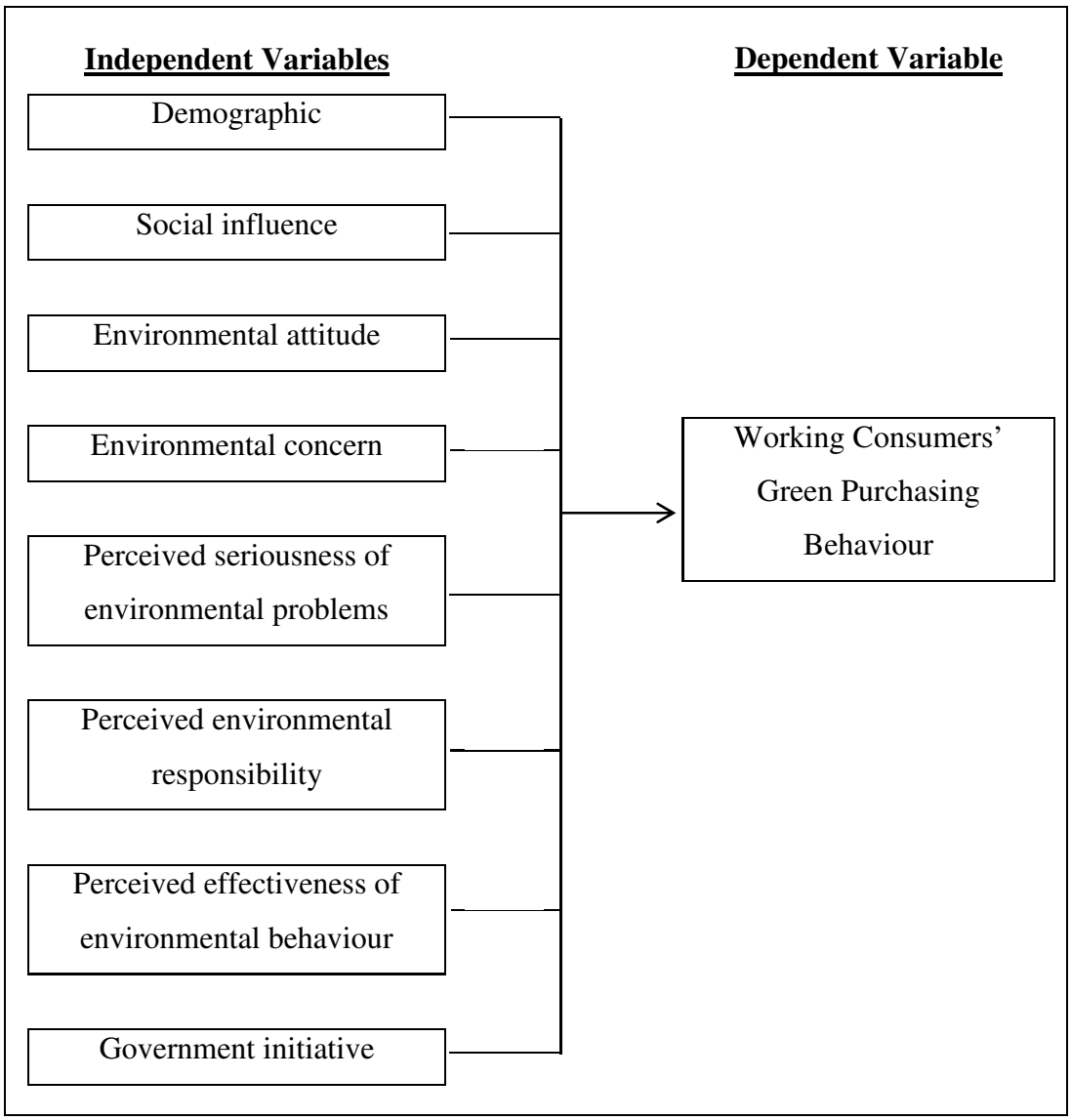
In addition, Haron, Paim and Yahaya (2005) said that Malaysian government choose to use social advertising to educate and foster environmental awareness and concern among the public. Government should launch a campaign to promote consciousness on the environmental protection activities such as "go-green"

campaign, “Earth Hour”, and others campaign activities to reduce the burden of environmental.

2.2 Research Framework

The conceptual framework is the foundation for the research project. In this study, both TRA and TPB theories are used to form the research framework. The figure below shows the conceptual framework established to study the relationship between dependent and independent variables.

Figure 1: Proposed Conceptual Framework



2.3 Hypotheses Development

2.3.1 Demographic Profile

Information regarding to consumers' demographic profile enable marketers to better perform its market segmentation and target consumers. Straughan et al. (1999) and Soonthonsmai (2001) indicated that some demographic variables were significantly correlated with consumers' green purchase behaviour when considered individually whereas some are lacks significance.

Besides, Tikka, Kuitunen, and Tynys (2000), Mainieri, Barnett, Valdero, Unipan & Oskamp (1997) and Eagly (1987) have demonstrated that gender have significant different towards environmental behaviour because female have positive attitude towards environment than male. However, Tan et al. (2010) found that there is no significant different between male and female in green buying behaviour. Therefore, gender plays an important role to consumers who care for their environmental (Ruiz, Arcas and Cuestas, 2001). Green purchase intention also positively correlates with age and income except for education (Soonthonsmai, 2001).

Memery, Megicks and Williams (2005) argued that race should be considered as an important factor when profiling consumerists and pro-environmental consumers. However, Sinnappan et al. (2011) resulted that race group is no significant in explaining the consumers buying behaviour towards green products. Generally, income was positive correlated to green purchasing behaviour because most green products are more expensive than conventional products (Awad, 2011). However Sandahl and Robertson (1989), Roberts and Bacon (1997) and Akehurst, Afonso, and Martins Gonçalves (2012) found that the result are not convincing. Different sort of demographic variables will result in different outcomes towards green purchasing behaviour. Hence, demographic variable such as gender, ethnic and monthly income will be discussed in this study and the hypotheses are developed as:

H_{1a}: There is a significant difference between gender and working consumers' green purchase behaviour.

H_{1b}: There is a significant difference between ethnic groups and working consumers' green purchase behaviour.

H_{1c}: There is a significant difference between monthly income and working consumers' green purchase behaviour.

2.3.2 Social Influences (SI)

Social influence has been considered as one of the important factors in determined an individual's purchasing behaviours. According to Baker et al. (2008), the study found that social influence has a strong connection with eco-friendly products because it was significantly drive people to purchase green products. Chen-Yu and Seock (2002) found that peer conformity is an important factors for purchase certain things. Thus, social influence was important in driving eco-responsible behaviour. Moreover, Kalafatis et al. (1999) proved that the most significance determinant that affects consumers' purchasing intention towards green products was social influence. Lee (2009) and Abdul Wahid et al. (2011) also found that social influence was the significant stimulus and highest predictor towards green purchase behaviour.

Besides, peer influence was one of the social influences which can drive consumer purchasing behaviour towards green products. According to Ryan (2001), a person normally will share and communicate with others who have the same thought, belief and behaviour. So, peer can be strongly influence and affect their purchase behaviour. For example, consumers may choose to purchase green products when they have influence by their peers of friends who often share the beneficial of green products.

In additions, Moschis and Churchill (1979) found that mass media can influence consumers' purchase behaviour towards green products. People normally will share and gather information via various types of communication sources such as Facebook, Twitter and etc. Moreover, Atwater, Salwen & Anderson (1985) revealed that mass media such as magazine, newspaper, or television can be a channel that enables consumers to access various information regarding to the environmental problems. Thus, the hypothesis is developed as:

H_{2a}: There is a positive relationship between social influence and working consumers' green purchase behaviour.

2.3.3 Environmental Attitude (EA)

People will purchase green products if they believed that their consumption have a significant influence and consequence to their environment (Follows and Jobbers, 2000). According to Gupta and Ogden (2009), Wasik (1992), Prothero (1990), Rice, Wongtada and Leelakulthanit (1993) sense of environmental deterioration makes consumers willing to pay more for green products in order to protect their environment and this form their attitude and create green purchasing behaviour among them. Squirea, Juris and Cornwell (2001) found that consumers who have positive attitude towards environment are more likely to purchase organic foods.

The result from a study conducted by Mostafa (2007) shows that consumers' attitude towards green purchase can directly affects their actual green purchase behaviour. Researchers such as Beckford, Jacobs, Williams, & Nahdee (2010), Cornelissen, Pandelaere, Warlop and Dewitte (2008), and Lynne & Rola (1988) indicated that environmental attitudes have a significant or positive effect on consumers' green purchasing behaviour. On the other hand, Paco et al. (2009) stated that attitude still could have a powerful influence on customers green purchase although it not necessarily used as a foundation for them in purchasing decisions.

However, some studies conducted by Axelrod and Lehman (1993), Smith, Haugtvedt & Petty (1994), Berger and Corbin (1992) revealed that there was a moderate or weak relationship between environmental attitude and green purchasing behaviour. Lee (2008) also found that environmental attitude was a weak factor of Hong Kong young consumers' purchasing behaviour. Hence, it necessary to has an investigation on this issue in the context of working consumers' green purchase behaviour in Malaysia. Thus, the hypothesis will be:

H_{2b}: There is a positive relationship between environmental attitude and working consumers' green purchase behaviour.

2.3.4 Environmental Concern (EC)

Suchard and Polonski (1991) stated that ethical consumption was one of the purchasing behaviour expressed by consumers who are concern about the environment. These kinds of consumers will only buy green products and check the packaging material of products.

Many researchers proved that environment concern has positively and significantly influence on consumers' behaviour to purchase green product (Roberts and Bacon, 1997; Van Liere and Dunlap, 1981; Bamberg, 2003). According to Said (2003), health issues cause the need of high concerning towards environmental. Therefore, Kim et al. (2005) revealed that people with high concerning to the environmental problems are more willing to buy eco-friendly products and vice versa. Besides, consumers who are willing to pay higher price for renewable energy indicated that they are more caring and conscious to the problems appear in their environmental as compare to others who are not caring to their surroundings (Bang et al., 2000).

The level of people's towards environmental concern is associated with their interest and desire to purchase green products (Biswas, Liecata, McKee, Pullig & Daughtridge, 2000; Mainieri, Barnett, Unipan & Oskamp, 1997; Schwepker &

Cornwell, 1991). Hence, environmental concern would be an essential factor for marketers as they can easily target environmentally conscious consumers (Mostafa, 2007). Meanwhile, Lee (2008) found that the second factor influencing the green purchasing behaviour of youth in Hong Kong is environmental concerns. Therefore, the hypothesis is defined as:

H_{2c}: There is a positive relationship between environmental concern and working consumers' green purchase behaviour.

2.3.5 Perceived Seriousness of Environmental Problems (EP)

According to Dunlap (1994), most of these studies concentrated on determining the subjects view of the problem, its seriousness and how is differs from the numerous cultures. Dunlap (1994) found that Asian people were more concerned with such problems than other Western counties because Asian society tends to perceive their local society in a negative manner than Western countries. Bord and O'Connor (1997) found that women were more perceived seriousness of the environmental problems and worried about various negative impacts on their health than men.

Sinnapan et al. (2011) reveals that consumer would really take severe action of it because environmental problems will seriously affect their health and quality of life. However, Lee (2008) found that it was an unimportant factor in influencing teenagers' green purchasing behaviour due to their desensitization. Thus, the result might vary in different context of study. Hence, the hypothesis is developed as:

H_{2d}: There is a positive relationship between perceived seriousness of environmental problems and working consumers' green purchase behaviour.

2.3.6 Perceived Environmental Responsibility (ER)

Lai (2000) has reported that Hong Kong's citizens have really aware of the environmental problems and more responsible in protecting their environment. However, their sense of individual responsibility in environmental safety is normally weak (Lai, 2000). However, study conducted by Lee (2008) demonstrated that the perceived environmental responsibility was an important determinant for Hong Kong's youth consumers towards purchase green products. In addition, females tend to have a better ability to take the responsibility for alleviating problems in the world (Gough, 1994). Therefore, Zelezny, Chua and Alrich (2000) have evidenced that females had higher levels of perceived personal responsibility towards environmental protection as compared to males.

To create green purchase behaviour among individuals cannot be short of their own perceived responsibility. Protecting the environment is the responsibility of everyone. This also highly includes companies that produce green products. Thus, perceived environmental responsibility is the second top predictor of green purchasing behaviour in the study of Sinnapan et al. (2011). Therefore, the hypothesis is developed as:

H_{2e}: There is a positive relationship between perceived environmental responsibility and working consumers' green purchase behaviour.

2.3.7 Perceived Effectiveness of Environmental Behaviour (EB)

According to Lee (2008) revealed that the people have different perception will lead to different action and this also will influence the consumers whether to buy green products or not. Lee and Holden (1999) demonstrated that perceived effectiveness of environmental behaviour is a significant determinant of pro-environmental consumer behaviours. Consumers who have high perceived effectiveness of environmental behaviour will caused them to become green buying behaviours, including the purchase of sustainable products (Vermeir &

Verbeke 2006), organic food (Verhoef 2005), and green products (Kim et al. 2005).

Different consumers' perceived effectiveness of environmental behaviour can be observed in various situations. If people believe that an environmental problem can be solved by a specific behaviour, this may change the consumer's behaviour. Perceived effectiveness of environmental behaviour can translate their attitude into actual purchasing action (Berger et al., 1992; Lee et al., 1999). Therefore, the hypothesis is defined as:

H_{2f}: There is a positive relationship between perceived effectiveness of environmental behaviour and working consumers' green purchase behaviour.

