A STUDY ON CONSUMERS' GREEN PURCHASING INTENTION

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2009

A STUDY ON CONSUMERS' GREEN PURCHASING INTENTION

A thesis submitted to the College of Business, University Utara Malaysia in partial fulfillment of the requirements for the degree Master of Business Administration Universiti Utara Malaysia

By

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Abstract

This research explores the factors that influence consumer behavior on buying green products. More specifically, this study examines the four dimensions such as environmental concern, social influence, self-image and man-nature orientation on the green purchasing behavior of students from College of Business, University Utara Malaysia. The total of 700 questionnaires were distributed, 604 questionnaires were returned and usable. Pearson correlation test showed that 'self-image' is the top influential factors in determining consumers' green purchasing intention, followed by 'social influence'. On the other hand, 'environmental concern' and 'man-nature orientation' is the third and fourth influential factors that determine green purchasing intention of consumers respectively. In this relation, marketers should consider these factors in carrying out appropriate promotions to attract customers.

Abstrak

Kajian ini bertujuan untuk mengetahui faktor-faktor yang mempengaruhi gelagat pengguna terhadap niat pembelian produk hijau. Khususnya, kajian ini mengaji empat dimensi seperti keprihatinan persekitaran, pengaruh sosial, imej diri dan 'man-nature orientation' terhadap niat pembelian produk hijau. Sejumlah 700 borang soal selidik telah diedarkan, hanya 604 borang soal selidik boleh digunapakai. Kajian ini mendapati imej diri merupakan faktor yang paling mempengaruhi niat pembelian produk hijau, dan diikuti oleh dimensi pengaruh sosial, keprihatinan persekitaran dan 'man-nature orientation'. Oleh kerana itu, pemasar boleh mempertimbangkan faktor-faktor seperti ini dalam melaksanakan promosi untuk menarik perhatian konsumer.

Acknowledgement

A sincere appreciation to my supervisor, Haji Mohammad Zainol Abidin bin Adam, for his wonderful guidance, professional analytical direction and enormous patient. The help and guidance provided me the will and vigor to complete this paper.

My appreciation is also extended to Associate Professor Hoe Chee Hee for his constructive criticisms and ideas in making this thesis a reality. Special thanks to all respondents of this study for their kind assistance and support throughout the data collection process. I am also very grateful to my friends and family for giving me a great support and encouragement.

Finally, I would also like to take this opportunity to thank all those involved directly or indirectly in making this paper a reality.

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1

Background and Aims

1.0 Background of the Study

The global environmental problem is a growing concern since 1970s. However, numerous environmental disasters and events in the late 1980s have pulled environmentalism into the spotlight once again. Issues like ozone depletion, air pollution, overpopulation, rain forest destruction and hazardous waste were no longer in someone else's backyard faraway, but in our own. Among the problems, most scientist agree that global warming is the most critical issue needing our action today, caused by burning of fossil fuels. Spreading awareness of environmental problems and responding to them without delay is absolutely necessary to deal with the global problem effectively. The responsible for environmental problems are neither falling on government nor industries; but every one of us is of the solution by taking responsibility for our own sustainability issues.

The market place is greener now than ever before and will become even more responsive to products and services promising environmentally responsibility well into the 21st century. Besides, people are concerned about protecting their lives and their livelihoods and are taking action at supermarket shelves, skewing purchases to products perceived as environmentally sound and rejecting those that are not. In

survey after survey, consumers have expressed strong concerns about the environment, along with a willingness to purchase products that they believe will contribute to a healthier planet. In the 1990s, consumers are voicing their concerns in the shopping market and they are shaping a new trend called *environmental consumerism* or *green consumerism* (Ottman, 1992).

1.1 An overview of Green Consumerism

Green consumerism refers to "an attempt by individuals to protect themselves and the planet by buying only green products on the shelves" (Ottman, 1992). The birth of green consumerism started at the time when newly-released Brundland Report heightened awareness of the global ecological crisis (Gosden, 1995). A British company called The Body Shop won the UK "Company of the Year" Business Enterprise Awards in 1987 and then "riding high on a wave of green consumerism" as an outlet for "cruelty-free, minimally packaged, natural ingredient soaps" (Gosden, 1995). Its extraordinary success inspired several authors to quickly assemble popular guides to both green economics and green consuming. Green discrimination by consumers was thereafter quickly established as an essential ingredient of the business culture's plan to save the planet.

Green consumerism can be seen in an increasing sign. As indicated by Klaus Topfer (2002), Executive Director of United Nations Environment Programme (UNEP), "Changing consumption and production patterns will be on the agenda of this year's World Summit on Sustainable Development (WSSD)" and "Consumers

will not save the world by themselves, but they are welcome allies in a struggle where we are going to need all the help we can get." In addition, Renner (2002) said that what consumers are demonstrating is that they want more environmentally acceptable choices than the market has been delivering and more trustworthy information about the social and environmental impact of the precuts they might buy.

1.2 Green Consumer

Green consumer can defined as a person who is mindful of environment related issues and obligations and is supportive of environmental causes to the extent of switching allegiance from one product or supplier to another even if it entails higher cost (Business Dictionary.com, 2009). As in an article in BSD global.com (2007) stated that green consumers "are sincere in their intentions, with a growing commitment to greener lifestyle; almost always judge their environmental practices as inadequate and do not expect companies to be perfect in order to be considered 'green'. Rather, they look for companies that are taking substantive steps and have made a commitment to improve".

In general, green consumers tend to have direct relationship to their income and educational levels. This means that the more they earn and the more schooling they have had, the greener they tend to be (Coddington, 1993). The most responsive age group tends to be young adults. In the US, children and teens are generally more concerned than adults about the environment and are more knowledgeable about green alternatives (BSD global.com, 2007; Coddington, 1993). Increasingly, they influence their parents; purchasing decisions. In the next decade, millions of them will

reach adulthood in the next decade, and gain purchasing power of their own. And they are what we so called the 'Generation Y".

1.2.1 Generation Y and Green Consumerism

Generation Y also known as The Millennial Generation, is a term used to describe the offsprings of Baby Boomers. Generation Y is usually defined as those born between the years 1977 and 1994, as indicated in *American Demographics* (Paul, 2001). 82 percent of this generation has reached adulthood that this year they will be between 18 to 32 years old.

Experiences that occur during the formative childhood and teenage years also will create and define differences between the generations. For instance, Baby Boomers were influenced by the advent of TV, Rock and Roll, the Cold War, Vietnam War, the Threat of nuclear war and the decimal currency. While Generation X lived through the age of the Personal Computer, AIDS, single parent families, the growth in multiculturalism and the downsizing of companies. Generation Y grow up with the internet, cable television, globalization, September 11 and environmentalism (McCrindle, 2002).

As reported by *Environmental Leader* (2007), their survey on shopping behaviour of Gen Y shows that 50 percent of respondents saying a retailer's policy did influence their shopping behaviour. The research also revealed that forty-seven percent of them would be willing to pay more for environmentally friendly services, products or brands. About 46 percent said they would shop at a retailer more if it were environmentally friendly.

1.3 Problem Statement

Understanding consumer behaviour is important for any marketer and it is especially critical for environmental products (Widger, 2007). There are positive signs that demand for greener products is increasing sharply recently. In fact, the Natural Marketing Institute reports that the USD$200+ billion Lifestyles of Health and Sustainability (LOHAS) market is expected to double by 2010 and quadruple by 2015 (Wigder, 2007). If consumers exhibit a high degree of environmental concern and channel it into some pro-environmental purchasing acts, it is likely that profit-driven enterprises will be strongly motivated to adopt the concept of green marketing in their operations.

Consequently, the dynamics of this buyer-seller interaction will lead to further advancement of the green revolution across the whole country (Othman, 1992; Salzman, 1991). There are a number of researches being done on green purchasing behaviour (Chan & Lau, 2000; Soonthonsmai, 2001; Tanner & Kast, 2003; Kamal & Vinnie, 2007; Lee, 2008). However, green purchase behaviour differ from country to country. Thus, in order to better understand the environmental movement of a particular country, a good starting point is the examination of how the consumers in a country view ecological issues and how these views are reflected in consumer behaviour on green issues.

1.4 Purpose of Study

1.4.1 Research Objectives

This study aims to explore the antecedents which will affect consumer's purchasing intention.

1.4.2 Specific objectives

i. To determine whether 'environmental concern' influence the extent to which customers' purchasing intention in green products.
ii. To determine whether 'social-influence' influence the extent to which customers' purchasing intention in green products.
iii. To determine whether 'self-image' influence the extent to which customers' purchasing intention in green products.
iv. To determine whether 'man-nature' orientation influence the extent to which customers' purchasing intention in green products.

1.5 Research Questions

i. Will 'environmental concern' influence the consumers' green purchasing intention?
ii. Will 'social-influence' influence the consumers' green purchasing intention?
iii. Will 'self-image' influence the consumers' green purchasing intention?
iv. Will 'man-nature orientation' influence the consumers' green purchasing intention?

1.6 Research Framework

A theoretical framework guides research, determines what variables to measure and what statistical relationships to look for. Trochim (2006) also stated that there are two realms involved in research – theory and observation. Theory is what goes on inside the heads of scientists while observation is what goes on in the real world or measures and observations (DevComPage, 2009). Theory guides every aspect of research, from research question formulation through operationalization and discussion.

Herek (1995) wrote that the theoretical framework strengthens the researcher's research in several ways:

1. Explicit statement of the theoretical assumptions permits them to be evaluated critically.
2. The theoretical framework connects the researcher to existing knowledge. Guided by a relevant theory, researchers have a basis for their hypotheses and choice of research methods.
3. Articulating the theoretical assumptions of a research study forces the researcher to address questions of why and how. It permits researchers to move from simply describing a phenomenon observed to generalizing about various aspects of that phenomenon.
4. Having a theory helps to identify the limits to those generalizations. A theoretical framework specifies which key variables influence a phenomenon of interest. It alerts the researcher to examine how those key variables might differ in varied populations.