2.3.8 Government Initiative (GI)

In study of Tsen, Phang, Hasan and Buncha (2006) revealed that although consumers have high sense on environmental concerning, but they still deemed government play an important role towards consumers purchasing behaviour on green products. Ministry of the Environment study as cited in Sinnappan et al. (2011), since government is the largest purchaser and if its purchasing policies focus on environmental performances can increase the production and consumption of green products. However, according to Lee (2004), the consumption of green products in Korea has decreased due to poor quality even though the government was strongly support for green marketing as compared with Japan. Thus, different result in government role between Japan and Korea create a need for investigation in Malaysia. Therefore, the hypothesis is defined as:

H_{2g}: There is a positive relationship between government initiative and working consumers' green purchase behaviour.

2.4 Conclusion

Overall, chapter two has discussed the literature review and a proposed conceptual framework was developed. Finally, hypotheses have developed. The next chapter will focus mainly on the research methodology used to carry out this study.

CHAPTER 3

RESEARCH METHOD

3.0 Introduction

This chapter will explain the research methodology used to collect data in order to answer the research question and hypotheses. This chapter will start with research design and follow by methodology data collection, sampling design, research instrument which will cover pilot test in this section, as well as measurement scales and methods of analysis.

3.1 Research Design

Research design is a master plan that stated the methods and procedures for collecting and analysing the needed information (Zikmund, 2003; Cooper & Schindler, 2008). According to Sekaran (2003), research design is set up to decide on how to collect data, analyse data, interpret data and find a solution to the problem. The research conducted by researcher may be visualized as telling something, happening of something or any particular situation. Hence, appropriate research was needed to avoid error occurred in collecting relevant data.

3.1.1 Quantitative Research

Quantitative research is applied in this study where a large amount of respondents' options can be collected through structured questions (Zikmund, 2003). Thus, its analysing methods consisted of mathematical formulas and probability to render findings (Zikmund, 2003) which means that the measurement is objective, quantitative and statistically valid. Besides, according to Malhorta and Peterson (2006), a course of action can be proposed base on the conclusive result of quantitative research.

3.1.2 Descriptive Research

Descriptive research is appropriate in this study because it aims to determine the factors that influence working consumers' green purchase behaviour in Malaysia. Descriptive research is used to describe the population characteristics (Zikmund, 2003) and describe the available circumstances instead of interpreting and making judgments (Creswell, 1994). The main objective of the descriptive research is to verify of the developed hypotheses that reflects the current situation. Besides, descriptive studies are based on some previous understanding of the nature of the research problem (Zikmund, 2003).

3.2 Data Collection Method

Researcher uses both primary and secondary data to collect the information needed in this study. Primary data was needed and collected through survey which uses to test the hypotheses. Meanwhile, secondary data was collected via journals from internet which was used to construct the hypothesis in order to support the research study.

3.2.1 Primary Data

Primary data are the data usually developed and gathered specifically for the research project at hand (Zikmund, 2003). Normally, the collected data is first-hand experience, so the primary data is more reliable, authentic and objective. The primary data is the fundamental source of data collection method in this study. Through the data collected from a sample of people by using questionnaire can make a conclusion on the characteristics of the population. There have four methods to collect primary data which included survey, interviews, observation and focus group. Survey is the most common method used in descriptive research to generate primary data. Self-administered survey will used to collect primary data.

3.3 Sampling Design

According to Zikmund (2003), sampling is a process that uses a subset of population to make a conclusion that represented the whole population. It enables researchers to predict some unknown populations' characteristics (Zikmund, 2003). Sampling process is use to outline the target population of the research, determine sample size and sampling technique, and appropriate way to select target respondents (Five Steps in Creating a Survey Sampling Plan, 2012).

3.3.1 Target Population

Target population is information provided from collected objects that need to be study in a research in order to make the right inferences. The appropriate target population should be defined in the beginning of the sampling process. The target respondents of this study will be working consumers in Malaysia. The reason for chosen this targeted respondents is because working consumers are fully manage their own daily consumption. This is because their monthly income will determine their final purchasing decision in certain consumption process. Besides, working

consumers now are more knowledgeable and concerned the environmental problems due to government and education efforts. Thus, working consumer may have an interest on buying green products as they think their actions can reduce the harmful of environment. By this, researcher can be analysing more accurately in the working consumers' purchasing behaviour towards green products.

3.3.2 Sampling Frame and Sampling Location

A sampling frame is the list of elements from which the samples may be drawn (Zikmund, 2003). However, sampling frame is not relevant in this research because non-probability sampling techniques are used.

The self-administrated questionnaires are randomly distributed mainly in Klang Valley where the population is more condense and convenience. The potential respondents for the current analysis are working consumers in Malaysia regardless the status or position they are currently held in their company. Meanwhile, some questionnaires also have been distributed to potential respondents via Internet.

3.3.3 Sampling Elements

For this research purpose, working consumers in various occupations with different ages, gender, education level, and income level are randomly selected to participate in the survey.

3.3.4 Sampling Technique

In this study, non-probability sampling is used to collect the samples, but not all the individuals being selected are given an equal chance. This is because the probability of each individual being chosen is unknown. Besides, it relies heavily on the personal judgment to select the unit of the sample. Non-probability

sampling also save the cost and time for researchers and it often seem to give acceptable results.

There are four types of non-probability sampling such as convenience sampling, judgmental sampling, quota sampling and snowball sampling (Zikmund, 2003). This study is utilizes a convenience sampling technique that is an ease in sampling. This sampling technique is to achieve and records the relevant information from the model or the unit of the study that are easily available (Zikmund, 2003). Generally, convenience sampling can use to obtain a large number of completed questionnaires result in quickly and economically way. This type of sample is very low cost and extensively used. It also not requires a list of population in order to select the respondents for the sample size of this research (Zikmund, 2003).

3.3.5 Sampling Size

Roscoe (1975) recommended that the appropriate sample size is larger than 30 and less than 500 because larger sample size can generate more accurate data (Malhotra et al., 2006). 220 questionnaires were distributed to the target respondents. Lackey and Wingate (1998) deemed that 10% of the final study size is commonly sufficient for pre-test study. Therefore, 22 sets of questionnaires will be carried out for pre-test purpose in order to ensure the questionnaire quality and appropriateness. Finally, only a total of 200 questionnaires are completely collected.

3.4 Research Instrument

Research instrument is a testing instrument that measures a given phenomenon. Questions in questionnaire were developed based on the literature review. Self-administrated questionnaire was used to collect the primary data.

3.4.1 Questionnaire Design

Questionnaire design is one of the most critical stages in the survey research process because it will affect the response rate and the reliability and validity of data collection. Researcher should use simple, understandable, unambiguous words in designing the questionnaire's questions (Zikmund, 2003). Besides, the questionnaire should only state the relevant and require question in order to gather the relevant data. In addition, the finding, sources of data, layout, order and flow of the questions are the critical factors in designing the questionnaire. It was important that the questionnaire design was attractive and clear in order to encourage respondents to fill up and return back to researcher. Besides, English was the solely and appropriately language used in the questionnaire designation. Both closed-ended and opened-ended questions were used in the questionnaire.

This complete set of questionnaire consists of cover letter, demographic factors, factors influence, green purchase behaviour, and the closing of the questionnaires. The layout of the questionnaire was started from cover letter which is used to explain the purpose of the survey. By explaining to the respondents the purpose of the questionnaire, it will enhance the participation of the targeted respondents. Besides, according to Dillman (2000), explaining why researcher want the respondents to complete the survey helps to achieve as high a response rate as possible, and this should be done on the first page of the questionnaire. In addition, the researcher thanks the respondents for their participation and appreciates them for spending time in completing the questionnaire. Lastly, researcher's contact method such as name and email address was provides to respondents for further clarification for their queries. This questionnaire consists of three parts which is section A (demographic factors), B (factors influencing) and C (green purchase behaviour) that require answering by the respondents.

In section A, respondents are asked to provide some basic demographic information. This part consist about five simple questions that require respondents which include the gender, age, race, education level, and monthly income. Normally, the sequencing of the questions is flow from the simple to depth and

respondents are given a series of answers and are required to select the one that best describe themselves. Certain demographic question like age is asked in an open-ended basis which required respondents to indicate their ages by writing down the number of years. This enables researcher to calculate the average age of the respondents. This is helpful in such a way that for instance, researcher can identify that the respondents of this survey has an average years of 25. The demographic information is important to this research. For instance, if most of the respondents are having Bachelor degrees, then researcher can predict that this research best describes the factors that influence working consumers' purchasing behaviour are those who having high education.

All the independent variables questions which designed to identify the factors influencing levels of the respondents will be asked in section B. In this part, it includes a series of statements regarding different factors influences and the respondents were asked to indicate their degree of agreement with each statement. Responses were scored on a five-point scale: 1 for "strongly disagree", 2 for "disagree", 3 for "neutral", 4 for "agree", and 5 for "strongly agree". Under each factors influence, several questions were asked in order to compute an average and to enhance the accuracy of the measure of the respondents' influencing level.

In section C, the questionnaire is to test the green purchase behaviour of the respondents. Similar with section B, it includes a series of statements and the respondents were asked to indicate their degree of agreement with each statement. Again, a five-point scale was used to measure the agreeableness of the respondents. Besides, multiple questions were asked in order to compute an average of the responses and to enhance the accuracy of the measure of the respondents' level of green purchasing behaviour. This part is crucial as researcher can identify not only the level of green purchase behaviour of the respondents, but also identify the relationship between factors influences and green purchase behaviour of working consumers. Furthermore, researcher also able to understand which factors influences has no relationship with green purchase behaviours and vice versa.

At the end of the questionnaire design, researcher thanks the respondents for taking the time to complete the questionnaire. Besides, researcher explain again to the respondents that all the information collected will be kept confidential and will only be used for academic purposes only.

3.4.2 Pilot Test

Pilot test also known as pre-testing, enable researchers to determine whether there have any ambiguous questions being asked in the questionnaire through the respondents' feedback (Zikmund, 2003). A pilot study is conducted to detect the weakness in design of the questionnaire (Cooper et al., 2003). The purpose of pilot test is to refine the questionnaire to ensure the respondent can answer the questions at ease and make adjustment before distribute to target respondents. After conduct the pre-test of questionnaire, the data collected will be more reliable and valid.

Lackey and Wingate (1998) proposed that 10% of the final study size is commonly sufficient for pilot testing. Thus, 22 sets of questionnaires were distributed to target respondents for pilot testing to ensure that there are no major problems of respondents understanding the questions and manage to answer them well. However, feedback from respondents such as typing error and grammar mistake did exist in the questionnaire. Although it was minor error, but it still can reduced the questionnaire quality and appropriateness.

3.5 Constructs Measurement

3.5.1 Origins of constructs

The sources used in this research project were adopted from Sinnappan and Abd Rahman (2011) and Ooi, Kwek and Tan (2012). All the questions asked for each variable are as the table below:

Table 4: Questions Asked For Each Factors Influence

Factors Influence	Questions Asked	Sources
Social Influence (SI)	1. I learn so much about environmental products from my friends. 2. I learn so much about environmental issues from my friends. 3. I often buy environmental products with my friends. 4. I often share information regarding environmental products with my friends.	Sinnappan & Abd Rahman (2011)
Environment Attitude (EA)	1. It is essential to promote green living in Malaysia. 2. I strongly agree that more environmental protection works are needed in Malaysia. 3. It is very important to raise environmental awareness among Malaysian. 4. Environmental protection issues are none of my business. 5. It is unwise for Malaysia to spend a vast amount of money on promoting environmental protection.	Ooi, Kwek & Tan (2012)
Environmental Concern (EC)	1. Malaysia's environment is my major concern. 2. I am emotionally involved in environmental protection issue in Malaysia. 3. I often think about how the environmental quality in Malaysia can be improved.	Sinnappan & Abd Rahman (2011)
Perceived seriousness of environmental problems (EP)	1. I think Malaysia's environmental problems are worsening. 2. Malaysia's environmental problems are threatening our health. 3. I think Malaysia's environmental problems need to be dealt urgently. 4. Malaysia's environmental problems are threatening the reputation of Malaysia.	Sinnappan & Abd Rahman (2011)

Perceived environmental responsibility (ER)	1. Environmental protection starts with me. 2. I think I should have so much responsibility in protecting the environment in Malaysia. 3. I have taken responsibility for environmental protection since I was young. 4. I am willing to take up responsibility to protect the environment in Malaysia. 5. Environmental protection is the responsibility of the environmental organization, not me.	Sinnappan & Abd Rahman (2011)
Perceived effectiveness of environmental behaviour (EB)	1. I think if I carry out some pro-environmental behaviour in my everyday life, I would contribute a lot to our environment. 2. I think my participation in environmental protection would influence my family and friends to participate too. 3. The environmental quality of Malaysia will stay the same even if I engage in some pro-environmental behaviour. 4. Even if I recycle and reuse things, the environmental quality of Malaysia will remain as it currently is.	Sinnappan & Abd Rahman (2011)
Government Initiative (GI)	1. Environmental protection is the responsibility of the Malaysian government, not me. 2. Schools should require all students to take a course dealing with environment and conservation problems. 3. The government should subsidize research on technology for recycling waste products. 4. Government should enforce environmental rules and regulation.	Ooi, Kwek & Tan (2012)

Table 5: Questions Asked For Green Purchase Behaviour

Dependent Variable	Questions Asked	Source
Green Purchase Behaviour (GPB)	1. When I want to buy a product, I look at the ingredients label to see if it contains thing that are environmentally damaging. 2. I prefer green products over non-green products when the products qualities are similar. 3. I choose to buy products that are environmentally friendly. 4. I buy green products even if they are more expensive than the non-green ones.	Sinnappan & Abd Rahman (2011)

3.5.1 Primary Scale of Measurement

Researcher able to collected all the relevant information or data from respondents through questionnaire distribution. All the information collected will help researcher to response or resolve the current business problem. In this study, researcher will use all the measurement scale to measure the questionnaire. The four measurement scales are nominal, ordinal, interval and ratio scale.