This study was based on the Theory of Reasoned Action by Ajzen and Fishbein (1975 & 1980). According to Ajzen and Fishbein (1975 & 1980), Theory of Reasoned Action suggests that a person's behavioral intention depends on the person's attitude about the behaviour and subjective norms. If a person intends to do a behaviour then it is likely that the person will do it. This theory will be explained more detailed in Chapter 2.

This study examined green purchasing intention of consumers which served as the dependent variable and environmental attitude, environmental concern, social influence, self-image and man-nature orientation as independent variable.

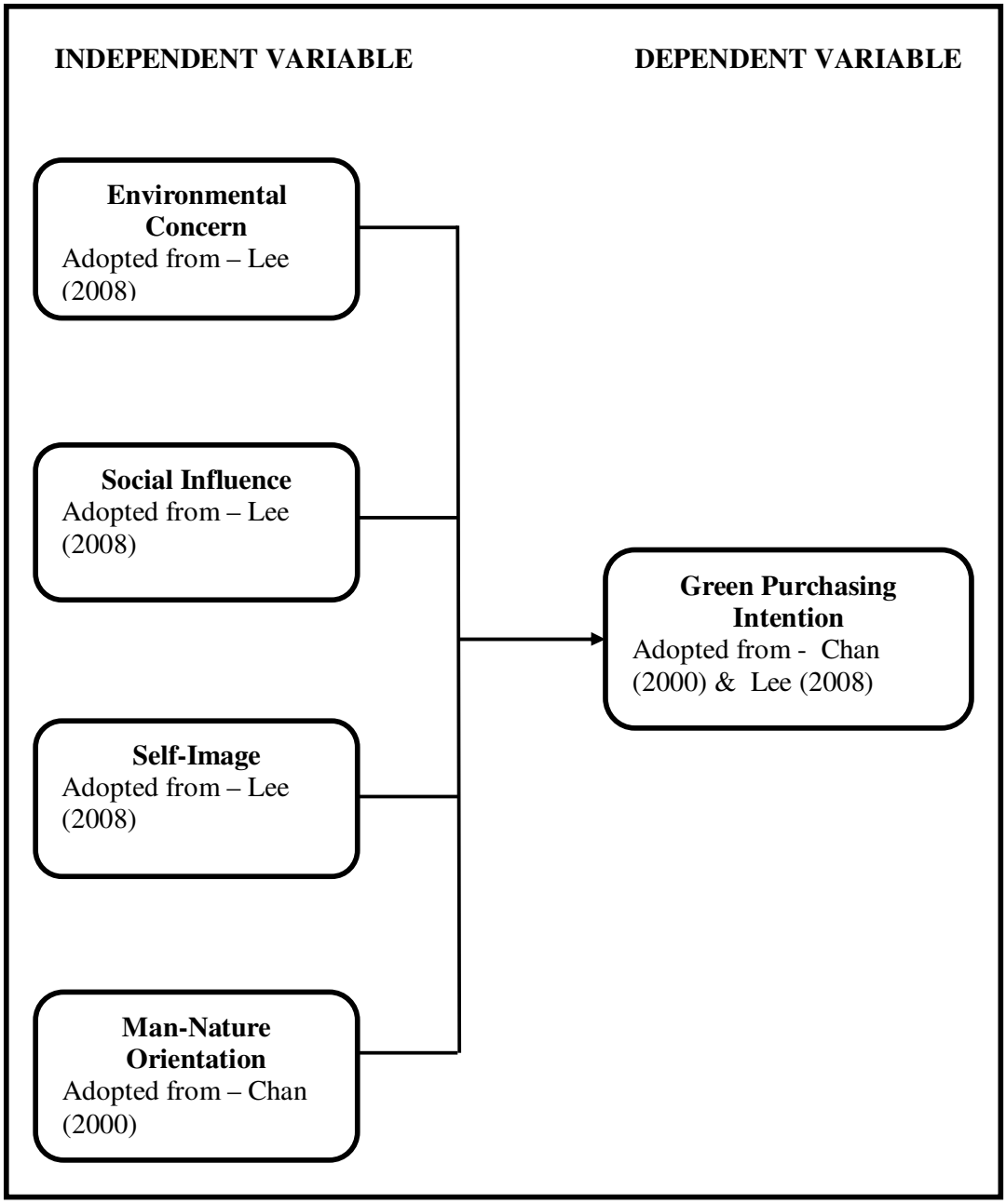

Figure 1.1: Theoretical Framework of the Research

1.7 Definition of Terms

The study was guided by the following definition of terms in the course of its implementation:

Green purchasing intention

Intention to "selectively choosing products with less environmental impact when purchasing goods" (MOE, 2007)

Environmental Concern

The degree of emotionality, the amount of specific factual knowledge and the level of willingness as well as the extent of actual behaviour on environmental issues (Maloney and Ward, 1973)

Social influence

Changing of belief or behaviour after observing the attitudes or actions of others (Skouteris *et.al.*, 2005)

Self image

Perceptions of self as a certain kind of person, with certain traits, habits, possessions, relationships and ways of behaving (Schiffman & Kanuk, 1997).

Man-nature orientation

The relationship between human beings and the natural environment (Chan, 2000).

1.8 Hypothesis

A hypothesis can be defined as a tentative conjecture explaining an observation, phenomenon or scientific problem that can be tested by further observation, investigation and/or experimentation. In general explanation, it is an assumption taken to be true for the purpose of argument or investigation (Wiktionary, 2009). It is also possible explanation that forms the basis of a research study. Studies are designed to help prove or disprove a hypothesis. Based on the literature, it can be hypothesized that environmental attitude, environmental concern, social influence, self-image and man-nature orientation have a positive relationship to green purchasing behaviour.

The following hypotheses are generated:

H1 : There is relationship between 'environmental concern' and green purchasing intention.

H2 : There is relationship between 'social influence' and green purchasing intention.

H3: There is relationship between 'self-image' and green purchasing intention.

H4: There is relationship between 'man-nature orientation' and green purchasing intention.

1.9 Significance of the Study

This study will to be beneficial to business in terms of knowing the green market potentials, especially the market targeted to green consumers. Specifically, it is hoped that the present study contributes to the following areas:

i. To assist businesses to better understanding the potential of the green market.
ii. To assist businesses to better understanding the trend of green purchasing behaviour.
iii. To assist businesses to better understanding the purchasing behaviour of green consumers.

1.10 Organization of the Thesis

The thesis is set out into five chapters. The Chapter One provides an overview on the current trend of green consumerism and the formulation of problem statements and research questions. Theoretical framework as well as hypotheses for this study is also discussed in the first chapter. Chapter Two displays a review of literature on previous research. Chapter Three explains the methodology and tools of analysis for this study while analysis and findings for this study can be found in Chapter Four. Lastly in Chapter Five, a discussion on the findings is included. Recommendations, limitations and conclusion for this study are also included in this last chapter.

2

Literature Review

2.0 Introduction

The first section in this chapter is concerned with the theoretical foundation which is Theory of Reasoned Action. This chapter also reviews the literature on green purchasing intention, environmental attitude, environmental concern, social influence, self-image and man-nature orientation.

2.1 Green Purchasing Intention

Lee (2004) defined green purchasing as "the purchasing of procurement efforts which give preferences to products or services which are least harmful to the environmental and human health". While Mostafa (2007) green purchasing behaviour refers to the consumption of products that are:

- Beneficial to the environment;
- Recyclable or conservable
- Sensitive or responsive to ecological concerns

The most commonly employed theory that assists in explaining the influence of antecedents on purchasing intention is the Theory of Reasoned Action (Fishbein and Ajzen, 1975, 1980). This theory is discussed next.

2.1.1 Theory of Reasoned Action

Theory of Reasoned Action was established by Ajzen and Fishbein in 1975 and modified in 1980. The theory was used to study human behaviour and develop appropriate interventions. Ajzen and Fishbein (1980) suggested that "attitudes could explain human actions". The key assumption of this theory is that individuals are assumed usually quite rational and make systematic use of information available to them. "People consider the implications of their actions before they decide to engage or not engage in a given behaviour" (Ajzen and Fishbein, 1980). The framework looks at behavioural intentions rather than attitudes as the main predictors of behaviours.

According to the theory, an individual's or person's intention is a function of two basic elements, attitudes and subjective norms, which has been found to predict actual behaviour (Miller, 2005). Attitudes are the sum of beliefs about a particular behaviour weighted by evaluations of these beliefs (Miller, 2005). Miller (2005) also defines subjective norms as "looks at the influence of people in one's social environment on his/her behavioral intentions; the beliefs of people, weighted by the importance one attributes to each of their opinions, will influence one's behavioral intention". That is, whenever our attitudes lead us to do one thing but the relevant

norms suggest we should do something else, both factors influence our behavioral intent.

Ajzen (2005) indicated that a person forms an intention to engage in certain behaviour and this intention remains a behavioral disposition until, at the appropriate time and opportunity, an attempt is made to translate the intention into action. However, many theorists agreed that the disposition most closely linked to a specific action tendency is the intention to perform the action under consideration (Fishbein and Ajzen, 1975; Triandis, 1977; Fisher and Fisher, 1992; Gollwitzer, 1993). In other words, except for unforeseen events, people expected to do what they intend to do.

2.1.2 Predicting Behaviour from Intention

Many studies have proved the predictive validity of behavioral intentions. Table 2.1 below shows a selective sample of findings which have strong correlations between intention and volitional behaviour.