3.5.1.1 Nominal Scale

According to Zikmund (2003), nominal scale is the simplest type of scale. The numbers or letters allocated to objects serve as labels for identification or classification purpose only. If the alpha numerical data is not in order form, it will use nominal scale to measure. In other words, nominal scale does not imply any ordering among the responses. For instance, demographic profile in Section A such as gender and races will use nominal scale to measure. This is because data of ‘male’ and ‘female’ are not in ordering form as well as races.

3.5.1.2 Ordinal Scale

Ordinal scale is a non-numerical scale that arranges objects or alternatives according to their magnitudes in an ordered relationship (Zikmund, 2003) but the differences between each one is not really known. If the alpha numerical data is in order form, it will use ordinal scale to measure. Changing the response format to numbers does not change the meaning of the scale. For example, ordinal scale will be used in the monthly income because the data are in order form and researcher does not know the actual monthly of anyone.

3.5.1.3 Interval Scale

According to Zikmund (2003), interval scale is a numeric scale that not only arranges objects or alternative according to their magnitudes but also distinguishes this ordered arrangement in units of equal intervals. These types of scale are best used for opinion measurement. These are variables that can rank data and precise differences between units of measure do not exist. For example, Likert scale rank from “Strongly Agree”, “Agree”, “Neutral”, “Disagree” and “Strongly Disagree” are applied in Section B and C to analyses the degree of agree or disagree on both independent and dependent variables.

3.5.1.4 Ratio Scale

Ratio scale is one of the highest levels of measurement. Ratio scale is a scale having absolute rather than relative quantities and possessing an absolute zero, where there is an absence of a given attribute (Zikmund, 2003). For instance, questions like “Please state your age” and “What is your monthly income” in the questionnaire are under ratio scale because it having the properties of interval scale and it has a true zero point.

3.6 Data Processing

Data processing refers to the converting process that transforms plain data into valuable information or information into data. Data processing ensures that the data is presented in a clean and systematic manner, easy to understand and be used for further for business purposes. The steps of data processing included questionnaire checking, data editing, data coding, data transcription, and data cleaning.

3.6.1 Questionnaire Checking

According to Malhotra (2007), the initial step of data processing is questionnaire checking. It uses to check the completeness of the questionnaires which are returned by respondents. Problems or errors in the earlier stage such as incomplete the questionnaire, respondents did not follow instructions when answering the questionnaire, or some pages are missing from the returned questionnaire can be detected and it allowed researcher to make an appropriate changes or corrections before conducted a real survey.

3.6.2 Data Editing

According to Zikmund (2003), editing means data is ready for coding and transfer to data storage. It consists of the questionnaire screening process which is to ensure the completeness, consistency, and reliability of data. Data editing is used to avoid incompleteness responses because missing value in the questionnaire will be rejected. If missing value in the questionnaires were discovered, researcher will either assigned missing value to unsatisfactory responses or discarded the unsatisfactory respondents. Hence, researcher will request respondents to fill in the missing information immediately to avoid missing value occurred.

3.6.3 Data Coding

The available data is not in any specific order even after editing process. Coding process is needed to make it more usable for further usage. Coding is the process of identifying and classifying each answer with a numerical score or other character symbol (Zikmund, 2003). Researcher will assign a numbers for all category scales used in the questionnaires. For example, in section A, "Male" is allocated as 1 and "Female" is allocated as 2. This is to ease for data entry process.

3.6.4 Data Transcription

After data have been properly coded, the next step is transferring the coded data from questionnaire directly into computer software to perform the eventual cross tabulation. The desired results can be obtained through Statistical Project of Social Science (SPSS) software when all the data have completely entered into the software.

3.6.5 Data cleaning

According to Malhotra and Birks (2007), the final step in data processing is data cleaning which use to ensure no missing responses in all the key-in data. Consistency checking can identify whether the data is logically incompatible or have extreme value. In addition, SPSS software programme can used to identify out of range value.

3.7 Data Analysis

Data analysis refers to the process of analysing and evaluating data to form some sort of finding or conclusion. The purpose of data analysis is to collected information that pertinent to the subject under consideration. The objective of carefully selecting the data analysis strategies is to translate the meaning of raw data into meaningful information for comparison, justification, and exploration purposes. It is planned that a statistical package to be used for this process. Descriptive analysis, factor analysis, reliability test and inferential analysis will be used to analyse the data.

3.7.1 Descriptive Analysis

According to Zikmund (2003), descriptive analysis is the process of transformation of raw data into a form that guides the researcher in better understanding and interpreting of the raw data. According to Hair (2006), descriptive analysis refers to a set of scientific methods and procedures to identify and describe the existing characteristics of a target population. Descriptive statistic used to summaries the characteristic of the data.

3.7.1.1 Frequency Distribution

Frequency distribution is a set of data organized by summarizing the number of times a particular value of a variable occurs (Zikmund, 2003). It only suit for low level measurement scale which is nominal or ordinal scale (Zikmund, 2003). The purpose of frequency is to summarize how frequently each response occurs. After that, data will tabulate into frequency table which included the percentages for all the values correlated with that variable (Malhotra, 2007).

3.7.2 Factor Analysis

Factor analysis was use to investigate whether a number of variables are correlated with each other. This allows numerous inter-correlated variables to be condensed into fewer dimensions, called factors. Kaiser and Rice (1974) recommend Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy below 0.50 indicated as unacceptable.

3.7.3 Reliability Test

Reliability test is used to decide the degree of stability and consistency with which the repeated measurement are made on the characteristic (Zikmund, 2003). Cronbach's alpha reliability coefficient normally ranges between 0 and 1. The higher the Cronbach's alpha is, the more reliable the test will be and vice versa. According to Nunnally (1978), a value of 0.6 or more indicated satisfactory internal consistency reliability.

3.7.4 Inferential Analysis

Besides that, inferential analysis is also to be used to investigate the research question, the theoretical framework, and the various hypotheses. Inferential statistics is used to generate conclusion about a population from observations and analyses of a sample. For this research purpose, SPSS is to be used to conduct the following analysis: Independent Sample t-test, One-way Analysis of Variance (ANOVA), Pearson's Correlation Analysis and Multiple Regression.

3.7.4.1 Independent Sample t-test

According to Hair et al. (2003), independent sample t-test is used to measure the differences between two independent group means. T-tests also appropriate for larger sample sizes, where n>30. Besides, the independent variable is non-metric which are nominal and ordinal scale whereas the dependent variable is metric which are interval or ratio scale. Likewise, the independent variable must have two groups of respondent which are male and female.

3.7.4.2 One-way Analysis of Variance (ANOVA)

Analysis of variance (ANOVA) is used to test the hypothesis that whether three or more means are statistically different from each other. One-way ANOVA is used since there is only one independent variable. Besides, the independent variable must be non-metric which are nominal or ordinal scale and must more than two groups for test. Likewise, the dependent variable must be metric which are interval or ratio scale. In this study, researcher use one-way ANOVA to test for the race groups and monthly income. Those testing groups are more than two groups and fulfil the requirement for implement ANOVA test.

3.7.4.3 Pearson's Correlation Analysis

Pearson's correlation coefficient is a measure of linear association. Correlations measure how variables are related. In other words, correlation analysis measured the degree of change in one variable will associated with the changes in another variable. Both independent variable and dependent variable are metric which are interval or ratio scale. It uses to measure the relationship between two groups. The correlation coefficient is ranges from -1.00 to +1.00 (Hair, Bush & Ortinau, 2006). When the value is +1.00, it means that there is a perfect positive linear relationship between the two variables, and vice versa. For an example, this test

use to measure the relationship between social influence and working consumers' green purchase behaviour.

3.7.4.4 Multiple Regressions

Multiple regressions analysis is used to determine the relationship between variables and to predict value of the dependent variable (Y) based on value of independent variables (X). Likewise, both independent variable and dependent variable are metric that is interval scales. Dependent variable (Y) is a criterion or a variable that is to be predicted or explained (Zikmund, 2003). In this research, the dependent variable is the working consumers' green purchase behaviour. Researchers will prove by the data collected about whether the factors influence have relationship between working consumers' green purchase behaviour. It also allows researcher to test which factors influence have significant relationship with working consumers' green purchase behaviour in separately method.

3.8 Conclusion

As conclusion, this chapter have discussed the method used to carry out this research. After completely collected all the questionnaire returned by respondents, data will be analyse through SPSS software. The next chapter will focus on interpretation of the research result.

CHAPTER 4

RESEARCH RESULTS

4.0 Introduction

The data collected from returned respondents will be analysed through SPSS software and few statistical analysis tests will be applied. Researcher will use descriptive analysis, factor analysis, reliability test, and inferential analysis (Independent Sample t-test, One-way ANOVA, Pearson Correlations, and Multiple Linear Regression) to analysis this research data.

4.1 Descriptive Analysis

Descriptive analysis is use to describe the main characteristics of a collected data. In other word, it was a conclusion technique that is used to describe some key features of the data in this research study.

4.1.1 Respondents' Demographic Profile

Table 6: Respondents' Demographic Profile

Characteristics	Per cent (%)
Gender	
Male	47.5
Female	52.5
Age	
Lowest thru 25	10.5
26 – 35	29.0
36 – 45	32.0
46 thru highest	28.5
Ethnic	
Malay	25.0
Chinese	49.0
Indian and others	26.0
Level of Education	
Secondary School	16.0
Pre-University (6^{th} Form)	11.0
Diploma	9.0
Bachelor's Degree	23.5
Master's Degree	40.5
Monthly Income Level	
Below RM 1,999	24.0
RM 2,000 – RM 2,999	26.5
RM 3,000 – RM 3,999	33.0
RM 4,000 and above	16.5
Total Percentage	**100.0**
Total Respondents	**200**

Table 6 describes the main characteristics of the targeted respondents in Malaysia. On gender, majority of the respondents are female that is 52.5% out of a total of 200 respondents whereas 47.5% respondents are male.

With regard to the age group in table 6, more than 30.0% (32.0%) of the respondents are aged 36 to 45 years old, follow by aged 26 to 35 years old (29.0%). In addition, about 30.0% (28.5%) of the respondents are aged 46 years old or older and 10.5% of the respondents are aged 25 years old or younger.

By looking to the ethnics group in table 6, Chinese was the majority respondents in this study, which consist almost 50% (49.0%) out of the total respondents, follow by Indian and others respondents (26.0%), and Malay respondents (25.0%),

In table 6, Master Degree holder and Bachelor Degree holder consisted more than 60.0% of out of a total of 200 respondents. More than 40.0% respondents are Master degree holder and about 23.0% are Bachelor degree holder. In addition, around 16.0% respondents are holding secondary school, follow by 11.0% pre-university (6th form) respondents and only less than 10.0% respondents are diploma holders.

With regard to the income level in table 6, majority respondents' income level are fall in the income range of RM 3,000 – RM 3,999, which consist of 33.0% respondents, follow by 26.0% (26.5%) respondents with income between RM 2,000 – RM 2,999. Meanwhile, around 25% respondents with income below RM 1,999, and more than 15.0% (16.5%). respondents with income RM 4,000 and above

4.2 Factor Analysis

Factor analysis used to expose the relationships among variables which can concentrate those inter-correlated variables into few factors. Thus, researcher uses factor analysis to investigate whether a number of variables are correlated with each other. The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy is an index used to examine the appropriateness of factor analysis. High value indicates factor analysis is appropriate and low value implies that factor analysis may not be appropriate. However, value more than 0.60 is adequate (Pallant, 2001). Kaiser et al. (1974) recommend accepting values of KMO test is as the following table.

Table 7: Kaiser-Meyer-Olkin Measure of Sampling Adequacy

KMO Value	Interpretation
0.00 to 0.49	Unacceptable
0.50 to 0.59	Miserable
0.60 to 0.69	Mediocre
0.70 to 0.79	Middling
0.80 to 0.89	Meritorious
0.90 to 1.00	Marvellous

Note: Rovai, A. P., Bakar, J. D. & Ponton, M. K. (2013). *Social Science Research Design and Statistics: A Practitioner's Guide to Research Methods and IBM SPSS Analysis. 11.0 update (2nd ed.).* Virginia Beach, VA: Watertree Press.

Bartlett's test is another indication of the strength of the relationship among variables. In Bartlett's test, this study needs to reject the null hypothesis of uncorrelated variable or non-identity matrix. Thus, it is a good idea to proceed to a factor analysis test.

However, out if 33 items, only a total of 31 items will be used in Factor analysis due to Principal Components Analysis (PCA). The result of factor analysis will be show in the following table.