Table 2.1: Correlations between Intentions and Volitional Behaviours

Behaviour	*Intention – behaviour correlation*
Applying for shares in the British Electric Company (East, 1993)	0.82
Using birth control pills (Ajzen and Fishbein, 1980)	0.85
Breast vs. bottle feeding (Manstead et.al., 1983)	0.82
Using ecstasy drugs (Orbell et. al., 2001)	0.75
Having an abortion (Smetana and Adler, 1980)	0.96
Complying with speed limits (Elliot et.al., 2003)	0.69
Attending church (King, 1975)	0.90
Donating blood (Giles and Cairns, 1995)	0.75
Using homeopathic medicine (Furnham and Lovett, 2001)	0.75
Voting choice in presidential election (Ajzen and Fishbein, 1980)	0.80

Note: All correlations are significant ($p < 0.05$).
(Adopted from Ajzen, I. (2003). *Attitudes, Personality and* Behaviour, *2nd ed.*, pg.100. Berkshire, England: Open University Press, McGraw-Hill)

It can be seen that intentions can accurately predict a variety of corresponding action tendencies, ranging from applying shares to choosing among candidates in an election or even in environmental intention. Empirical studies have demonstrated a significant positive relationship between environmental intention and behaviour (Maloney and Ward, 1973; Chan and Yam, 1995; Li, 1997; Chan and Lau, 2000).

Besides, Ajzen (2005) also indicated that behaviour tends to become routine or habituate with repeated performance. However, research to date suggests that even when this is the case, intentions continue to be good predictors of behaviour (Ouellete and Wood, 1998; Sheeran and Orbell, 1999).

Consumer actual purchase can be more accurate in examining consumers' actual behaviour. However, studies examining consumers' actual purchase responses towards green products might generate biased results due to the effect of situational factors not included in this study (Hoyer & McInnis, 1997). Therefore, actual purchase behaviours will not be investigated in this study.

2.1.3 Efforts on Promoting Green Purchasing

Green purchasing is a highly effective tool in the shift towards sustainable green consumption and production and can address a wide range of environmental issues, including the reduction of CO2 emissions. To achieve a sustainable future for the global society, public and private sector stakeholders around the world are urged to practice green purchasing (IGPN, 2009).

In Japan government plays an important role in promoting green purchasing in Japan. They enacted The Green Purchasing Law*3 in May 2000 in order to "establish a society which can enjoy sustainable development with a lower environmental impact by encouraging the State and other entities in the public sector to procure eco-friendly goods and services that will contribute to the reduction of environmental impact and through various other activities" (MOE Japan, 2007). With the

establishment of this law, it is not only making the activities of purchasers eco-friendly, as they consume goods and services in their daily life, but also encourage suppliers to develop eco-friendly products.

In Korea, green purchasing is also being promoted. Active consumer's green purchasing was started in 1990 (Lee, 2004). In the initial stage, there were strong and positive responses from consumers for highly symbolic products like recycled papers. However, due to greener products has poor quality and uncertain environmental efficiency, the responses evaded very rapidly. Korea Green Purchasing Network (KGPN) has campaigned for persuading of the establishment of green purchasing law in Korea (Lee, 2004). A research has been carried out by KGPN to seek for the NGOs leaders' opinion on green purchasing. They found that most of NGO leaders think that there is lack of concern and information of mass media and consumer and they might regard green purchasing action programme as valuable thing in the future (Lee, 2004). On the other hand, this study also found that 50% of the Korean consumers have purchasing intention of environmental-friendly enterprise products while 43% of consumers are willing to pay more for green products (Lee, 2004).

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Green purchasing is yet a very new concept in Malaysia (MGPN, 2003). To date, literature on promotion of green purchasing to individual consumers in Malaysia is still lacking. However, it is noticed that large companies where the headquarters are from the USA, UK and other European countries are promoting 'green' practice. In contrast, for the local manufacturing industries, many still have the attitude of 'wait and see' (MGPN, 2003). Lee (2004), President of Green Purchasing Network Malaysia (MGPN), in his talk in the 1st International Conference on Green Purchsing,

suggested that the government needs to be able to convince some big corporations to take the lead and initiate the implementation of green purchasing. In another word, buying 'green' leading by example can accelerate in promoting green purchasing.

2.1.4 Passed Studies on Purchasing Intention

According to Morrison (1979), a large number of studies in the past have used purchasing intention. Smith (1965) presented a highly readable interesting publication on the use of purchase intentions to evaluate the effectiveness of automobile advertising. In addition, Silk and Urban (1978) had purchase intention as one input for a new product model. On the other hand, purchasing intentions was also being used for brand preference and choice by Pessemier, and Lehmann (1972). Sewall (1978) used purchase intention to segment markets for proposing new (redesigned) products.

Purchasing intention data is also routinely used by marketing managers to make strategic decisions on both new and existing products and also marketing programme which support them. Managers use purchasing intentions in concept tests for new products to determine whether a concept merits further development and in product tests to direct attention to whether a new products merits launch. In addition, it also helps managers to decide in which geographic markets and to which customer segments the product should be launched (Silk and Urban, 1978; Urban and Hauser, 1993).

The Theory of Reasoned Action has also been applied in a number of pro-environmental purchasing intention researches. Chan (2000) examined the environmental attitudes and behaviour of consumers in China and tested the relationships among environmental knowledge, affect, intention and behaviour. In his study, the results demonstrate that a strong positive relationship exists and Chinese consumers express a positive ecological affect and green purchase intention. Another research conducted by Follows and Jobber (1999) to predict environmental responsible purchase behaviour and environmental responsible purchase intention also found significant. Follows and Jobber (1999) argued that individual who felt that the environmental consequences of pro-environmental buying were important, were more likely to intend to engage in green purchasing. In their study, they also found that intention is formed as the end result of an evaluation or trade-off between the environmental and individual consequences.

Furthermore, Ramli (2009) examined awareness of Eco-label in Malaysia's green marketing initiative and the result showed that respondents who have high awareness on eco-label would have stronger relationship between concrete knowledge and intention to purchase a product with environmental friendly features. Lee (2008) studied gender differences in green purchasing behaviour of adolescent consumers and found that female were the main green consumers.

In general, the strength of purchase intention as a surrogate measure of future behaviour is a well established phenomenon in the literature (Ajzen and fishbein, 1980; Morrison, 1979). Key reasons for the use of purchase intentions as the single key response variable can be summarized as follows:

- Purchase intention tends to be the single best predictor of actual behavior (Peter & Olson 2002);
- Trying to predict purchase intention is easier than trying to predict actual behaviors (Ajzen & Fishbein 1980; Hoyer & MacInnis 1997; Sheppard et al.1988);
- Research examining the effect of consumers' characteristics on behavioral purchase intentions is less likely to face biased research results due to other situational factors that researchers do not investigate, compared to that examining the effect of consumers' characteristics on actual behaviors (Blattberg & Neslin 1990; Hoyer & MacInnis 1997; Lichtenstein, 1993).

In brief, behavioral intention, specifically green purchasing intentions is adopted as the dependent variable for this study.

2.2 Environmental Concern

Environmental concern is a strong attitude towards preserving the environment (Cosby, Gill and Taylor, 1981). Based on the research by Dunlap and Van Liere (1978), environmental concern is also defined as a global attitude with indirect effects on behaviour through behavioral intention (Gill, Crosby and Taylor, 1981). Environmental concern is also sometime known as "ecological concern", which refers to the degree of emotionality, the amount of specific factual knowledge, and the level of willingness as well as the extent of actual behaviour on pollution-environmental issues (Maloney and Ward, 1973). Maloney, Ward and Braucht (1975) develop the EAKS scale which consisted of four subscales: affection (A), Knowledge (K), verbal

commitment (VC) and actual commitment (AC) to measure ecological concern. This scale implies that the higher a person's cognitive, affective and behavioural intention dimensions of ecological concern, the higher will be the frequency of actual environmental commitment (Kinnear and Taylor, 1973).

In Malaysia, the average amount of solid waste generated by Malaysians is more than 0.8kg per day and a total waste generated is more than 15, 000 tons per day. To quantify it, these wastes can fill up Petronas Twin Towers in 10 days (Lee, 2003). This kind of situation is usually experienced by development countries. However, the experiences of the developed countries have demonstrated that environmental degradation need not arise if environmental considerations are incorporated into development planning (ESCAP, 2003). The government has integrated environment concerns into national policy like the five-year development plans, the (Development) Perspective Plan (1991 – 2000) and the First Malaysia Statement: the Way Forward Towards Vision 2020 (ESCAP, 2003).

A study was conducted to evaluate environmental concerns, knowledge and practices gap among Malaysian teachers (Aini *et.al.*, 2003). Seven dimensions of environmental concern were measured, which were health, wildlife, technology, biosphere, waste, energy and general issues. Of the seven dimensions measured, the respondents concerned for the health was the highest which has a mean score of 3.8 on a scale of 1-4, while the lowest was concerned for waste (m = 3.6) (Aini *et.al.*, 2003). The mean scores were distributed quite evenly for each dimensions and this illustrated the presence of high level of environmental concern among the teachers (Aini *et.al.*, 2003).

Angela (2001) found that the most important determinants mediated by attitudes of purchasing intention in ecologically sound products are environmental concern. This indicated that consumers who were environmentally concerned were more likely to form positive environmental attitudes. Taylor and Todd (1995) found that ecological concern had a causal effect on intentions and mediated by attitudes. Lee's (2008) findings also suggested that environmental concern was found to be the second top predictor of green purchasing behaviour which is right after social influence. To this extent, it can be argued that environmental concern can be the main antecedents that influence pro-environmental behaviour.

2.3 Social Influence

An important determinant of an individual's behavior is the influence of others (Bearden et al. 1989). This belief can be proof with the use of well-known spokespersons endorsing products and portrayal of products being consumed in social situations (Bearden et al. 1989). This clarifies a major part of consumer susceptibility of interpersonal influence, which advocates a bilateral-directional interaction and can also occur between the environmental and personal characteristics (Bandura 1977; 1986; 1989). Social influences and physical structures within the environment will develop and modify human expectations, beliefs, and cognitive competencies. Thus, it can be assumed that attitudes toward buying decisions are strongly influenced by their social environments, which include family, friends, and peer networks. Moreover, interpersonal processes and relationships between opinion leaders and professionals have a significant impact on attitude towards buying decisions (Cheah and Phau, 2005).

Social learning theory also proposes that individuals learn general behaviours and attitudes from past experiences. However, previous research indicated that consumers learn or model behaviours, values, attitudes and skills through the observation of other individuals or through observations of electronic or print media (Bandura, 1977). From this observation, it is obvious that adolescent shopping behaviour are developed and affected by socialization agents, which include family, peers, media and schools (Moschis, 1981; Ozgen, 2003). Many recent studies have analyzed how parents and /or peers influence the consumption attitudes of individual consumers (Bush *et* al., 1999; Carlson *et* al., 1994; Keillor *et al.*, 1996, Laczniak *et al*., 1995). These influences are critical consumer socialization agents among adolescents and may often impact whether or not the young will buy certain products or brands. Shopping patterns of young consumers will be changed depending on the relative presence or absence of interfamily communication about consumption matter and adolescents' media use (Sidin et.al., 2008). Overall, socializing agents are critical in affecting adolescent purchasing decision and their consumption patterns will later influence their consumer behaviour as adults.

Social media is another influencer which has a big impact to purchasing intention. Ad-ology Research (Business Wire, 2009) conducted a survey to study online, traditional and social media influence on buying decisions. It found that fifty-seven percent of 18 to 24 years olds and 48.5% of 25 to 34 year olds say social media influenced their choice of a hair salon or day spa. In addition, across all demographics, online media had the most impact. In addition, their survey also indicated that "buyers who use social technology don't rate it highly in terms of its influence on their buying decisions, despite the fact that they count on peers' opinion to make decisions"

(Ramos, 2009). This reflects the growing state of social media as a main input in buying decisions. Social networking sites like Facebook, MySpace and Twitter is increasingly used by marketers to reach consumers. A research revealed that 30 percent of frequent social networkers trust their peers' opinion when making a major purchase decision, but only 10 percent trust an advertisement (Burns, 2007).

2.4 Self-Image

Consumers have a variety of enduring images of themselves. These images are associated with personality in that individuals consumption related to self-image. In other words, each and every one of us has a perceived self-image as a certain kind of person with certain traits, habits, possessions, relationships and ways of behaving. Consumers frequently attempt to preserved, enhance, alter or extend their self-images by purchasing products or services and shopping at stores believed to be consistent with the relevant self-image and by avoiding products and stores that are not (Schiffman & Kanuk, 1997).

'Self-image' is also defined as the perceptions individuals have of what they are like (Goldsmith, Moore & Beaudoin, 1999). 'Self concept' or 'self image' is an important determinant of individual behaviour as it is concerned with how we see ourselves and how we think other people see us. Individuals tend to create a personal image that is acceptable to their reference group. This 'inner picture' of the self is communicated to the outside world by behaviour, for instance, purchasing behaviour. 'Self-image' is influenced by social interaction and people make purchases that are

consistent with their 'self-concept' in order to protect and enhance it (Lancaster & Reynolds, 2005).

Recently some researchers found that self-image dimension can be a useful in studying motivations to become pro-environmentally (e.g. Mannetti *et. al.*, 2004; Stets & Biga, 2003). For instance, Mannetti *et.al.* (2004) found that an individual's personal identity of being an environmentally responsible person contributes significantly to the explanation of intentions to recycle. On the other hand, Stets and Biga (2003) revealed that identity factor is important in influencing environmentally responsive behaviour.

Moreover, the image of an environmentally-friendly person could project a good image of oneself to others. Survey done by Lee (2008) showed that concern for self-image in environmental protection was found to be the third top predictor of green buying behaviour among Hong Kong adolescents, which was immediately after social influence and environmental concern. This implies that adolescents are concerned with how to keep their good image in front of their reference group by purchasing green products. Thus, it is assumed that their behaviour towards environment carries symbolic functions among them.

Furthermore, consumption is a non-verbal form of communication about the self. Buying goods in order bolster one's self-image may be a motivation in most buying behaviour. A study conducted by Dittmer (2009) on whether impulsive and excessive buying can be understood as attempts to bolster self-image, the findings found that some consumers would buy because the purchase "put me in a better

mood", "makes me feel more like the person I want to be" and "express what is unique about me". While those consumers who whole strong materialistic, were more motivated to buy in order to bolster their self-image. Adolescent is the stage when they're naturally insecure and search for a personal identity (Kersting, 2004). Thus, it will not be surprise that if they engage in green purchasing in order to bolster their own self-images and to fit themselves in their social group.

2.5 Man-Nature Orientation

Values are regarded as principles that guide the formation of attitudes and actions (Rokeach, 1973). That is, people's attitudes affect their thoughts (the cognitive function) and feelings (the affective function) and thus influence behaviour such as purchasing behaviour (Hoyer and MacInnis, 2004). Hoyer and MacInnis (2004) state that when examine the influences that affect purchasing decisions, consumers's value and beliefs need to be considered. Values are enduring beliefs that a given behaviour is desirable or good and include valuing the environment. Environmental values play a primary role in pro-environemtnal behaviour: value affect people's beliefs which then have influences on personal norms that lead to consumers' pro-environmental behaviours (Reser and Bentrupperbaumer, 2005; Stern, 2000).

As we become more psychometrically sophisticated and able to measure attitudes accurately with instruments like Likert scale, we learned that attitudes are much more complex than we had realized (Hills, 2002). However, we all have so many attitudes which change so readily and different so much over time. Therefore, social psychologist started looking for more fundamental, slower changing concept

which may give more reliable behavioral prediction. One of the basic human values which has been widely used and influential is that of Kluckhohn and Strodtbeck (1961). They defined a value as: "A conception, explicit or implicit, distinctive of an individual or characteristic of a group, of the desirable which influences the selection from available modes, means and ends of action". Their theory is later known as the Value Orientation Theory.

The Value Orientation Theory consisted of five dimensions relating to human activities and their relation to them. Kohls (1981) provides a brief introduction to these dimensions as below in Table 2.2.

One of the dimensions of value orientation used in this study is man-nature orientation, which concerns man's relation to his natural environment. There are three potential types that exist between human and nature: man's mastery over nature, man's subjugation to nature and man's harmony with nature (Berry, 1992). Westerners tend to view themselves as separate from nature. In contrast, Asian people view themselves that they live in harmony with nature (de Mooij, 2004). Man is part of nature and therefore, man should not try to overcome or master nature but has to learn how to adapt to it (Yau, 1988). In other words, man should live harmoniously with the nature. The research of Triandis (1993, cited by Laroche *et al.*, 2001) also showed that collectivist people compared with individualism people were friendlier to the environment.

Table 2.2: Description of Five Common Human Concerns and Three Possible Responses.

Concerns/ orientations	Possible Responses		
Human Nature: What is the basic nature of people?	**Evil.** Most people can't be trusted. People are basically bad and need to be controlled.	**Mixed.** There are both evil people and good people in the world, and you have to check people out to find out which they are. People can be changed with the right guidance.	**Good.** Most people are basically pretty good at heart; they are born good.
Man-Nature Relationship: What is the	**Subordinate to Nature.** People really can't change nature. Life is largely determined by external forces, such as fate and genetics. What happens was meant to happen.	**Harmony with Nature.** Man should, in every way, live in harmony with nature.	**Dominant over Nature.** It the great human challenge to conquer and control nature. Everything from air conditioning to the "green revolution" has resulted from having met this challenge.
Time Sense: How should we best think about time?	**Past.** People should learn from history, draw the values they live by from history, and strive to continue past traditions into the future.	**Present.** The present moment is everything. Let's make the most of it. Don't worry about tomorrow: enjoy today.	**Future.** Planning and goal setting make it possible for people to accomplish miracles, to change and grow. A little sacrifice today will bring a better tomorrow.
Activity: What is the best mode of activity?	**Being.** It's enough to just "be." It's not necessary to accomplish great things in life to feel your life has been worthwhile.	**Becoming.** The main purpose for being placed on this earth is for one's own inner development.	**Doing.** If people work hard and apply themselves fully, their efforts will be rewarded. What a person accomplishes is a measure of his or her worth.
Social Relations: What is the best form of social organization?	**Hierarchical.** There is a natural order to relations, some people are born to lead, others are followers. Decisions should be made by those in charge.	**Collateral.** The best way to be organized is as a group, where everyone shares in the decision process. It is important not to make important decisions alone.	**Individual.** All people should have equal rights, and each should have complete control over one's own destiny. When we have to make a decision as a group it should be "one person one vote."

(Adopted from Kohls, L. R. (1981). *Developing Intercultural Awareness*. Washington, D.C.: Sietar Press).

Previous research also found that man-nature orientation is one of the influential factors on environmentally purchase behaviour. Sabrina's (2007) finding showed that consumer value will positively influence consumer ecological affect which will later influence purchasing intention.

Chan (2000) stated that man-nature orientation exert a significant influence on a person's affective responses towards green purchasing intention but not in ecological knowledge. Chan (2000) also conclude that the influence of man-nature orientation on ecological affect and ecological knowledge provides insights into how cultural values actually shape people's eco-friendly behaviour, namely via their unconscious affective reaction to instead of their cognitive understanding of ecological issues. It is explainable that culture is so "automatic" and "natural" that its influence is often taken for granted (Schiffman & Kanuk, 1994). This implies that marketers should understand the culture of their target consumers and then seek to change consumers' attitudes so that they can influence consumers' decision making and behaviour.

3

Methodology

3.0 Introduction

The chapter begins by describing the research design, measurement of variables, sampling method and data collection procedures. This includes a description of pilot test and its results. Techniques of data analysis are explained in the last part of this chapter.

3.1 Research Design

This study used a causal research design. Causal research explores the effect of one thing or the effect of one variable on another (DJS Research Ltd, 2009). A causal explanation exists when there is a correlation between an independent variable and a dependent variable (Wikipedia, 2009). In terms of nature of causality, two variables are related if certain values of one variable coincide with certain variables of another variable. And, when the values of one variable produce the values of the other variable, the relationship is a causal relationship (Lawrence, 2009). In this study, the independent variables are environmental concern, social influence, self-image and man-nature orientation while the dependent variable is 'green purchasing intentions'.