Table 8: Factor Analysis

KMO and Bartlett's Test		Total Variance Explained (Initial Eigenvalues)			Rotated Component Matrix								
						Component							
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	(Bartlett's Test of Sphericity) Sig.	Component	Total	% of Variance		1	2	3	4	5	6	7	8
0.781	0.000	1	6.366	20.537	SI1	0.899							
		2	2.954	9.531	SI2	0.925							
		3	2.838	9.156	SI3	0.828							
		4	2.007	6.473	SI4	0.788							
		5	1.749	5.641	EA1			0.838					
		6	1.479	4.769	EA2			0.848					
		7	1.308	4.219	EA3			0.866					
		8	1.195	3.854	EC1							0.682	
		9	0.986	3.182	EC2							0.744	
		10	0.893	2.881	EC3							0.656	
		11	0.806	2.601	EP1				0.669				
		12	0.788	2.543	EP2				0.776				
		13	0.769	2.480	EP3				0.740				
		14	0.716	2.310	EP4				0.690				
		15	0.637	2.054	ER1						0.672		
		16	0.578	1.866	ER2						0.672		
		17	0.530	1.711	ER3						0.621		

18	0.516	1.664	ER4			0.604	
19	0.455	1.467	ER5			0.506	
20	0.427	1.376	EB1	0.783			
21	0.422	1.362	EB2	0.831			
22	0.367	1.183	EB3	0.856			
23	0.349	1.127	EB4	0.823			
24	0.322	1.039	GI1				0.574
25	0.299	0.966	GI2				0.542
26	0.285	0.919	GI3				0.627
27	0.270	0.870	GI4				0.581
28	0.267	0.861	GPB1		0.625		
29	0.190	0.613	GPB2		0.575		
30	0.162	0.523	GPB3		0.680		
31	0.069	0.222	GPB4		0.668		

In table 8, the KMO measure is 0.781 which is considered as Middling. This indicates that the sampling identify in this study is satisfactory for factor analysis to proceed. In Bartlett's test, this study needs to reject the null hypothesis of uncorrelated variable or non-identity matrix. A significant level 0.000 indicates that the correlation matrix is non-identity matrix. Hence, the variables in this analysis have some relationships between the each other. This result is small enough to reject the hypothesis thus it is a good idea to proceed with a factor analysis.

The Kaiser criterion states that researcher should use a number of factors equal to the number of the Eigenvalues of the correlation matrix that are greater than one. In table 8, there have eight components were greater than one which indicated that all the measurable variables can be group into eight components respectively. Besides, the Eigenvalues associated with each factor represent the variance explained by that particular linear component and it also display in terms of the percentage of variance explained. In table 8, the total variance of eight components is 64.2%. Component 1 explains 20.5% of total variance, follow by component 2 explains 9.5% of total variance, component 3 explains 9.2% of total variance, component 4 explains 6.5% of total variance, component 5 explains 5.6% of total variance, component 6 explains 4.8% of total variance, component 7 explains 4.2% of total variance, component 8 explains 3.9% of total variance, and so on. It should be clear that the first eight factors explain relatively large percentages of variance whereas subsequent factors explain only small percentages of variance.

Rotated component matrix in table 8 shown that all the thirty one items will be group into 8 components. Costello and Osborne (2005) stated that a factor with less than three variables is generally weak and unstable. In addition, the factor loading of the variables must ≥ 0.7 in order to determine which items will group into which factors. If the value is ≤ 0.7, it is depend on the highest factor loading allocate by each of them. For instance, the highest loading of SI1 is 0.899 which fall in the component 1 as compare to the rest of seven components. Thus, it will group under component 1. Therefore, component 1 consisted of SI1, SI2, SI3 and

SI4 variables, follow by Component 2 consisted of EB1, EB2, EB3, and EB4 variables. Besides, EA1, EA2, EA3 variables are consisted in Component 3. EP1, EP2, EP3, and EP4 variables are group in the components 4, follow by component 5 which included GPB1, GPB2, GPB3, and GPB4 variables. In addition, Component 6 consisted of ER1, R2, ER3, ER4, and ER5 variables whereas EC1, EC2, and EC3 variables are in Component 7. Lastly, GI1, GI2, GI3, and GI4 variables are fall in Component 8.

4.3 Reliability Statistics

Cronbach's Alpha Reliability test allow researcher to generate consistent results by testing the reliability of this study. According to Hair et al. (2003), coefficient alpha also referred as Cronbach's Alpha. The measurement of Cronbach's Alpha is indicated as a number 0 and 1. According to George and Mallery (2003), the Cronbach's Alpha coefficient closer to 1, the better the internal consistency of the items in the scale. The rules of thumb for Cronbach's Alpha reliability scale were as the following table 9.

Table 9: Interpretation Scale of Cronbach's Alphas Tests Results

Scale	Interpretation
> 0.9	Excellent
> 0.8	Good
> 0.7	Acceptable
> 0.6	Questionable

Note: George, D., & Mallery, P. (2003). *SPSS for Windows step by step: A simple guide and reference. 11.0 update (4th ed.).* Boston: Allyn & Bacon.

According to Hair et al. (2003), researcher generally considers an alpha of 0.7 as a minimum, although lower coefficients may be acceptable, but it was depending on the research objectives. In the other hands, according to Schuessler (1971) stated that an alpha value greater than 0.60 is consider reliable. However, according to Hamid, Momtaz, Ibrahim, Mansor, Samah, Yahaya, and Abdullah (2013),

Cronbach's alpha value is acceptable if it's alpha value greater than 0.50. The reliability test result for each variable will be shown in the following table.

Table 10: Reliability Test Result for Each Variable

Variables		N of items	Cronbach's alpha
Dependent variable	Green Purchase Behaviour (GPB)	4	0.679
Independent variables	Social Influence (SI)	4	0.901
	Environment Attitude (EA)	3	0.870
	Environmental Concern (EC)	3	0.721
	Perceived seriousness of environmental problems (EP)	4	0.749
	Perceived environmental responsibility (ER)	5	0.638
	Perceived effectiveness of environmental behaviour (EB)	4	0.850
	Government's initiative (GI)	4	0.552

Based on the result of Cronbach's alpha, all variables is consider reliable because they achieve alpha value 0.6 and above except government's initiative. According to Hamid et al. (2013), government initiative variable is considered acceptable because its alpha value is 0.552, and deleted any questions would not be improve its alpha value. This result is show in table 11. In other word, the variables have good internal consistency reliability. It also means that all variables in this study are more than acceptable as recommended values of 0.50 by Hamid et al. (2013). This shows that all the 31 items were reliable and valid to measure the working consumers' green purchase behaviour.

Table 11: Reliability Statistics and Item-Total Statistics (Government's Initiative)

Reliability Statistics		Items	Item-Total Statistics
Cronbach's Alpha	N of Items		Cronbach's Alpha if Item Deleted
0.552	4		
		GI1	0.526
		GI2	0.460
		GI3	0.418
		GI4	0.503

In the other hand, researcher also realised that there has one question in perceived environmental responsibility variable must be deleted in order to increase its Cronbach's Alpha value. Hence, after deleted the unnecessary question (ER5), its Alpha value was increased to 0.764. The result was show in the following table.

Table 12: Reliability Statistics and Item-Total Statistics (Perceived Environmental Responsibility)

Reliability Statistics		Items	Item-Total Statistics
Cronbach's Alpha	N of Items		Cronbach's Alpha if Item Deleted
0.638	5		
		ER1	0.536
		ER2	0.518
		ER3	0.535
		ER4	0.548
		ER5	0.764

Finally, there have a total of 30 items to be used for further analysis of inferential statistics. The details for all the hypotheses used for the analysis of inferential statistics can be found in Chapter 2.

4.4 Inferential Statistics

4.4.1 Independent Sample t-test

H_{1a}: There is a significant difference between gender and working consumers' green purchase behaviour.

Table 13: Independent Samples Test

	Gender	Mean	Levene's Test for Equality of Variances		t-test for Equality of Means		Shapiro-Wilk (Normality test)	Mann-Whitney test	
			F	Sig	t	Sig. (2-tailed)	Sig.	Z	Sig.
GPB	Male	3.8737	2.741	0.099	0.026	0.979	0.000	-0.299	0.765
	Female	3.8714					0.003		

The rejected region is if $p<0.05$, reject H_0, which means that it was not reasonable for us to assume the population variances were approximately equal. By refer to the table 13, the Levene's Test for equality of variance is no significant because significant value 0.099 is more than 0.05 ($p>0.05$). This means that the two variances are no significantly difference and approximately equal. In the T-test for equality of means, there is no significant between the two groups because the $p_{0.979} > \alpha_{0.05}$. Thus, do not reject null hypothesis with at most 5% error. Therefore, there is not enough evidence to show that there is a significant difference between gender and working consumers' green purchase behaviour. In other words, female have no statistically difference mean score on green purchase behaviour (3.8714) than male (3.8737).

Table 13 reflected whether each variable is normally distributed. The Shapiro-Wilk shows the same result where p-value for male is 0.000 and p-value for female is 0.003, which both are less than 0.05. Therefore, reject the null hypothesis and it can be concluded that the gender is not normally distributed. Since the data collected through questionnaire is not normally distributed, Mann-Whitney test which is non-parametric test is used for further analysis. The Z value

of Mann-Whitney test for behaviour is -0.299 with a significant level of p = 0.765. The probability value is more than 0.05, so the result is not significant. Therefore, cannot reject null hypothesis at α = 0.05. Hence, there is no statistical significant difference in the green purchase behaviour between male and female working consumers.

4.4.2 One-way ANOVA

H_{1b}: There is a significant difference between ethnic groups and working consumers' green purchase behaviour.

Table 14.1: One-way ANOVA (Ethnic Group)

		One-way ANOVA		Shapiro-Wilk (Normality test)	Kruskal-Wallis test	
		F	Sig.	Sig.	Chi-Square	Sig.
GPB	Between Group	1.514	0.223		1.836	0.399
	Within Group					
	Malay			0.010		
	Chinese			0.000		
	Indian and Others			0.010		

Table 14.2: Post Hoc Test (Ethnic Group)

(I) Ethnic	(J) Ethnic	Sig.
Malay	Chinese	0.230
	Indian and Others	0.333
Chinese	Malay	0.230
	Indian and Others	1.000
Indian and Others	Malay	0.333
	Chinese	1.000

The reject region is to reject null hypothesis if $p<0.05$. Table 14.1 shows that the F-value is 1.514 and the significant value is 0.223 ($p>0.05$). This means that there is no significant difference between the ethnic groups. In other words, the variances are significant equal. Hence, do not reject hull hypothesis with at most 0.05% error and conclude that there is no significant difference between ethnic groups and working consumers' green purchase behaviour in Malaysia. In table 14.2, the result of Post Hoc Test shows that none of the ethnic groups is significantly differentiate because all the significant level are more than 0.05 ($p>0.05$). It indicates that there is no difference about the green purchase behaviour to all the race groups.

Table 14.1 reflected whether each variable is normally distributed. The Shapiro-Wilk shows the same result where p-value is 0.000 to 0.010, which is less than 0.05. Therefore, reject the null hypothesis and it can be concluded that the ethnic groups is not normally distributed. Since the data collected through questionnaire is not normally distributed, Kruskal-Wallis test which is non-parametric test is used for further analysis. From table 14.1, the Chi-Square value for green purchase behaviour is 1.836 with a significant level of $p = 0.399$ ($p>0.05$). We cannot reject null hypothesis at $\alpha = 0.05$ because the result is not significant. Hence, there is no significant difference between ethnic groups and working consumers' green purchase behaviour.

H_{1c}: There is a significant difference between monthly income and working consumers' green purchase behaviour.

Table 15.1: One-way ANOVA (Monthly Income)

		One-way ANOVA		Shapiro-Wilk (Normality test)	Kruskal-Wallis test	
		F	Sig.	Sig.	Chi-Square	Sig.
GPB	Between Group	3.286	0.022		11.046	0.011
	Within Group					
	Below RM 1,999			0.041		
	RM 2,000 – RM 2,999			0.000		
	RM 3,000 – RM 3,999			0.065		
	RM 4,000 and above			0.333		

Table 15.2: Post Hoc Test (Monthly Income)

(I) Monthly Income	(J) Monthly Income	Sig.
Below RM 1,999	RM 2,000 – RM 2,999	0.142
	RM 3,000 – RM 3,999	0.994
	RM 4,000 and above	0.749
RM 2,000 – RM 2,999	Below RM 1,999	0.142
	RM 3,000 – RM 3,999	0.173
	RM 4,000 and above	0.018
RM 3,000 – RM 3,999	Below RM 1,999	0.994
	RM 2,000 – RM 2,999	0.173
	RM 4,000 and above	0.567
RM 4,000 and above	Below RM 1,999	0.749
	RM 2,000 – RM 2,999	0.018
	RM 3,000 – RM 3,999	0.567

The reject region is to reject null hypothesis if $p<0.05$. Table 15.1 shows that the F-value is 3.286 and the significant value is 0.022 ($p<0.05$). Thus, there is a significant difference between the monthly income levels. In other words, the variances are not significant equal. Hence, reject null hypothesis with at most 0.05% error and conclude that there is a significant difference between monthly income level and working consumers' green purchase behaviour.

In table 15.2, the result of Post Hoc Test shows that only one group of monthly income is significantly differentiate because its significant level are less than 0.05 ($p<0.05$). It indicates that there is a difference between green purchase behaviour and monthly income level between RM 2,000 – RM 2,999 and RM 4,000 and above. Except it, Post Hoc Test shows that there is no difference between green purchase behaviour and others monthly income levels.

Table 15.1 reflected whether each variable is normally distributed. The Shapiro-Wilk shows the same result where p-value is 0.000 to 0.333, which is more than 0.05. Thus, do not reject the null hypothesis and it can be concluded that the monthly income groups is normally distributed. Although the data collected through questionnaire is normally distributed, Kruskal-Wallis test which is non-parametric test can be used for further analysis. From table 15.1, the Chi-Square value for green purchase behaviour is 11.046 with a significant level of $p = 0.011$. The result is significant because the probability value is less than 0.05. Therefore, reject null hypothesis at $\alpha = 0.05$. Hence, there is a significant difference between monthly income level and working consumers' green purchase behaviour.

4.4.3 Pearson Correlation Analysis

First of all, researcher will use the correlation matrix to check the pattern of relationships. The purpose is to ensure that all the variables have some relationship with each other's. The rules of thumb about correlation coefficient are as the following table. By scanning the correlation coefficients, researcher should be aware that whether there is a problem of multicolinearity exists in the data if the correlation coefficients is greater than 0.9.

Table 16: Rules of thumb About Correlation Coefficient Size

Coefficient Range	Strength of Association
+ 0.91 - ±1.00	Very strong
+ 0.71 - ± 0.90	High
+ 0.41 - ± 0.70	Moderate
+ 0.21 - ± 0.40	Small but define relationship
+ 0.01 - ± 0.20	Slight, almost negligible

- Assume correlation coefficient is statistically significant.

Note: Hair, J. F. Jr., Babin, B., Money, A., and Samouel, P. (2003). *Essentials of Business Research Methods.* New York: John Wiley & Sons.

By refer to the table 17, correlation matrix shown that all the variables were significantly and positively related with each other variables. Most of the variables are within the range of + 0.21 - ± 0.40 which have small but define relationship. The correlation coefficients of all variables were not more than 0.9. Therefore, multicolinearity does not exist in these data.

Table 17: Bivariate Correlation Results

		GI	EA	SI	EB	EP	EC	ER	GPB
GI	Pearson Correlation	1							
	Sig. (2-tailed)	-							
EA	Pearson Correlation	0.346**	1						
	Sig. (2-tailed)	0.000	-						
SI	Pearson Correlation	0.120	0.045	1					
	Sig. (2-tailed)	0.091	0.529	-					
EB	Pearson Correlation	0.128	0.015	0.076	1				
	Sig. (2-tailed)	0.070	0.830	0.282	-				
EP	Pearson Correlation	0.376**	0.198**	0.119	0.181*	1			
	Sig. (2-tailed)	0.000	0.005	0.093	0.010	-			
EC	Pearson Correlation	0.230**	0.284**	0.282**	0.105	0.299**	1		
	Sig. (2-tailed)	0.001	0.000	0.000	0.140	0.000	-		
ER	Pearson Correlation	0.344**	0.303**	0.264**	0.116	0.319**	0.456**	1	
	Sig. (2-tailed)	0.000	0.000	0.000	0.102	0.000	0.000	-	
GPB	Pearson Correlation	0.235**	0.232**	0.269**	0.222**	0.356**	0.422**	0.438**	1
	Sig. (2-tailed)	0.001	0.001	0.000	0.002	0.000	0.000	0.000	-

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

H_{2a}: Social Influence

Table 17 shown the correlation between social influence and working consumers' green purchase behaviour is r=0.269 (p<0.05). According to Hair et al. (2003), the correlation of social influence is category into small but define relationship. This means that social influence is significant related to working consumers' green behaviour. Hence, social influence is supported.

H_{2b}: Environmental Attitude

The correlation result between environmental attitude and working consumers' green purchase behaviour that show in table 17 is r=0.232 (p<0.05) which can be group into small but define relationship. Therefore, environmental attitude is supported because environmental attitude is significant related to working consumers' green purchase behaviour.

H_{2c}: Environmental Concern

Based on table 17, correlation between environmental concern and working consumers' green purchase behaviour.is at r=0.422 (p<0.05). The coefficient range of environmental concern is moderate. This means that environmental concern is significant related to working consumers' green behaviour. Thus, environmental concern is supported.

H_{2d}: Perceived Seriousness of Environmental Problems

In table 17, the correlation result between perceived seriousness of environmental problems and working consumers' green purchase behaviour is at r=0.356 (p<0.05) which can be consider as small but define relationship between this two variables.

Therefore, perceived seriousness of environmental problems is supported because it is significant related to working consumers' green purchase behaviour.

H_{2fe}: Perceived Environmental Responsibility

Based on table 17, correlation between perceived environmental responsibility and working consumers' green purchase behaviour.is at r=0.438 (p<0.05). The coefficient range of perceived environmental responsibility is moderate. This means that perceived environmental responsibility is significant related to working consumers' green behaviour. Thus, perceived environmental responsibility is supported.

H_{2f}: Perceived Effectiveness of Environmental Behaviour

In table 17, the correlation result between perceived effectiveness of environmental behaviour and working consumers' green purchase behaviour is at r=0.222 (p<0.05) which can be consider as small but define relationship between this two variables. Therefore, perceived effectiveness of environmental behaviour is supported because it is significant related to working consumers' green purchase behaviour.

H_{2g}: Government Initiative

In table 17, the correlation result between government initiative and working consumers' green purchase behaviour is at r=0.235 (p<0.05) which can be consider as small but define relationship between this two variables. Therefore, government initiative is supported because government initiative is significant related to working consumers' green purchase behaviour.

4.4.4 Multiple Regressions

Table 18: Multiple Regression Result

Independent Variables	Unstandardized Coefficients (B)	Standardized Coefficients (Beta)	t-stat.	p-value	VIF
Constant	0.622		1.237	0.218	
GI	-0.017	-0.011	-0.155	0.877	1.336
EA	0.074	0.068	1.030	0.304	1.228
SI	0.069	0.119	1.892	0.060	1.123
EB	0.114	0.134	2.212	0.028	1.046
EP	0.238	0.175	2.611	0.010	1.277
EC	0.157	0.202	2.885	0.004	1.391
ER	0.200	0.226	3.158	0.002	1.454
R				0.568	
R^2				0.322	
Adjusted R^2				0.297	
F-test				13.034	
Sig				0.000	

Dependent Variable: Working consumers' green purchase behaviour in Malaysia, *p<0.05, **p<0.01

In table 18, the F-test is 13.034 and the p-value = 0.000 (p<0.05). This means that the factors influence are significantly explain the working consumers' green purchase behaviour in Malaysia. Therefore, reject null hypothesis and accept alternative hypothesis. In other words, it has enough evidence to conclude that the factors influence will significantly explain working consumers' green purchase behaviour. Moreover, the R^2 = 0.322 which show that is small but define relationship between these seven variables and dependent variable. The adjusted R^2 is equal to 0.297 which show that about 29.7% of the variation in the working consumers' green purchase behaviour is explained by the factors influence and the rest of 70.3% is explained by other factors. Besides that, all the independent variables were uncorrelated with other independent variables in the equation because the multicolinearity is low (VIF<10). By refer to table 18, the results shows that the strength of relationships between all the seven variables are less

than 0.7, which mean that this is no multicollinearity among seven independent variables.

Based on the regression equation, researcher has calculated the statistical result:
Y = 0.622 – 0.017 (GI) + 0.074 (EA) + 0.069 (SI) + 0.114* (EB) + 0.238* (EP) + 0.157** (EC) + 0.200** (ER)

Y = Green Purchase Behaviour
GI = Government's initiative
EA = Environment Attitude
SI = Social Influence
EB = Perceived effectiveness of environmental behaviour
EP = Perceived seriousness of environmental problems
EC = Environmental Concern
ER = Perceived environmental responsibility

From the result, it shows that decrease of 0.017 (GI) and increase of 0.074 (EA), 0.069 (SI), 0.114 (EB), 0.238 (EP), 0.157 (EC), and 0.200 (ER) in order to increase 1 unit of working consumers' green purchase behaviour. In additions, among the seven independent variables, perceived environmental responsibility is the most important predictor in this study because it was the strongest influence on working consumers' green purchasing behaviour where standardize beta equal to 0.226, followed by environmental concern (0.202), perceived effectiveness of environmental problems (0.175), perceived effectiveness of environmental behaviour (0.134), social influences (0.119), environmental attitudes (0.068), and lastly was government initiative (-0.011).

H_{2a}: There is a positive relationship between social influence and working consumers' green purchase behaviour.
Table 18 shows that the p-value is 0.060 (p>0.05), the result is not significant. Hence, do not reject null hypothesis with at most 0.05% error and conclude that there is no significant relationship between social influence and working consumers' green purchase behaviour.

H_{2b}: There is a positive relationship between environmental attitude and working consumers' green purchase behaviour.

Table 18 shows that the p-value is 0.304 (p>0.05). Hence, do not reject null hypothesis with at most 0.05% error and conclude that there is no significant relationship between environmental attitude and working consumers' green purchase behaviour.

H_{2c}: There is a positive relationship between environmental concern and working consumers' green purchase behaviour.

Table 18 shows that the p-value is 0.004 (p>0.05), the result is significant. Hence, do not reject null hypothesis with at most 0.05% error and conclude that there is a significant relationship between environmental concern and working consumers' green purchase behaviour.

H_{2d}: There is a positive relationship between perceived seriousness of environmental problems and working consumers' green purchase behaviour.

Table 18 shows that the p-value is 0.010 (p>0.05), the result is significant. Thus, reject null hypothesis with at most 0.05% error and conclude that there is a significant relationship between perceived seriousness of environmental problems and working consumers' green purchase behaviour.

H_{2e}: There is a positive relationship between perceived environmental responsibility and working consumers' green purchase behaviour.

Table 18 shows that the p-value is 0.002 (p>0.05), the result is significant. Hence, reject null hypothesis with at most 0.05% error and conclude that there is a significant relationship between perceived environmental responsibility and working consumers' green purchase behaviour.

H_{2f}: There is a positive relationship between perceived effectiveness of environmental behaviour and working consumers' green purchase behaviour.

Table 18 shows that the p-value is 0.028 (p>0.05). Therefore, reject null hypothesis with at most 0.05% error and conclude that there is a significant

relationship between perceived effectiveness of environmental behaviour and working consumers' green purchase behaviour.

H_{2g}: There is a positive relationship between government initiative and working consumers' green purchase behaviour.

Table 18 shows that the p-value is 0.877 (p>0.05), the result is not significant. Hence, do not reject null hypothesis with at most 0.05% error and conclude that there is no significant relationship between government initiative and working consumers' green purchase behaviour.

4.5 Conclusion

In this chapter, researcher has used SPSS software for data analysis and the results are generated for further discussion. Next chapter will provide an in-depth discussion on the findings.

CHAPTER 5

DISCUSSION AND CONCLUSION

5.0 Introduction

After completed data analysis, researcher will discuss on the findings in detailed. Hence, this chapter will thoroughly interpret the research results, provided the research limitation and recommended for future study. This chapter will end with conclusion of entire study.

5.1 Summary of Statistical Analysis

5.1.1 Descriptive analysis

In the demographic variable, the result show in table 6 displays that female respondents are more than male respondents. The female respondents consist of 52.5% whereas male consist of 47.5%. Majority respondents are fall in the age group of 36 to 45 years old which consist of 32.0%. In additions, 49.0% respondents are Chinese which possess the highest portion in this category. For education level, more than 40.0% of respondents possess of Master degree holders. With regards to the monthly income of working consumers, majority respondents having the monthly income in the range of RM 3,000 – RM 3,999 which consist of 33.0%.

5.1.2 Factor Analysis

For factor analysis, when the data is tested through the KMO test to measure of sampling adequacy, the result showed that KMO is 0.781 which was middling. Bartlett's test of Sphericity was also conducted on the data which showed 0.000 significance which means that null hypothesis of the variables are uncorrelated in the population were rejected. Besides, the rotated component matrix in table 8 shown that all the thirty one variables will be group into 8 components.

All variables in component 1 seem to be related to social influences. Hence, researcher labels this factor as "social influences". All variables in component 2 seem to be related to perceived effectiveness of environmental behaviour. Therefore, researcher labels this factor as "perceived effectiveness of environmental behaviour". Researcher labels all variables in component 3 as "environmental attitudes" because it seems to be related to environmental attitudes. All variables in component 4 seem to be related to perceived effectiveness of environmental problems. Therefore, researcher labels this factor as "perceived effectiveness of environmental problems".

All variables in component 5 seem to be related to green purchase behaviour. Thus, researcher labels this factor as "green purchase behaviour". Researcher labels all variables in component 6 "perceived environmental responsibility" because it seems to be related to perceived environmental responsibility. All variables in component 7 seem to be related to environmental concern. Hence, researcher labels this factor as "environmental concern". Finally, component 8 will be label as "government initiative" because this group of variables seems to be related to government initiative.

5.1.3 Reliability Analysis

After grouping all the items into relevant factors, researcher need to test against reliability analysis and it is essential to ensure that all the variables tested are reliable. All the thirty one variables were tested through the Cronbach's Alpha test for its reliability. The results of Cronbach's Alpha of each variable are fall between 0.552 to 0.901 which indicates that the reliability analysis is acceptable, good and consistent. In other word, the variables have good internal consistency reliability. In table 11, the alpha value of government's initiative is 0.552 and no items would be deleted because no improvement for its alpha value if deleted any items.

However, as refer to table 12, researcher need to deleted ER5 item in order to slightly increase the Cronbach's Alpha of perceived environmental responsibility to 0.764. This is because deleted others variables rather than ER5 only will decrease the scale of its Cronbach's Alpha. Finally, a total of thirty items will be used for further inferential analysis. The highest level of Cronbach's Alpha for each variable after the adjustment are social influences (0.901), follow by environmental attitudes (0.870), perceived effectiveness of environmental behaviour (0.850), perceived environmental responsibility (0.764), perceived effectiveness of environmental problems (0.749), environmental concern (0.721) and green purchase behaviour (0.679). The lowest level of Cronbach's Alpha is government initiative which is 0.552.

5.1.4 Inferential Analysis

5.1.4.1 Independent Sample t-test

Table 13, the result generated by independent sample t-test shown the $p_{0.979} > \alpha_{0.05}$. Thus, do not reject null hypothesis because the two variances (male and female) are no significant difference and approximately equal. In other words, there is no

significant between the male and female working consumers towards green purchase behaviour.

5.1.4.2 One-way ANOVA

For race group, the result of One-way ANOVA in table 14.1 shows that $p_{0.223} > \alpha_{0.05}$. The result of Post Hoc Test in table 14.2 shows that none of the groups of ethnic is significantly differentiate because all the significant level are more than 0.05 ($p>0.05$). Therefore, we cannot reject null hypothesis at $\alpha = 0.05$. Hence, there is no significant difference between ethnic groups and working consumers' green purchase behaviour.