There are many methods of collecting primary data and the main methods such as questionnaires, interviews and observations. Among these methods, questionnaires are a popular means of collecting data because it can cover a large number of people or organizations and relatively cheap (de Vaues, 2002; Zikmund, 2000). Hence, questionnaire was used in this study as the main source of getting data.

3.2 Measurement of Variables

In this study, questionnaires are used to be instrument for analysis and which can be divided two parts:

Part A: Demographic

Part B: Questions related to variables answered in a six-point Likert scale.

In the first part, the respondents' demographic profiles were asked. The second part consists of 33 questions to measure the independent variables and dependent variables. This part was divided into five dimensions. The first and second dimension are "environmental concern" and "social influence", which consist of 4 questions and 6 questions respectively, also adopted from Lee's (2008). The third dimension, "self-image" consists of 3 questions, with reference to the previous study by Lee (2008). The fourth dimension is "man-nature orientation", which has 5 questions and was adopted from the study done by Chan (2001). The last six questions are to measure the last dimension, "green purchasing intention", and is adopted from Chan (2001) and Lee (2008).

Likert scale was used in this study to generate statistical measurements of people's attitudes and opinions. A Likert scale is a psychometric scale commonly used in questionnaires, and is the most widely used scale in survey research (Wikipedia, 2009). Respondents specify their level of agreement to a statement when responding to a Likert questionnaire item. Likert scale is a direct measure of attitudes developed by Rensis Likert (Keegan, 2009). The advantages of using Likert scale are obvious that "they are easy to construct, administer and score" (Keegan, 2009). The use of Likert scale to measure purchase intention is justified on the basis that it has been successfully used in various purchase intention studies (Kalwani and Silk, 1982; Lee and Green, 1991; Twyman, 1973).

After the questionnaire is completed, each item may be analyzed separately or in some cases item responses may be summed to create a score for a group of items. Hence, Likert scales are also known as summative scales. A Likert scale adds up responses to statements representative of a particular attitude. A person's attitude is the summed score from each question. As in this study, a high score would indicate a favorable attitude to green purchasing intention, and a low score an unfavourable attitude. In this study a six point Likert Scale was used as indicated below:-

1 – Extremely disagree

2 – Very disagree

3 – Somewhat disagree

4 – Somewhat agree

5 – Very agree

6 – Extremely agree

The summary of the number of items for each dimension in the questionnaire is shown in Table 3.1 below:-

Table 3.1: Summary of the Questionnaire

Variables	No. of Items	Items
Part A: Demographic		
Gender	1	Part A, Item 1
Age	1	Part A, Item 2
Religion	1	Part A, Item 3
Programme/ Course	1	Part A, Item 4
Part B:		
Environmental concern	4	Part B, Item 1-4
Social influence	6	Part B, Item 5-10
Self-image	3	Part B, Item 11-13
Man-nature orientation	5	Part B, Item 14-18
Green purchasing intention	6	Part B, Item 19-24

3.3 Research Sample

The target population for this study is the undergraduate students from College of Business, University Utara Malaysia. Business students are chosen as surveys indicated that most of the business students are knowledgeable and concerned about the environment (Lawrence, 1992). Moreover, their age are between 18 – 25 years old, since research revealed that 47% of them would be willing to pay more for environmentally friendly services, products or brands (Maritz, 2007). The purchasing power of students may not be as strong as working adults; however, they would be the major green consumers in the coming future.

Convenience Random sampling was used in this study. Convenience random sampling is one of the main types of non-probability sampling methods. A convenience random sample is made up of people who are easy to reach. According to Changing Minds (2009), convenience random sampling generally assumes a homogeneous population that one person is pretty much like another.

Krejcie and Morgan (1970) have produced a table (Table 3.2) for determining sample size and the table is applicable to any population of a defined (finite) size. Overall, there were 13,000 students in College of Business. According to the table, when population size, N=10000, sample size (n) = 370 and when N=15000, n=375. Thus, the sample size for this study should be around 373 samples. Martin and Bateson (1986) indicated that to a point, the more data collected the better, since statistical power is improved by increasing the sample size. Instead of using 373

samples, a total of 604 (145 males and 459 females) undergraduate students from College of Business, University Utara Malaysia, participated in this study.

Table 3.2: Table for Determining Sample Size from a Given Population

N - n	N - n	N - n	N - n	N - n
10 - 10	100 - 80	280 - 162	800 - 260	2800 - 338
15 - 14	110 - 86	290 - 165	850 - 265	3000 - 341
20 - 19	120 - 92	300 - 169	900 - 269	3500 - 346
25 - 24	130 - 97	320 - 175	950 - 274	4000 - 351
30 - 28	140 - 103	340 - 181	1000 - 278	4500 - 354
35 - 32	150 - 108	360 - 186	1100 - 285	5000 - 357
40 - 36	160 - 113	380 - 191	1200 - 291	6000 - 361
45 - 40	170 - 118	400 - 196	1300 - 297	7000 - 364
50 - 44	180 - 123	420 - 201	1400 - 302	8000 - 367
55 - 48	190 - 127	440 - 205	1500 - 306	9000 - 368
60 - 52	200 - 132	460 - 210	1600 - 310	10000 - 370
65 - 56	210 - 136	480 - 241	1700 - 313	15000 - 375
70 - 59	220 - 140	500 - 217	1800 - 317	20000 - 377
75 - 63	230 - 144	550 - 226	1900 - 320	30000 - 379
80 - 66	240 - 148	600 - 234	2000 - 322	40000 - 380
85 - 70	250 - 152	650 - 242	2200 - 327	50000 - 381
90 - 73	260 - 155	700 - 248	2400 - 331	75000 - 382
95 - 76	270 - 159	750 - 254	2600 - 335	100000 - 384

Note: Required sample size, given a finite population, where N = population size and n = sample size
(Adopted from Krejcie, R.V. & Morgan, D.W. (1970). Determining sample size for research activities. *Educational & Psychological Measurement*, 30, 607-610.)

3.4 Data Collection Procedures

Timetable for courses like Strategic Management which was usually taken by final year students, Marketing Management and Managerial Accounting by second year students and Principles of Marketing by first year students, were first identified. These classes were chosen for two reasons: (1) These students are core subjects for majority of the students from all programmes, (2) most students from year one to year four will take these courses.

In order to obtain minimum sample size (373 students), it was necessary to enter at least 5 – 6 core lecture periods. Each class has between 60 – 80 students when all are in attendance. Before those classes started, permission to distribute and collection of the survey questionnaires was obtained from the respective lecturers.

Upon receiving permission, a short briefing on answering the questionnaire was given to the students. Then, questionnaires were distributed to each of the students. If the lecturers agreed, students would be given around 10 to 15 minutes to answer the questionnaires and returned to the researcher. Otherwise, the questionnaires would only be collected at the end of the class.

3.5 Pilot Test

A questionnaire should be piloted with a reasonable sample of respondents representing the target population. Weakness in design and instrumentation can be detected thru a pilot study and it can provide proxy data for selection of profitability sample (Cooper et.al., 2006). A total of 40 respondents were chosen for the pilot test. The questionnaire were distributed randomly to students from College of Business in order to determine the reliability of the instrument that is used to measured the variable of this study prior performing data collection in order to achieve the objectives.

3.6 Reliability Test

Reliability test refers to the degree to which a test is consistent and stable in measuring what it is intended to measure (Cavana et.al., 2001). Consistency indicates how well the items measuring a concept hang together as a set. The most common consistency measure is Cronbach's alpha. Conbach's alpha will generally increase when the correlations between the items increase. Generally, alpha value can take values between negative infinity and 1, although only positive values make sense. As a rule of thumb, correlations between the items considered reliable at the value of 0.7 or higher. The results of the reliability test of the pilot instrument fall within 0.694 to 0.862. Hence, variables measured in this study are considered reliable as their alpha values are 0.7 and higher. The result is shown in Table 3.2 below.

Table 3.3: Reliability Statistic for the Pilot Test

Item	Number of Item	Cronbach's Alpha
Environmental concern	4	0.722
Social influence	6	0.862
Self-image	3	0.694
Man-nature orientation	5	0.726
Green purchasing intention	6	0.834

3.7 Techniques of Data Analysis

In research, obtained raw data will be analysed by statistical method. It is a method of analyzing or representing statistical data or a procedure for calculating a statistic. There are many soft wares in the market for analyzing social science study. In this study, Statistical Package for the Social Science 16.0 (SPSS 16.0) computer software was used. SPSS is a good first statistical package for people wanting to perform quantitative research in social science because it is easy to use and because it can be a good starting point to learn more advanced statistical packages (Harvard-MIT Data Center, 2009). The data collected from the survey was tested using statistical techniques such as frequencies distribution, t-test, one-way analysis of variance (ANOVA), correlation and multiple regression analysis.

3.8 Chapter Summary

This chapter provides details of the research design. It discussed the development stage of the questionnaire which are aligned with the aims and objectives of the research and literature reviewed. In addition, the conducted pilot test also indicated that the instrument is useful reliable for this study. The analysis of the result from the survey is presented in the next chapter.

4

Data Analysis and Findings

4.0 Introduction

This chapter presents the results of the data analysis. The objective of this chapter is to report the findings of the study. Hence, the data analysis is structured around the hypotheses. Data were analysed by using descriptive statistics (frequencies and means) and one way-Anova, t-test, correlation and regression were used to test the hypotheses.

4.1 Descriptive Statistics of Data Collection

Descriptive statistics are methods used to organize, display, describe and explain a set of data with use of tables, graph, and summary measures (Norusis, 1999: Johnson & Christensen, 2000). Two types of measures used in descriptive statistics are Measures of Central Tendency and Measures of Dispersion or Variability. Descriptive statistics may be particularly useful to make some general observations about the data collected, for example, demographics questions. The demographics factors in this research are gender, age, race, religion, programme, and Cumulative Grade Point Average (CGPA).

4.1.1 Gender of Respondents

Table 4.1 below shows the gender of the respondents. The table shows that most of the respondents are female (76.0% or 459 respondents) while 24.0% (145 respondents) are male.