For monthly income level, the result in table 15.1 shows that $p_{0.022} < \alpha_{0.05}$. In table 16.5, the result of Post Hoc Test shows that only one group of monthly income (RM 2,000 – RM 2,999 and RM 4,000 and above) is significantly differentiate because its significant level are less than 0.05 ($p<0.05$). Therefore, we can reject null hypothesis at $\alpha = 0.05$. Hence, there is a significant difference between monthly income level and working consumers' green purchase behaviour.

5.1.4.3 Pearson Correlations Analysis

The relationship between factors influence and working consumers' green purchase behaviour are measured under Pearson Correlation Analysis. The result in table 17 shows that all the independent variables are significantly and positively related to green purchase behaviour of working consumers in Malaysia. Therefore, the null hypothesis is rejected.

5.1.4.4 Multiple Regressions Analysis

Based on the result shown in table 18, the p0.000 <α0.05, thus, reject null hypothesis and accept alternative hypothesis. This means that the factors influence are significantly explain the working consumers' green purchase behaviour. Besides, the adjusted R^2 is equal to 0.297 which implied that about 29.7% of the variation in the working consumers' green purchase behaviour is explained by the factors influence.

In additions, the beta of standardized coefficient shows that perceived environmental responsibility is 0.226 which is the strongest factors influence on working consumers' green purchase behaviour whereas the least factors influence variable is government initiative with beta of -0.011. Result in table 18 shows that decrease of 0.017 (GI) and increase of 0.074 (EA), 0.069 (SI), 0.114 (EB), 0.238 (EP), 0.157 (EC), and 0.200 (ER) in order to increase 1 unit of working consumers' green purchasing behaviour.

In Pearson correlation analysis, there is a significant relationship between each independents variables and working consumers' green purchase behaviour. However, in multiple regression analysis, government initiative, environmental attitudes and social influences variables are not significant influence the working consumers' green purchase behaviour because the p-values are more than 0.05.

5.2 Discussion of Hypotheses Results

Table 19: Summary of Outcome of Research

Research Questions	Research objectives	Hypothesis	Result	Supported
1) Do demographic factors that will influence working consumers' green purchase behaviour?	To identify which of the demographic factors (gender, race, and income level) that influence working consumers' green purchase behaviour.	H_{1a}: There is a significant different between gender and working consumers' green purchase behaviour.	($p<0.05$), reject H_0 $p=0.099$	No
		H_{1b}: There is a significant different between ethnic groups and working consumers' green purchase behaviour.	($p<0.05$), reject H_0 $p=0.223$	No
		H_{1c}: There is a significant different between monthly income and working consumers' green purchase behaviour.	($p<0.05$), reject H_0 $p=0.022$	Yes
2) Is there any relationship between factors influence and working consumers' green purchase behaviour?	To identify whether there is a relationship between factors influence (social influences, environmental attitudes,	H_{2a}: There is a positive relationship between social influence and green purchase behaviour in Malaysian working consumers.	$r=0.269$ ($p<0.05$), reject H_0 $p=0.060$	No

	environmental concern, perceived effectiveness of environmental problems, perceived effectiveness of environmental behaviour, perceived environmental responsibility, and government initiative) and working consumers' green purchase behaviour.	H_{2b}: There is a positive relationship between environmental attitude and green purchase behaviour in Malaysian working consumers.	r=0.232 ($p<0.05$), reject H_0 p=0.304	No
		H_{2c}: There is a positive relationship between environmental concern and green purchase behaviour in Malaysian working consumers.	r=0.422 ($p<0.05$), reject H_0 p=0.004	Yes
		H_{2d}: There is a positive relationship between perceived seriousness of environmental problems and green purchase behaviour in Malaysian working consumers.	r=0.356 ($p<0.05$), reject H_0 p=0.010	Yes
		H_{2e}: There is a positive relationship between perceived environmental responsibility and green purchase behaviour in Malaysian working consumers.	r=0.438 ($p<0.05$), reject H_0 p=0.002	Yes

		H_{2f}: There is a positive relationship between perceived effectiveness of environmental behaviour and green purchase behaviour in Malaysian working consumers.	r=0.222 ($p<0.05$), reject H_0 p=0.028	Yes
		H_{2g}: There is a positive relationship between government initiative and green purchase behaviour in Malaysian working consumers.	r=0.235 ($p<0.05$), reject H_0 p=0.877	No

5.2.1 Hypothesis 1a

H_{1a}: There is a significant difference between gender and working consumers' green purchase behaviour.

The result shows that there is no significant difference between male and female working consumers towards green purchase behaviour. In this study, the result is same with the outcome of Tan et al. (2010) as they found that there is no significant difference between male and female in green purchasing behaviour. It meant that all working consumers are concern for the environment issues regardless their gender. Both male and female respondents are fully understanding their responsibility towards environmental protection and willing to behave in green manner. Besides, education also acts as a strong influence to their purchasing behaviour because all environmental related topics are fully discussed and shared during their student life. Moreover, now a day, almost all Malaysian are employed in different work fields regardless the gender. Thus, male and female consumers have their own consumption ability to purchase goods or products that they are desired such as vehicle, costume, foods and et cetera. Therefore, understanding and concerning for the status of environmental issues caused both of them actively participating into environment protection activities in order to improve the quality of their environment. This also will change their consumption behaviour to become more in green manner.

5.2.2 Hypothesis 1b

H_{1b}: There is a significant difference between ethnic groups and working consumers' green purchase behaviour.

Result shows that there is no significant difference between ethnic groups and working consumers' green purchase behaviour. The result is consistent with the Sinnappan et al. (2011) which show that ethnic group is no significant in explaining the consumers' green buying behaviour. "1 Malaysia" concept have

been promoted by the Prime Minister of Malaysia for the purpose to foster unity amongst the multi-ethnic citizens of Malaysia. It meant that all races must treat themselves as an important component and should treat their compatriots as equal. Although all the respondents are from different family background with different culture and norm, but all of them do sharing the same responsibility on preventing the environmental issue and improving their quality of life in future. Besides that, many activities and programs are implemented by many green supporter organizations and government departments in order to increase the awareness and enthusiasm of Malaysian to participate in these meaningful activities. Many Malaysian have enthusiastic response towards these green activities. Hence, those environmental friendly activities are successfully convey the important message to all Malaysian consumers and it will influence their purchase behaviour towards green products regardless their ethnics.

5.2.3 Hypothesis 1c

H_{1c}: There is a significant difference between monthly income and working consumers' green purchase behaviour.

Based on the result, there is a significant difference between monthly income and working consumers' green purchase behaviour. This result is consistent with Awad (2011) which stated that income was positive correlated to green purchasing behaviour because most green products have higher prices than conventional products.

Each working consumers are from different career fields with different salary income. Income will dominate the individual's quality of life. Although they have the final consumption decision on their hand, but there still have some reasons that can restricted them to purchase green products. For instance, inflation caused price of everything increase and this will increase the economic burden of individuals. Besides, household expenses for single and married consumers also different and their purchasing behaviour also will be influenced. This may because

single consumers are willing to buy green products due to less household expenses than married consumers. Hence, this may cause married consumers to look for low price product rather than quality and healthy product even they have intention or willing to support for green products.

5.2.4 Hypothesis 2a

H_{2a}: There is a positive relationship between social influence and working consumers' green purchase behaviour.

The result in show that no significant relationship between social influence and working consumers' green purchase behaviour. Irawan and Darmayanti (2012) concluded that the respondents may less discuss about the environmental problems and share eco-friendly products with their friends. This study gets the same result with Irawan et al. (2012) because social influence have positive relationship but did not significant effect on green purchasing behaviour. However, Kalafatis et al. (1999) and Abdul Wahid et al. (2011) demonstrated that social influence has directly and significantly effect on green purchase behaviour. Different target respondents, different country and cultural distance, or different research variables and methodology used to conduct the research may cause inconsistency result of this study as compare with former researchers.

5.2.5 Hypothesis 2b

H_{2b}: There is a positive relationship between environmental attitude and working consumers' green purchase behaviour.

The result shown that environmental attitudes are not significant related to working consumers' green purchase behaviour. Diamantopoulos, Winklhofer & Witt (1994) found that there is a weak but significant relationship between environmental attitudes and the buying behaviour towards green products. In

additions, this result also consistent with Axelrod et al. (1993), Berger et al. (1992), and Lee (2008). These researchers revealed the same result where a weak determinant or low relation between environmental attitude and green purchasing behaviour. Besides, Paco et al. (2009) stated that attitude still could influence on customers green purchase although it not necessarily used as a foundation for them in purchasing decisions. Therefore, this may cause no significant relationship between environmental attitude and working consumers' green purchase behaviour.

5.2.6 Hypothesis 2c

H_{2c}: There is a positive relationship between environmental concern and working consumers' green purchase behaviour.

The result showed that environmental concern and working consumers' green purchase behaviour have a significant relationship. This result is similar with Lee (2008) which found that environmental concern was a strong influencing of the green purchasing behaviour in Hong Kong. Besides, consumers with high conscious and concern to the environmental problems are willing to pay more (Bang et al., 2000) and willing to buy green products (Kim et al., 2005) and vice versa. Therefore, the level of people's towards environmental concern is associated with their interest and desire to purchase green products.

5.2.7 Hypothesis 2d

H_{2d}: There is a positive relationship between perceived seriousness of environmental problems and working consumers' green purchase behaviour.

The result revealed that there is a significant relationship between perceived seriousness of environmental problems and working consumers' green purchase behaviour. This result is consistent with Sinnapan et al. (2011), which found that

consumers would really take severe action of it because environmental problems will seriously affect their health and quality of life. Perceived seriousness about the environmental problems on how it can be worsen and threatening the health of Malaysian is important because it not only will affect the health of this generation, but also the next and future generation. Therefore, Dunlap (1994) found that Asian people were more concerned with such problems than other Western counties because Asian society tends to perceive their local society in a negative manner.

5.2.8 Hypothesis 2e

H_{2e}: There is a positive relationship between perceived environmental responsibility and working consumers' green purchase behaviour.

In this research, the result shown that perceived environmental responsibility have a significant relationship with green purchasing behaviour. Although this variable is second top predictor in the study of Sinnapan et al. (2011), however, it was an important predictor in this study. Besides, females tend to have a better ability to take the responsibility for alleviating problems in the world than male (Gough, 1994). To create green purchase behaviour among individuals cannot be short of their own perceived responsibility. Hence, when responsibility towards environmental preserving is well educated and informed to people, they are willing to take up responsibility to protect and save the environment. The result is consistent with Lai (2000) which evidenced that citizens of Hong Kong have really aware the environmental issues and more responsibility in protecting their environment.

5.2.9 Hypothesis 2f

H_{2f}: There is a positive relationship between perceived effectiveness of environmental behaviour and working consumers' green purchase behaviour.

The result shows that there is a significant relationship between perceived effectiveness of environmental behaviour and working consumers' green purchase behaviour. It was consistent with the study conducted by Lee et al. (1999), which demonstrated that perceived effectiveness of environmental behaviour is an important predictor of a variety of eco-environmental awareness and pro-environmental consumer behaviours. When people believed that their consumption attitude were able to reduce or minimise the environment deterioration and contribute to the environmental protection, they are willing to translate their attitude into actual purchasing action through buying the green products (Berger et al., 1992; Lee et al., 1999).

5.2.10 Hypothesis 2g

H_{2g}: There is a positive relationship between government initiative and working consumers' green purchase behaviour.

Based on the result, it show that government initiative have no significant relationship with green purchasing behaviour of working consumers. The result is inconsistent with Tsen et al. (2006) and Sinnappan et al. (2011) which stated that government play an important role in affecting the consumers' green purchasing behaviour. This may because consumers considered they played an important role as government in protecting their environment. Now a day, not only government will implement environmental protection activities, many organisations and companies also support for going green programme. For example, Anugerah Hijau or Green Awards is a programme launched by EcoKnights to address environmental issues with youth through "Sustainable Fashion", "Eco Architecture" and "Environmental Film Making" competition. Recently a

television programme “Let’s Cycle” launched by 8TV has actively promoted and educated public regarding the positive behaviour towards environment through multimedia and advertisement. Hence, as many people aware of the environment problems, they are willing to work together with government in the protecting and developing their mother earth.

5.3 Implications of Study

5.3.1 Managerial Implication

This research result shows that environmental concern has a significant relationship with working consumers’ green purchasing behaviour which the p-value is 0.004. The level of people’s towards environmental concern is associated with their interest and desire to purchase green products (Biswas, et al., 2000; Mainieri et al., 1997). This meant that consumers with high conscious and concern to the environmental problems are willing to pay more (Bang et al., 2000) and willing to buy green products (Kim et al., 2005). Hence, environmental concern would be an important factor for marketers to easily target environmentally conscious consumers (Mostafa, 2007).

Environmental concern can consider as important factor in influencing working consumers’ green purchase behaviour because concern to environmental issues can improve environmental quality. Marketers can create a new green product by using wastage material. For example, Nestle (Malaysia) Berhad and Terta Pak (Malaysia) Sdn Bhd have collected used beverage cartons to produce into roofing tiles. Besides, marketers can promote their green products based on cause-related marketing (CRM) method. According to CSR Europe study as cited in Abdul Wahid et al. (2011), Scottish Power has positioning itself as an environmentally conscious energy supplier and actively participates in green related events such as exhibitions.

Besides, perceived seriousness of environmental problems also has a significant relationship with working consumers' green purchase behaviour which its p-value is 0.010. Sinnapan et al. (2011) reveals that consumer would really take severe action of it because environmental problems will seriously affect their health and quality of life. Worsen of environmental problems not only will affect the health of all Malaysian, but also will bring negative impact to our next and future generations. As compare with men, Bord et al. (1997) found that women were more perceived seriousness of the environmental problems and worried about various negative impacts on their health.

Hence, perceived seriousness of environmental problems allows marketers to identify the current environmental problems and provide an insight in the early stage of product development. Therefore, it can be produce more eco-friendly products. For example, the usage of polystyrenes in food packing will increase the environmental problem since it not biodegradable and also hazardous to the health. Hence, eco-friendly packing would be highly demanded by consumers. Besides, waste utilisation products such as eco mug which is produced by using rice husk fibre not only have the same function as normal mug, it was more eco-friendly and reduce the environmental problems.

In additions, the result shows that there is a significant relationship between perceived environmental responsibility and working consumers' green purchase behaviour which the p=0.002. Lai (2000) found that people who have really aware of the environmental problems are more responsibility in protecting their environment. Females have higher levels of perceived personal responsibility towards environmental protection (Zeleny et al., 2000). To create green purchase behaviour among individuals cannot be short of their own perceived responsibility. Protecting the environment is the responsibility of everyone, which also highly includes companies that produces green goods and products. Companies need to co-operate its marketing effort with a sense of consumers' responsibility in order to increase consumers' green consumption power. For instance, marketers can create some creative and attractive green slogans like 'save our earth' or 'tree planting program' as a message to create a feeling of high involvement among

consumers. Besides, it also can increase the intention of personal contribution in green purchase decision. Meanwhile, good practicing in ethical business and involved in Corporate Social Responsibility in promoting the green purchase also a good idea for company to show its responsibility towards the environment.

Furthermore, government can publish green advertisements through television, broadcast and others media to raise their sense towards responsibility of environmental protection. It can encourage and motive consumers to actively participate in recycle activities and buy eco-friendly products. Meanwhile, government also can provide positive and effective information or message to public. Once the public have good understanding on their contribution to the environmental, they will more actively to purchase green products. On the other hands, government can held some green related campaigns to encourage public to participate in order to promote public awareness towards environmental issue and clarifies the impact and consequences of their contribution on those green actives to their mother earth and their future generation.

Lastly, the p-value of perceived effectiveness of environmental behaviour is 0.028, which shows that it has a significant relationship with green purchasing behaviour. Lee et al. (1999) demonstrated that perceived effectiveness of environmental behaviour is a significant predictor of a variety of eco-environmental awareness and pro-environmental consumer behaviours. It meant that consumers who have high perceived effectiveness of environmental behaviour will become green buying behaviours. Perceived effectiveness of environmental behaviour can translate their attitude into actual purchasing action (Berger et al., 1992; Lee et al., 1999) when they feel that their attitude can help to protect their environment. Besides, marketers can educate consumers regarding to the benefits of their products and well inform them how much they can contribute to the environment especially when the products is used frequently. For instance, company used recycling rubbers to produce goods such as glove, flippers, or doormat. This can reduce waste of rubbers as well as decrease the rubber usage when consumers buy these recycling products. Besides, marketers can implement campaigns and

exhibitions to introduce their green product to consumers. Meanwhile, sales promotion can be carried out to stimulate purchasing behaviour.

This research findings have provided some insight and feedback to marketers who basically facing a lot of challenges in persuading consumers to buy eco-friendly products. To successfully refine and redefine this new target market, they needs to understand the route that shift the environmental factors to green purchase behaviour. By gathering this information, marketers would be able to formulating their strategies to more effectively attract consumers to buy green products.

5.3.2 Theoretical Implication

According to the TRA and TPB theories applied in this study, researcher revealed that personal's ecological beliefs factors, for instance, perceived environmental responsibility, perceived seriousness of environmental and environmental concern are more suitable and accurate to explain the working consumers' green purchasing behaviour than environmental factors such as governmental initiative and social influence. Thus, future researchers can have a depth investigate on how the factors of personal's ecological beliefs can significantly explained on consumers' green purchasing behaviour.

5.4 Limitations of the study

There are several limitations related to this study have been identified by researcher. Firstly, the main limitation in this study is geographical bias. Although the population of Klang Valley is more condense as compare to other area or state. However, the findings of this study may not represent the views of whole working consumers in Malaysia due to the different setting of target respondents may have different views in green purchasing behaviour. Therefore, it may not be appropriate to generalize the results that represented all working consumers in Malaysia.

Secondly, this study is cross-sectional study which is data only collected at one point of time. Consumers' purchase behaviour will constantly change from time to time due to many changeable influences. Therefore, the result of this finding is inappropriate to explain and reflect the pattern of consumers' purchase behaviour. In other word, this research only able to describe the pattern of consumers' purchase behaviour at one point of time.

5.5 Recommendations

In order to solve those limitations that occurred during this study, researcher hereby proposes some suggestion and option to overcome those limitations. Firstly, researchers recommended to broadening the research setting across whole Malaysia in order to get the overall picture and accurate result on all working consumers' green purchase behaviour in Malaysia.

Secondly, researcher proposed to adopted longitudinal study on consumers' green purchase behaviour because it can capture the changes of consumers' perception and trace on the trends of consumers' purchase behaviour at more than one point of time. Besides, the result of this study may invalid in the future due to dynamic changes on consumers' purchasing behaviour. Thus, researcher suggested that longitudinal study is more suitable for future research.

Lastly, researcher recommended that one-to-one communication can help to avoid misunderstanding of the respondents when answering the questionnaire. Researcher can immediately explain and justify to respondents when they are facing difficulties, unclear or do not understand of the questions asked in questionnaire. For instance, researcher can immediately explain and translate to other language to help those respondents that having poor understanding of English. This can avoid inaccurate and inappropriate data to be collected from respondents due to simply answer by them. In additions, researcher suggests to provide some rewards or small gifts to the respondents to attract them during the

data collection process. Hence, respondents will become more committed to the questionnaire when they answer the questions.

5.6 Suggestion for further study

Researcher will like to provide some suggestions for other researchers who like to conduct a related research topic. Thus, other researchers can fill up the research gap in the future.

First of all, the research result shows that there are about 29.7% is explained by the factors influence. However, there are still have 70.3% is explained by other factors. Thus, the researcher will like to suggest that other researchers can investigate the remaining unknown factors. Researchers also can investigate which factors among the unknown factors are the most influence or important in determine the working consumers' green purchase behaviour.

Besides, the government's initiative is the least influence that contributes to the working consumers' green purchase behaviour. So, in future, researchers can investigate what are the reasons that lead the government initiative become the least influence among these seven factors influences. By this, future researchers can understand why the government initiative is least important among the targeted respondents.

In addition, future researchers can test the other aspects in the demographic profile such as age group and education level in order to determine whether there is a significant different between demographic and working consumers' green purchasing behaviour or not. According to study conducted by Quester and Smart (1993) found that a significant different between different age groups. Several studies demonstrated that green consumers are usually between the age group of 30 to 44 years old (older group) (Roberts, 1996; D'Souza et al., 2007). Some studies found that education level has a positive relationship with green consumer behaviour (Roberts, 1996; Zimmer, Stafford & Stafford, 1994) whereas some

studies found an opposite result on it (Sandahl et al., 1989; Straughan et al., 1999). Therefore, it is worth to demonstrate in the future to determine whether a significant or not significant relationship between demographics and green purchasing behaviour.

5.7 Conclusion

This study is focus on the factors that influence working consumers' green purchase behaviour. The outcome of this study can be used by marketers to evaluate the trend of green purchase behaviour among working consumers. Malaysia government also can used to forecast the changes of the environmental issues. Importantly, this study determined that working consumers aware of environmental issues and willing to protect and safe their environment through purchase green products in order to improve their current and future quality of life. However, economies inflation may be one of the obstacles for working consumers to have further actions on the purchasing green products.

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Appendix: Questionnaire

UNIVERSITI TUNKU ABDUL RAHMAN
FACULTY OF ACCOUNTANCY AND MANAGEMENT
MASTER OF BUSINESS ADMINSTRATION

Dear potential respondent,

I am student from Universiti Tunku Abdul Rahman (UTAR), currently pursuing the master program of Master of Business Administration (MBA). As part of the requirements to complete my program, I am researching the **Factors That Influence Green Purchase Behaviour of Malaysian Consumers.**

I would like to invite you to participate in this research project by completing and sending back this questionnaire to me. This questionnaire consists of 3 parts, and should take about 10 to 15 minutes to complete. Your responses will be kept strictly confidential. However, participation is entirely your choice.

I hope that you can support this research as your participation is essential to the findings of my research. I appreciate your time and cooperation for participating in this questionnaire survey.

Should you have any enquiry about this survey, kindly contact me at:

Name	Student ID	E-mail Address
Tang Sook Mun	11UKM01737	tangsm85@yahoo.com.my

Section A: Demographic Profile

(Please tick on the appropriate box or write the correct answer)

1. Gender

□ Male

□ Female

2. Age

_____ years old

3. Race

□ Malay

□ Chinese

□ Indian and Others

4. Education Level

□ Primary School

□ Secondary School

□ Pre-University (6th From)

□ Diploma

□ Bachelor's Degree

□ Master's Degree

□ Doctorate's Degree

5. Monthly Income

□ Below RM 1,999

□ RM 2,000 – RM 2,999

□ RM 3,000 – RM 3,999

□ RM 4,000 and above

Section B: Factors Influencing Green Purchasing Behavior

*(Below are factors that influence your green purchasing behavior. For the following statements, please indicate your degree of agreement by **ticking** the answer that matches your view most closely. There is no right or wrong answer – we are interested in your personal opinions.)*

- *Please indicate whether (1) strongly disagree (SD), (2) disagree (D), (3) neutral (N), (4) agree (A), (5) strongly agree (SA).*

		SD	D	N	A	SA
Social influence						
1	I learn so much about environmental products from my friends.	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
2	I learn so much about environmental issues from my friends.	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
3	I often buy environmental products with my friends.	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
4	I often share information regarding environmental products with my friends.	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
Environmental attitude						
1	It is essential to promote green living in Malaysia.	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
2	I strongly agree that more environmental protection works are needed in Malaysia.	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
3	It is very important to raise environmental awareness among Malaysian.	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
4	Environmental protection issues are none of my business. ®	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
5	It is unwise for Malaysia to spend a vast amount of money on promoting environmental protection. ®	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐

		SD	D	N	A	SA
Environmental concern						
1	Malaysia's environment is my major concern.	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
2	I am emotionally involved in environmental protection issue in Malaysia.	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
3	I often think about how the environmental quality in Malaysia can be improved.	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
Perceived seriousness of environmental problems						
1	I think Malaysia's environmental problems are worsening.	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
2	Malaysia's environmental problems are threatening our health.	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
3	I think Malaysia's environmental problems need to be dealt urgently.	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
4	Malaysia's environmental problems are threatening the reputation of Malaysia.	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
Perceived environmental responsibility						
1	Environmental protection starts with me.	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
2	I think I should have so much responsibility in protecting the environment in Malaysia.	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
3	I have taken responsibility for environmental protection since I was young.	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
4	I am willing to take up responsibility to protect the environment in Malaysia.	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
5	Environmental protection is the responsibility of the environmental organization, not me. ®	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐

		SD	D	N	A	SA
Perceived effectiveness of environmental behaviour						
1	I think if I carry out some pro-environmental behaviour in my everyday life, I would contribute a lot to our environment.	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
2	I think my participation in environmental protection would influence my family and friends to participate too.	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
3	The environmental quality of Malaysia will stay the same even if I engage in some pro-environmental behaviour. ®	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
4	Even if I recycle and reuse things, the environmental quality of Malaysia will remain as it currently is. ®	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
Government initiative						
1	Environmental protection is the responsibility of the Malaysian government, not me. ®	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
2	Schools should require all students to take a course dealing with environment and conservation problems.	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
3	The government should subsidize research on technology for recycling waste products.	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
4	Government should enforce environmental rules and regulation.	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐

Section C: Green Purchasing Behaviour in Malaysia Consumers

*(For the following statements, please **tick** on the number that matches your answer most closely.)*

- *Please indicate whether (1) strongly disagree (SD), (2) disagree (D), (3) neutral (N), (4) agree (A), (5) strongly agree (SA).*

		SD	D	N	A	SA
Green purchase behaviour						
1	When I want to buy a product, I look at the ingredients label to see if it contains thing that are environmentally damaging.	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
2	I prefer green products over non-green products when the products qualities are similar.	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
3	I choose to buy products that are environmentally friendly.	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
4	I buy green products even if they are more expensive than the non-green ones.	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐

All the information is treated as "Private and Confidential".

Thank you very much for your participation in this survey.

Your time and opinions are deeply appreciated.