Table 4.1: Gender of Respondents

Gender	Frequency	Percent
Male	145	24.0
Female	459	76.0
Total	**604**	**100.0**

4.1.2 Age of Respondents

The result of respondents' age is shown in Table 4.2 below. The table shows that 93.0% of the respondents (562 respondents) are between the age of 20-26 years old, followed by respondents at the age below 20 years with 7.0% (42 respondents).

Table 4.2: Age of Respondents

Age	Frequency	Percent
Below 20 years old	42	7.0
20 till 26	562	93.0
Total	**604**	**100.0**

4.1.3 Ethnic Origin of Respondents

The result of respondents' ethnic origin is shown in Table 4.3 below. The finding shows that 58.6% of the respondents (354 respondents) are Malay, while 31.8% (192 respondents) are Chinese followed by Others 5.0% (30 respondents) and the rest is Indian with total 4.6% (28 respondents).

Table 4.3: Ethnic Origin of Respondents

Ethnic Origin	Frequency	Percent
Malay	354	58.6
Chinese	192	31.8
Indian	28	4.6
Others	30	5.0
Total	**604**	**100.0**

4.1.4 Religion of Respondents

Table 4.4 shows the religion of the respondents. It was found that most of the respondents are Muslims with 60.4% (365 respondents). On the other hand, 30.1% (182 respondents) are Buddhist while 5.3% (32 respondents) are Hindus, Christian with total 2.3% (14 respondents) and the rest is in other religion category 1.8% or 11 respondents.

Table 4.4: Religion of Respondents

Religion	Frequency	Percent
Islam	365	60.4
Buddhist	182	30.1
Hindu	32	5.3
Christian	14	2.3
Others	11	1.8
Total	**604**	**100.0**

4.1.5 Programme/ Course of Respondents

The result of respondents' programme is shown in Table 4.5. The finding shows that 37.4% (226 respondents) are pursuing Bachelor of Business Administration (BBA) programme, while 11.3% (68 respondents) are students from Bachelor of Accounting (B.ACCT) programme, followed by 9.9% (60 respondents) were in Bachelor of Entrepreneurship (B.ENT) programme. In addition, there are 8.6% of the respondents or 52 respondents pursuing Bachelor of Marketing (B.MKTG) programme and 7.6% (46 respondents) are in Bachelor of Islam Finance and Banking (BIFB) programme. 5.5% (33 respondents) were pursuing Bachelor of International Business Management (BIBM) programme, and 5.3% (32 respondents) were in Bachelor of Finance (BFIN) programme. This is following by Bachelor of Muamalat Administration (BMA), 3.3% (20 respondents), Bachelor of Technology Management (BTM), 2.6% (16 respondents) and followed by 2.5% (15 respondents) from Bachelor of Accounting (Information System) (B.ACCT.IS) programme while 2.3% or 14 respondents are pursuing Bachelor of Human Resource Management (BHRM) programme. Moreover,

both Bachelor of Operations Management (BOM) and Bachelor of Banking (BBANK) have 1.2% or 7 respondents, respectively. While for Bachelor of Risk Management and Insurance (BRMI) and Bachelor of Business Administration (Logistics and Transportation) (BBALT), both have 0.7% or 4 respondents.

Table 4.5: Programme/ Course of Respondents

Programme/Course	Frequency	Percent
BBA	226	37.4
B.ENT	60	9.9
B.MKTG	52	8.6
B.ACCT	68	11.3
BIBM	33	5.5
BOM	7	1.2
BHRM	14	2.3
BFIN	32	5.3
BIFB	46	7.6
BBANK	7	1.2
BMA	20	3.3
BRMI	4	0.7
BBALT	4	0.7
BTM	16	2.6
B.ACCT.IS	15	2.5
Total	**604**	**100.0**

4.1.6 Cumulative Grade Point Average (CGPA) of Respondents

The results of respondents' CGPA in university are shown in Table 4.6. The table shows that 61.1.9% or 369 respondents had a CGPA of 3.00-3.49. On the other hand, 22.2% (134 respondents) had their CGPA between 2.50-2.99, while 16.1% or 97 respondents are between 3.50-3.99 and 0.7% (4 respondents) score 4.0 for their CGPA.

Table 4.6: CGPA of Respondents

CGPA	Frequency	Percent
2.50 – 2.99	134	22.2
3.00 – 3.49	369	61.1
3.50 – 3.99	97	16.1
4.00	4	0.7
Total	**604**	**100.0**

4.2 Mean and Standard Deviation

Tables 4.7 to Table 4.11 provide the mean and standard deviation scores of independent variables and dependent variables adopted in this study. To answer the questions, the respondents were asked to rate each of the four dimensions on a six-point scale ranging from strongly disagree (1) to strongly agree (6). Overall, the mean scores for the six scales which consist of total twenty four items shows the positive high mean values which ranged from 3.58 to 5.06.

4.2.1 Environmental Concern

As tabulated in Table 4.7, all the items have means between 4.15 and 4.70, indicating high level of environmental concern among respondents. Item one; worry about the worsening quality of Malaysia's environment was the most dominant factors in measuring influential of environmental concern on green purchasing intention.

Table 4.7: Means and Standard Deviation of Items Measuring Environmental Concern.

Items	Mean	Standard Deviation
Worry about the worsening of Malaysia's environment quality	4.70	1.047
Malaysia's environment is my major concern	4.41	1.022
Emotionally involve in environmentally protection issues	4.15	1.006
Think how to improve environmentally quality of Malaysia	4.35	0.979
Average	**4.40**	**1.014**

4.2.2 Social Influence

As shown in Table 4.8, the respondents' perception of social influence received an average mean of 3.78. The respondents gave highest response on the item 'Discuss about environmentally issues with my friends' with the mean of 3.98. Whereby, the items 'Buy environmentally friendly products with my friends' received the lowest mean of 3.64. This suggests that the respondents have a moderately high agreement towards social influence on environmentally friendly behaviour.

Table 4.8: Means and Standard Deviation of Items Measuring Social Influence.

Items	Mean	Standard Deviation
Learn environmentally friendly products from my friends	3.65	1.155
Learn environmentally issues from my friends	3.66	1.149
Discuss about environmentally products with my friends	3.83	1.153
Discuss about environmentally issues with my friends	3.98	1.136
Buy environmentally friendly products with my friends	3.64	1.097
Share information about environmentally friendly products with my friends	3.91	1.068
Average	**3.78**	**1.126**

4.2.3 Self-Image

In Table 4.9, all the items for self-image variable scored mean ranges in between 3.58 to 4.15. It indicates a moderate high level of concerning self-image in environmental related behaviour. Item 'Supporting environmental protection make me more social attractive' scored the highest mean of 4.15. However, the third item for this dimension received a mean of 3.58.

Table 4.9: Means and Standard Deviation of Items Measuring Self-Image.

Items	Mean	Standard Deviation
Supporting environmental protection makes me more social attractive	4.15	0.998
Supporting environmental protection makes me special	4.01	1.064
I will be perceived by others as 'out-dated' if I do not support environmental protection	3.58	1.193
Average	**3.91**	**1.085**

4.2.4 Man-Nature Orientation

Table 4.10 presents mean score and standard deviation for man-nature orientation dimension. This dimension received an average mean score of 4.58. Item 'We should maintain harmony with nature' received a high mean score of 5.06. Whereby, the third item received the lowest mean score for this dimension, with a mean of 4,26. This finding suggests that respondents have a high level of agreement on living harmoniously with nature. Overall, this dimension also obtained a relatively high mean score compare to the other dimensions.

Table 4.10: Means and Standard Deviation of Items Measuring Man-Nature Orientation.

Items	Mean	Standard Deviation
Human beings need to understand the way of nature and act accordingly	4.78	1.021
We should maintain harmony with nature	5.06	0.951
Being the master of the world, human beings are NOT entitled to deploy any of the natural resources as they like	4.26	2.043
Human beings are only part of nature (R)	4.32	1.239
We should adapt instead of mastering the environment	4.49	0.980
Average	**4.58**	**1.247**

Note: (R) – reverse scored

4.2.5 Green Purchasing Intention

As shown in the Table 4.11, the respondents' perception of green purchasing intention received an average mean of 4.28. The respondents gave highest response on the item 'I choose to buy products that are environmentally friendly', with a mean of 4.50. All items obtained a mean above 4.0, except for the item 'I buy green products (environmentally friendly products) even if they are more expensive than the non-green ones' has a mean of 3.93.

Table 4.11: Means and Standard Deviation of Items Measuring Green Purchasing Intention.

Items	Mean	Standard Deviation
Intend to buy environmentally friendly products as they are less polluting	4.49	1.061
Intend to switch to other brand for ecological reasons	4.20	1.014
When buying a product, I look at the ingredient label to see if it contains things that are environmentally-damaging	4.09	1.203
I prefer green products (environmentally friendly products) over non-green products when their product qualities are similar	4.44	1.041
I choose to buy products that are environmentally friendly	4.50	1.016
I buy green products (environmentally friendly products) even if they are more expensive than the non-green ones	3.93	1.166
Average	**4.28**	**1.083**

4.3 T-test of Data Collection

T-test is used to determine whether there is a significant difference between the mean of two sets of data (Coakes & Steed, 2007). There are three types of t-tests commonly used in data analysis, namely one-sample t-test, independent-sample t-test, and paired-sample t-test (repeated measures). One-sample t-test is used to identify whether sample data is drawn from a hypothesized population. In other words, the researcher has obtained a set of data from the samples, he/she wants to know whether the sample mean is the same as the population mean from which the samples were drawn.

The result of the t-test is shown in Table 4.12 below. As shown, the difference in the mean of 24.90 and 25.88 with standard deviation of 5.073 and 4.678 for male and female on green purchasing intention were insignificant. Therefore, we can assume that there is a significant different of green purchasing intention between male and female respondents.

Table 4.12: Independent Samples Test between Gender and Green Purchasing Intention

	Gender	Mean	Std. Deviation	t	Significant
Green Purchasing Intention	Male	24.9034	5.07352	-2.077	0.039
	Female	25.8889	4.67814		

4.4 Hypotheses Testing

One-way analysis of variance (one-way ANOVA) is a statistical test used to compare the mean of three or more independent sample groups. This test will determine whether there is a significant difference in the population mean from which the samples were drawn.

The basic procedure involved in analysis of variance is to obtain the estimation of two different population variance i.e between-groups variance and within-group variance based on the data collected from samples. This is followed by the calculation of F-ratio which represents the ratio of between-group variance and within-group variance.

The results of ANOVA are shown in Table 4.13. In the case of race factor, the F value is 5.877. This F value is significant at the level 0.001. This implies that there is a significant difference in the mean of race factor towards green purchasing intention. Similar result is shown when the test was conducted on the religion of the respondents. The F value of 3.652 is significant at the level 0.006. This implies that there is a significant difference in the mean of religion and green purchasing intention.

Table 4.13: One-Way ANOVA between Race, Religion, Programme and CGPA, with Green Purchasing Intention

	F	Significant
Race	5.877	0.001
Religion	3.652	0.006
Programme	1.528	0.096
CGPA	1.192	0.312

Furthermore the programme factor shows that, the F value is 1.528 and it is not significant at the level of 0.096. This implies that there is no significant different between programme and green purchasing intention. Finally, CGPA factor shows similar result. The F value of 1.192 is not significant at the level of 0.312. That is, there is no significant difference in the mean of CGPA and green purchasing intention.

The following part will presents the findings of the research. One way-ANOVA and t-test were used to determine if there were statistically significant differences in the respondents' green purchasing intention when grouped by five components which influence in green purchasing intention.

Hypotheses 1: There is relationship between environmental concern and green purchasing intention.

Since both variables are interval, Pearson Correlation test was conducted and the results are shown in Table 4.14. There is a significant positive correlation between environmental attitude dimension and green purchasing intention with a significant value of 0.000. Hence **we accept** hypothesis H1. In other words environmental concern dimension and green purchasing intention are related with a weak positive relationship (r = 0.471).

Table 4.14: Correlations between Environmental Concern and Green Purchasing Intention

	Pearson Correlation (r)	Significant
Values	0.471**	0.000

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

Hypotheses 2: There is relationship between social influence and green purchasing intention

As shown in Table 4.15, there is a significant positive correlation between environmental concern dimension and green purchasing intention with a significant value of 0.000. Hence **we accept** hypothesis H2. In other words, dimension and green purchasing intention are related with a weak positive relationship (r = 0.478).

Table 4.15: Correlations between Social Influence and Green Purchasing Intention

	Pearson Correlation (r)	Significant
Values	0.478**	0.000

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

Hypotheses 3: There is relationship between self-image and green purchasing intention.

Since both variables are interval, Pearson Correlation test was conducted and the results are shown in Table 4.16. There is a significant positive correlation between social influence dimension and green purchasing intention with a significant value of 0.000. Hence **we accept** hypothesis H_3. In other words social influence dimension and green purchasing intention are related with a moderate relationship (r = 0.507).

Table 4.16: Correlations between Self-Image and Green Purchasing Intention

	Pearson Correlation (r)	Significant
Values	0.507**	0.000

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

Hypotheses 4: There is relationship between man-nature orientation and green purchasing intention

Since both variables are interval, Pearson Correlation test was conducted and the results are shown in Table 4.17. There is a significant positive correlation between self-image dimension and green purchasing intention with a significant value of 0.000. Hence **we accept** hypothesis H_4. Therefore, self-image dimension and green purchasing intention are related with a weak positive relationship (r = 0.454).

Table 4.17: Correlations between Man-Nature Orientation and Green Purchasing Intention

	Pearson Correlation (r)	**Significant**
Values	0.454**	0.000

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

4.5 Regression Analysis

The results of regressing the four (4) independent variables against green purchasing intention can be seen in Table 4.18. The first table in the output 'Model Summary' shows the four (4) independent variables that are entered into the regression model, the R (0.658), which is the correlation of the four (4) independent variables with the dependent variable. After all the inter correlations among the four (4) independent variable are taken into account, the R Square value is 0.432. This is the explained variance and is actually the square of the multiple R (0.658)2. Thus only 43.2 percent of the four (4) variables influence the dependent variables.

The ANOVA table shows that the F value of 114.102 is significant at the 0.000 level. This result reflects that 43.2 percent of the variance (R-Square) in green purchasing intention has been significantly explained by the four (4) independent variables.

The next table, title Coefficients, helps us to see which among the four (4) independent variables is the most important in explaining the variance in green purchasing intention. If we look at the column Beta under Standardized coefficients, the highest number in the beta is 0.285 for "man-nature orientation" dimension, which is significant at the 0.000 level. It may also be seen that four (4) independent variables were significant which is "environmental concern", "social influence", "self image", and "man-nature orientation" dimension.

Table 4.18: Multiple Regression Analysis

Model Summary

Model	R	R Square	Durbin-Watson
1	0.658	0.432	1.917

ANOVA

Model	F	Significant
1	114.102	0.000

Coefficients

Model	B	Beta	t	Significant
Constant	3.534		3.279	0.001
Environmental Concern	0.279	0.174	4.747	0.000
Social Influence	0.198	0.215	5.461	0.000
Self Image	0.436	0.233	5.897	0.000
Man-Nature Orientation	0.331	0.285	8.465	0.000

4.6 Chapter Summary

The four (4) hypotheses proposed earlier have been tested. Using a sample of 604 respondents, data was obtained from the students of College of Business, University Utara Malaysia. The main objective was to determine the factors influencing customers purchasing intention towards green products. Two level of statistical analysis were conducted with two different steps. The first level involved the use of basic descriptive statistic.this level of analysis enable us to obtain an overview of the basic characterisc of the data rather to test the hypotheses. While second level involved two main statistical analysis, analysis of difference (t-test and one way ANOVA) and analysis of relationship and influences (correlation and regression analysis).

Based on the test conducted, all the hypotheses are accepted. Regression test also shows that the four independent variables, namely environmental concern, social influence, self image and man-nature orientation were vital in determining the customers' green purchasing intention.

5

Discussion, Recommendation & Conclusion

5.0 Introduction

This chapter discusses the findings of this study. Recommendations for future research are also included. For the purpose of this discussion, this chapter will be divided into three parts which are discussion, recommendation for future research and conclusion.

5.1 Discussion

The objective of this study is to examine the factors like environmental concern, social influence, self-image and man-nature orientation influencing customers purchasing intention on green products. Demographic factors such as gender, age, race, religion and programme or courses have been used to describe characteristics of respondents.

This study found that 76 percent of respondents are female and 24 percent of respondents are male. With respect to age, 96 percent of the respondents are in

between 20 – 26 years old while the rest are below 20 years old. This finding is reasonable as normally enrolment age to the public universities are at the age of 19 or 20 years old. Majority of the respondents are Malay (58.6 percent), followed by Chinese (31.8 percent) and Indian (4.6 percent). Other races like Bumiputera from Sabah and Sarawak consist of 5 percent. The result is nearly similar to the population statistics of Malaysia that Malay consists of 50.9 percent, Chinese 22.7% and Indian 6.8% (Department of Statistics Malaysia, 2009). Thus, it can be representing the green consumer behaviour of young adults in Malaysia. In terms of religion, it was found that majority of the respondents are Muslim (60.4 percent). This can be explained that Islam is the largest and official religion in Malaysia and the official statistics from Department of Statistics Malaysia (2005) also indicated that there are 60.4 percent Islam in Malaysia. Most of the respondents (37.4 percent) are studying Bachelor of Business Administration which is the programme with the highest student amount in College of Business (COB, 2009). Academic result of respondents was impressive with 77.8 percent respondents obtained CGPA 3.00 and above.

The results of ANOVA showed that 'Ethnic Origin' factor have the F value of 5.877. This F value is significant at the level of 0.001. This implies that race has significant influence in customers' green purchasing intention. For the religion factor, the F value is 3.652 and significant at the level of 0.006. Furthermore, the programme factor has a F value of 1.528, which is not significant at the level of 0.096. CGPA factor also shows the similar result with F value of 1.192 and is not significant at the level of 0.312. All these results show that demographic factor does not fully affect customers' purchasing intention on green products. Only race and religion factor have a significant influence towards customers' green purchasing intention. Since majority

of the respondents were Malay who are Muslim, they will consider on the 'halal' status of the green products. This may influence their green purchasing intention.

Our world has evolved significantly in the last hundred years from a society that relied on farming as a means of survival to an industrial world of factories and pollution (Runyon, 2009). The world condition has even become worst nowadays due to global warming which has caused a lot of natural disasters. For the sake of our own good and to save this planet, it is very important for each and every one of us to do our part in preserving our environment. Although recycling is now still at the top of the list of environmental preservation (Runyon, 2009), green consumerism is increasing significantly worldwide as well. "Landfill, recycling and energy consumption increasingly top the consumer agenda and customers are voting with their feet for companies that show they care"(Tappin & Cave, 2008). This can be seen that today's consumers would prefer green products for a number of reasons. This study has identified four (4) dimensions which will affect consumers' purchasing intention on green products, namely environmental concern, social influence, self-image and man-nature orientation.

In the correlations results, "environmental concern" dimension is positively (correlation coefficient = 0.471) correlated towards green purchasing intention. Here, environmental concern refers to the degree of emotional involvement in environmental issues. This finding was supported by the findings by Lee (2008). She found that environmental concern was the second top predictor to green purchasing behaviour among adolescent consumers in Hong Kong. This implies that consumers who have high degree of concern towards environmental issues, they may have higher

intention to engage in green purchasing behaviour. This is because these customers may have high awareness on the environmental issues which motivate them to act pro-environmentally as they know the impact of not doing so.