Appendix: SPSS Output

Frequency Table: Demographic Profile

Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	95	47.5	47.5	47.5
	Female	105	52.5	52.5	100.0
	Total	200	100.0	100.0	

Age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Lowest thru 25	21	10.5	10.5	10.5
	26 - 35	58	29.0	29.0	39.5
	36 - 45	64	32.0	32.0	71.5
	46 thru highest	57	28.5	28.5	100.0
	Total	200	100.0	100.0	

Ethnic

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Malay	50	25.0	25.0	25.0
	Chinese	98	49.0	49.0	74.0
	Indian and Others	52	26.0	26.0	100.0
	Total	200	100.0	100.0	

Education_level

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Secondary School	32	16.0	16.0	16.0
	Pre-University (6th Form)	22	11.0	11.0	27.0
	Diploma	18	9.0	9.0	36.0
	Bachelor's Degree	47	23.5	23.5	59.5
	Master's Degree	81	40.5	40.5	100.0
	Total	200	100.0	100.0	

Monthly_Income

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Below RM 1,999	48	24.0	24.0	24.0
	RM 2,000 - RM 2,999	53	26.5	26.5	50.5
	RM 3,000 - RM 3,999	66	33.0	33.0	83.5
	RM 4,000 and above	33	16.5	16.5	100.0
	Total	200	100.0	100.0	

Factor Analysis

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.781
Bartlett's Test of Sphericity	Approx. Chi-Square	2693.563
	Df	465
	Sig.	.000

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	6.366	20.537	20.537	6.366	20.537	20.537	3.298	10.639	10.639
2	2.954	9.531	30.067	2.954	9.531	30.067	2.857	9.218	19.856
3	2.838	9.156	39.224	2.838	9.156	39.224	2.671	8.615	28.471
4	2.007	6.473	45.696	2.007	6.473	45.696	2.462	7.941	36.412
5	1.749	5.641	51.337	1.749	5.641	51.337	2.379	7.673	44.085
6	1.479	4.769	56.106	1.479	4.769	56.106	2.324	7.496	51.582
7	1.308	4.219	60.325	1.308	4.219	60.325	2.044	6.595	58.176
8	1.195	3.854	64.180	1.195	3.854	64.180	1.861	6.003	64.180
9	.986	3.182	67.362						
10	.893	2.881	70.242						
11	.806	2.601	72.844						
12	.788	2.543	75.387						
13	.769	2.480	77.867						
14	.716	2.310	80.177						
15	.637	2.054	82.231						
16	.578	1.866	84.097						
17	.530	1.711	85.808						
18	.516	1.664	87.472						
19	.455	1.467	88.939						
20	.427	1.376	90.315						
21	.422	1.362	91.677						
22	.367	1.183	92.860						
23	.349	1.127	93.987						
24	.322	1.039	95.026						
25	.299	.966	95.992						
26	.285	.919	96.911						
27	.270	.870	97.781						
28	.267	.861	98.642						
29	.190	.613	99.255						
30	.162	.523	99.778						
31	.069	.222	100.000						

Extraction Method: Principal Component Analysis.

Rotated Component Matrix[a]

	Component							
	1	2	3	4	5	6	7	8
SI2	.925	-.011	.027	-.030	.050	.122	.005	.009
SI1	.899	.010	.042	-.027	.087	.105	.038	.085
SI3	.828	.042	-.019	.080	.065	.035	.081	.026
SI4	.788	.069	-.022	.109	.092	.024	.210	.000
EB3	.042	.856	-.034	.006	-.036	.020	.060	-.121
EB2	.042	.831	.014	.129	.188	.031	-.015	.139
EB4	.006	.823	-.030	.028	.044	.051	.085	-.005
EB1	.023	.783	.046	.092	.113	-.012	-.043	.181
EA3	.108	-.063	.866	.099	.125	.060	.053	.119
EA2	-.009	.029	.848	.091	.124	.193	.019	.168
EA1	-.087	.014	.838	.016	-.019	.076	.142	.146
EP2	.066	.059	.040	.776	.058	-.053	.094	-.017
EP3	.041	.112	.044	.740	.047	-.022	.136	.144
EP4	.086	.117	.004	.690	.156	.255	.053	.218
EP1	-.053	-.017	.135	.669	.205	.127	-.040	.132
GPB3	.202	.055	-.074	.201	.680	.204	.168	.084
GPB4	.032	.099	.063	.109	.668	-.004	.271	.123
GPB1	.284	.051	.302	.074	.625	.086	-.060	.077
GPB2	-.068	.187	.064	.161	.575	.209	.057	-.219
ER1	.235	-.026	.101	.168	.140	.672	.112	.027
ER2	.048	.107	.102	-.015	.320	.672	.053	.227
ER3	.003	-.041	.049	.039	.347	.621	.299	.142
ER4	.191	.094	.082	.114	-.012	.604	.308	.272
ER5	-.091	.009	.213	-.008	-.285	.506	-.290	-.133
EC2	.153	.097	-.130	.072	.260	.071	.744	.157
EC1	.135	-.035	.291	.247	-.073	.234	.682	-.131
EC3	.104	.041	.276	.049	.302	.171	.656	.032
GI3	.073	.008	.227	.173	.112	-.018	.138	.627
GI4	.036	.124	.239	.029	-.193	.080	.034	.581
GI1	-.009	.052	.059	.065	.187	.134	-.170	.574
GI2	.024	-.013	-.037	.307	-.007	.212	.183	.542

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 8 iterations.

Reliability: Social Influence (SI)

Reliability Statistics

Cronbach's Alpha	N of Items
.901	4

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
SI1	8.82	9.106	.829	.852
SI2	8.83	9.100	.867	.837
SI3	9.29	10.368	.719	.892
SI4	8.80	10.774	.704	.897

Reliability: Environmental Attitude (EA)

Reliability Statistics

Cronbach's Alpha	N of Items
.870	3

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
EA1	9.12	1.192	.712	.865
EA2	8.96	1.325	.785	.790
EA3	8.97	1.336	.772	.801

Reliability: Environmental Concern (EC)

Reliability Statistics

Cronbach's Alpha	N of Items
.721	3

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
EC1	6.81	2.734	.523	.654
EC2	6.98	3.000	.530	.650
EC3	6.92	2.406	.580	.586

Reliability: Perceived Seriousness of Environmental Problems (EP)

Reliability Statistics

Cronbach's Alpha	N of Items
.749	4

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
EP1	13.31	1.853	.524	.703
EP2	13.14	2.077	.536	.698
EP3	13.16	2.071	.556	.690
EP4	13.44	1.614	.590	.669

Reliability: Perceived Environmental Responsibility (ER)

Reliability Statistics

Cronbach's Alpha	N of Items
.638	5

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
ER1	14.74	6.696	.506	.536
ER2	14.70	6.601	.554	.518
ER3	14.99	6.035	.483	.535
ER4	14.56	6.961	.495	.548
ER5	14.82	7.405	.100	.764

Reliability: Perceived Effectiveness of Environmental Behaviour (EB)

Reliability Statistics

Cronbach's Alpha	N of Items
.850	4

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
EB1	11.62	5.173	.649	.826
EB2	11.51	5.005	.740	.793
EB3	12.05	4.465	.709	.801
EB4	12.08	4.396	.685	.815

Reliability: Government Initiative (GI)

Reliability Statistics

Cronbach's Alpha	N of Items
.552	4

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
GI1	12.88	1.580	.279	.526
GI2	13.02	1.557	.366	.460
GI3	13.15	1.250	.404	.418
GI4	12.82	1.606	.308	.503

Reliability: Green Purchase Behaviour (GPB)

Reliability Statistics

Cronbach's Alpha	N of Items
.679	4

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
GPB1	11.83	3.375	.447	.627
GPB2	11.12	4.482	.386	.666
GPB3	11.45	3.626	.586	.547
GPB4	12.06	2.861	.501	.601

T-Test: Gender

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
GPB	Equal variances assumed	2.741	.099	.026	198	.979	.00226	.08516	-.16569	.17020
	Equal variances not assumed			.026	183.416	.979	.00226	.08595	-.16732	.17184

Test of Normality: Gender

Tests of Normality

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Gender	Statistic	df	Sig.	Statistic	df	Sig.
GPB	Male	.106	95	.011	.938	95	.000
	Female	.140	105	.000	.959	105	.003

a. Lilliefors Significance Correction

Mann-Whitney Test: Gender

Test Statistics[a]

	GPB
Mann-Whitney U	4866.500
Wilcoxon W	10431.500
Z	-.299
Asymp. Sig. (2-tailed)	.765

a. Grouping Variable: Gender

Oneway ANOVA: Ethnic

ANOVA

GPB

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	1.084	2	.542	1.514	.223
Within Groups	70.540	197	.358		
Total	71.624	199			

Post Hoc Tests: Ethnic

Multiple Comparisons

GPB

Tukey HSD

(I) Ethnic	(J) Ethnic	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Malay	Chinese	.17092	.10400	.230	-.0747	.4165
	Indian and Others	.16827	.11852	.333	-.1116	.4482
Chinese	Malay	-.17092	.10400	.230	-.4165	.0747
	Indian and Others	-.00265	.10266	1.000	-.2451	.2398
Indian and Others	Malay	-.16827	.11852	.333	-.4482	.1116
	Chinese	.00265	.10266	1.000	-.2398	.2451

Test of Normality: Ethnic

Tests of Normality

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Ethnic	Statistic	Df	Sig.	Statistic	df	Sig.
GPB	Malay	.140	50	.016	.937	50	.010
	Chinese	.151	98	.000	.904	98	.000
	Indian and Others	.190	52	.000	.938	52	.010

a. Lilliefors Significance Correction

Kruskal-Wallis Test: Ethnic

Test Statistics[a,b]

	GPB
Chi-Square	1.836
df	2
Asymp. Sig.	.399

a. Kruskal Wallis Test

b. Grouping Variable: Ethnic

Oneway ANOVA: Monthly Income

ANOVA

GPB

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	3.430	3	1.143	3.286	.022
Within Groups	68.194	196	.348		
Total	71.624	199			

Post Hoc Tests: Monthly Income

Multiple Comparisons

GPB

Tukey HSD

(I) Monthly_Income	(J) Monthly_Income	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Below RM 1,999	RM 2,000 - RM 2,999	.25256	.11753	.142	-.0520	.5571
	RM 3,000 - RM 3,999	.02936	.11189	.994	-.2606	.3193
	RM 4,000 and above	-.13352	.13339	.749	-.4792	.2121
RM 2,000 - RM 2,999	Below RM 1,999	-.25256	.11753	.142	-.5571	.0520
	RM 3,000 - RM 3,999	-.22320	.10879	.173	-.5051	.0587
	RM 4,000 and above	-.38608*	.13080	.018	-.7250	-.0472
RM 3,000 - RM 3,999	Below RM 1,999	-.02936	.11189	.994	-.3193	.2606
	RM 2,000 - RM 2,999	.22320	.10879	.173	-.0587	.5051
	RM 4,000 and above	-.16288	.12576	.567	-.4887	.1630
RM 4,000 and above	Below RM 1,999	.13352	.13339	.749	-.2121	.4792
	RM 2,000 - RM 2,999	.38608*	.13080	.018	.0472	.7250
	RM 3,000 - RM 3,999	.16288	.12576	.567	-.1630	.4887

*. The mean difference is significant at the 0.05 level.

Test of Normality: Monthly Income

Tests of Normality

	Monthly_Income	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
GPB	Below RM 1,999	.128	48	.048	.950	48	.041
	RM 2,000 - RM 2,999	.169	53	.001	.903	53	.000
	RM 3,000 - RM 3,999	.141	66	.002	.966	66	.065
	RM 4,000 and above	.149	33	.060	.964	33	.333

a. Lilliefors Significance Correction

Kruskal-Wallis Test: Monthly Income

Test Statistics[a,b]

	GPB
Chi-Square	11.046
df	3
Asymp. Sig.	.011

a. Kruskal Wallis Test

b. Grouping Variable: Monthly_Income

Correlations

Correlations

		GI	EA	SI	EB	EP	EC	ER	GPB
GI	Pearson Correlation	1	.390**	.120	.128	.376**	.230**	.344**	.235**
	Sig. (2-tailed)		.000	.091	.070	.000	.001	.000	.001
	N	200	200	200	200	200	200	200	200
EA	Pearson Correlation	.390**	1	.039	.021	.267**	.270**	.357**	.277**
	Sig. (2-tailed)	.000		.585	.770	.000	.000	.000	.000
	N	200	200	200	200	200	200	200	200
SI	Pearson Correlation	.120	.039	1	.076	.119	.282**	.264**	.269**
	Sig. (2-tailed)	.091	.585		.282	.093	.000	.000	.000
	N	200	200	200	200	200	200	200	200
EB	Pearson Correlation	.128	.021	.076	1	.181*	.105	.116	.222**
	Sig. (2-tailed)	.070	.770	.282		.010	.140	.102	.002
	N	200	200	200	200	200	200	200	200
EP	Pearson Correlation	.376**	.267**	.119	.181*	1	.299**	.319**	.356**
	Sig. (2-tailed)	.000	.000	.093	.010		.000	.000	.000
	N	200	200	200	200	200	200	200	200
EC	Pearson Correlation	.230**	.270**	.282**	.105	.299**	1	.456**	.422**
	Sig. (2-tailed)	.001	.000	.000	.140	.000		.000	.000
	N	200	200	200	200	200	200	200	200
ER	Pearson Correlation	.344**	.357**	.264**	.116	.319**	.456**	1	.438**
	Sig. (2-tailed)	.000	.000	.000	.102	.000	.000		.000
	N	200	200	200	200	200	200	200	200
GPB	Pearson Correlation	.235**	.277**	.269**	.222**	.356**	.422**	.438**	1
	Sig. (2-tailed)	.001	.000	.000	.002	.000	.000	.000	
	N	200	200	200	200	200	200	200	200

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

*. Correlation is significant at the 0.05 level (2-tailed).

Regression

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.568[a]	.322	.297	.50287

a. Predictors: (Constant), ER, EB, SI, EA, EP, GI, EC

b. Dependent Variable: GPB

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	23.072	7	3.296	13.034	.000[a]
	Residual	48.552	192	.253		
	Total	71.624	199			

a. Predictors: (Constant), ER, EB, SI, EA, EP, GI, EC

b. Dependent Variable: GPB

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	.622	.503		1.237	.218		
	GI	-.017	.108	-.011	-.155	.877	.749	1.336
	EA	.074	.072	.068	1.030	.304	.814	1.228
	SI	.069	.037	.119	1.892	.060	.891	1.123
	EB	.114	.051	.134	2.212	.028	.956	1.046
	EP	.238	.091	.175	2.611	.010	.783	1.277
	EC	.157	.055	.202	2.885	.004	.719	1.391
	ER	.200	.063	.226	3.158	.002	.688	1.454

a. Dependent Variable: GPB