"Social influence" is another factor taken into consideration to assure the customers purchasing intention of green products. In this study, "social influence" is found to be positively and second top predictor of green purchasing intention. The correlation coefficient is 0.478. This indicated that parents and peer play a decisive role influencing young adult purchasing intention of green products. Individuals significant peer network might suggest, cultivate, circulate and reinforce a 'norm' of environmental behaviour (Lee, 2008). Uusitalo and Oksanen's (2004) also indicated that green consumption is a form of symbolic consumption. The finding may imply the importance of referral marketing in encouraging individuals to recommend and try green products to their friends. Moreover, individuals tend to have more trustworthy to their social group rather than advertisement when making a decision in purchasing. Television, newspaper, magazine and internet provide us a lot of information everyday and individuals are almost overloaded with different kind of advertisements and product descriptions. This has complicated the decision making process as we can find both pros and cons simultaneously from these media. Thus, testimonials from friends and family towards the products become easily acceptable and believable.

In the correlations results, "self-image" is the most important predictor of young adults green purchasing intention (correlation coefficient = 0.507). This finding is consistent with Kamen Lee (2008) study that concern for self-image in environmental protection has a significant effect on green purchasing intention. In

Malaysia context, surprisingly self-image rank the top among other dimension which is differently with Kamen Lee (2008) study in Hong Kong. In her study, social influence is the most influential factor to green purchasing behaviour. Adolescence is a development period with the following characteristics:

- Struggle with a sense of identity
- Need for approval and acceptance
- Focus on self
- Development of moral ideals (Shaffer, 1994)

Therefore, a pro-environment person could thus project a good impression or image of oneself to others. This is may become a push to engage in green purchasing especially for these young adults who are the stage of identity-and-approval-seeking. Engaging in green purchasing behaviour may make them feel superior and trendy since green consumerism has become a trend now. Besides, respondents are educated generation and usually familiar and cultivated with environmental preservation concept. Being green has become their responsibility. If they refuse to involve in environmental protection, their friend may have a bad impression towards him/her which will then spoil him/her self-image. Therefore, self-image may be one of the forces for them to have purchasing intention of green products.

The result of this study also indicate that "man-nature orientation" dimension is positively correlated (correlation coefficient = 0.454) towards green purchasing intention. Man-nature orientation is usually used in examining culture context. The finding indicates that this is group of people is concerning harmoniously living with nature. Hence, it is possible that they would engage in green purchasing as a mean to

protect the environment. Besides, demographic findings shows that majority of the respondents are religious. Eastern societies believed people should live in harmony with nature and worship it. The Eastern societies see nature as a creation of god and life as God's will (Reisinger & Turner, 2003). Therefore, it is reasonable that religion and culture are also playing an important role in motivating people to become pro-environment.

5.2 Recommendations

In most survey that has been conducted, consumers have expressed strong concerns about the environment, along with willingness to purchase products that they believe will contribute to a healthier planet. Green consumerism is already a substantial movement and it promises to become even more significant with the passage of time. Therefore, what is good for the environment is good for the business as well. Environmental marketing can be done by enterprise or corporate to raise green purchasing intention of consumers. One of the approaches to environmental marketing is environmental education. Environmental education refers to organized efforts to teach about how natural environments function and particularly how human beings can manage their behaviour and ecosystems in order to live sustainably (Wikipedia, 2009). Since this generation is usually well educated, environmental education may be included in the syllabus. It is also noted by Coddington (1993) that "the seeds that are sown under the right approach to environmental marketing are the seeds of environmental education". Cultivating a habit takes time. If consumers are taught when they are small, it can activate their concern towards environment and subsequently become green consumers.

The finding of this study also found that social influence has a deep impact to young adults' decision making. Thus, word-of-mouth marketing or referral marketing can be an effective way in promoting green purchasing behaviour to this consumer group. According to data from Publicis media network Zenith Optimedia (AdAge, 2008), recommendations from family and friends trump all others consumer touch points when it comes to influencing purchases. Moreover, consumers trust friends above experts when it comes to product recommendations. In a study conducted by Yankelovich (2003), it was found that 65% of US respondents trust friends, 27% trust experts while only 8% trust celebrities in terms of product recommendation. According to a report published in Market Sherpa (2007), 86.9 percent of respondents said they would trust a friends's recommendation over a review by critic, while 83.8 percent said they would trust user reviews over a critics.

Online social network like Facebook and Twitter have become popular and even a 'must have' account for young adults in order to get connected with friends. And this online social network has been preferably used by marketers for advertising and promotional purposes. It is also found that online social network users were three times more likely to trust peers' opinions over advertising when making purchase decisions (Jupiter Research, 2007). To create green purchasing intention, testimonials and user reviews on green products and environmental issues may be post in the social network in order to gain publicity. In addition, it can increase environmental awareness and environmental concern among users of social network as well.

Government roles, for example, green related campaign/policy should be taken in consideration in the context of intention purchase. For instance, Budget 2010

with the theme "1 Malaysia, Together We Prosper", Prime Minsister Datuk Seri Najib Tun Razak announced stamp duty exemption for buyers of any buildings and residential properties that have been issued a Green Building Index (GBI) certificate (The Star, 2009). The announcement might encourage people to buy the related products, Green Building direct or indirectly. In another words, government efforts on 'Green' would be able to encourage and stimulate the intention of purchase of products and services. Youngster is always the trend follower and this is an undeniable fact. Hence, manufacturers of green products may also develop green products which look "cool" and trendy. With this, consumers would prefer to buy green products rather than conventional products as at the same time they can play their part in saving this planet.

However, there is no promise that intentions will lead to actual behaviours. Findings from researches showed that consumers are concerned about the environment and social impacts of the products they buy but when it comes to actually buying green products, words and deeds often part ways. To realize the green market, businesses must first identify and remove the hurdles between would-be green consumers' intention and actions that prevent them from buying green. According to Mckinsey's (Bonini *et.al.*, 2008) work with businesses and other organizations around the world, they have identified five hurdles and solution in educating green consumerism. This is shown in the Table 5.1. In Malaysia aspect, green products are yet a niche market today, but they may grow fast in the near future. Marketers in Malaysia may face the same problems too. Hence, they may use this information in order to remove the barriers in order to cultivate more green consumers.

Table 5.1 The Walls between Words and Deeds.

BARRIER	SOLUTION
Lack of awareness of eco-friendly goods	Educate consumers
Negative perceptions of green products	Build better products
Distrust of green items	Be honest
Higher prices	Offer more
Low availability	Bring the products to the people

(Adopted from *Cultivating the Green Consumer*, by Sheila Bonini & Jeremy Oppenheim, 2008).

5.3 Limitations of Study

Due to limited resources and time constraints, the sampling frame for this study was only limited to the students in UUM. Therefore, the findings of this study were unable to be generalizing to all population of consumer in Malaysia. It is recommended that future research shall utilize broader demographic profile to analyze respondents as this study was only studying on young adults. They are not the only green consumers that perhaps other generation like middle-agers and elderly are also potential green consumers. Besides, research subjects in broader geographical location throughout Malaysia should also be conducted. This study examined four variables influencing green purchasing intentions. However, these are not the only determinants. There are yet a lot of purchase considerations for consumers to decide whether or not to buy green products. Future research is thus can consider other demographic factors and purchasing considerations as determinants of green purchasing intention.

5.4 Conclusion

"Going green" has become a buzzword and being discussed by people from all walks of life. One of the ways of being green is thru our purchasing behaviour. The present study shows that the key to raise green purchasing intention among young adults lies on four factors, which are concern of self-image in environmental protection, social influence, environmental concern and man-nature orientation. This finding shows that young consumers are more concern about green products. Therefore, marketers must practice market segmentation in order for them to be successful in this competitive business world.

Overall, the study shows that young consumers displayed a quite positive intention of purchasing green products. Green marketers can consider this group of consumers as one of their potential target markets. In addition, in the future this group of consumers will become a big market for green products due to the following reasons:

i. They have purchasing power
ii. They have influencing power on their parents' and friends' purchase intention
iii. They welcome new and innovative ideas
iv. Their anticipated life span is longer (Bakewell and Mitchell, 2003; Moschis and Moore, 1979).

Based on the findings of this study, it is suggested that environmental education and word-of-mouth can be utilized in increasing and activate green purchasing intention. Government and private sectors, especially manufacturers and

enterprises should play as a leading role in cultivating green consumerism. Cultivating green consumerism would be a long run process. Therefore, future research should be continually conducted to explore green consumer purchasing behaviour. In short, green marketers should recognize the salience of the predictors of green purchasing intention in their efforts to promote green consumerism.

Overall, the present findings have some practical implications. For marketers, green market will be a potential profitable market in the coming years as being green is not a fad that it is now officially a trend (Griffiths, 2009). He also noted that green-minded consumers have increased from 12% to 38% in the past two years. The overall desire to be 'greener' has become a universal need with over 90% of consumers believing that 'environmental responsibility' is important. By 2010 the green market is projected to reach USD $400 billion. Therefore, to attract more green shoppers, Malaysian retailers and manufacturers need to improve consumers' awareness of green products and the choices available.

According to Manget *et.al.* (2009), consumers greatly value the direct benefits of green products offerings, such as superior freshness and taste, the promise of safety and health and savings on energy costs. In fact, respondents in this study are also willing to pay a higher price for green products which have higher quality. More specifically, consumers are willing to pay a little more for some green products if they believe such products are healthier, safer or better for environment. For instance, replace incandescent light bulb with compact fluorescent light bulb (CFL) which not only results in energy saving but also save costs.

Malaysian government is also putting an effort in encouraging all citizens to be green consumers. Penang is the first state in Malaysia that practices "green" by making every Monday a 'No Plastic bag day' (Tan, 2009). In the recent Budget 2010 tabled by the Prime Minister, the Malaysian government is also encouraging Malaysians to embrace green technology. The government is giving income tax exemption to building owners or developers obtaining the Green building Index (GBI) certification (Subramaniam, 2009). Hence, this study can be an input towards the government policy in surveying and promoting green consumerism. As a suggestion, in addition to giving businesses tax exemption for being green, the government should also consider tax exemption to consumers who buy green products.

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APPENDIX A

UNIVERSITI UTARA MALAYSIA
COLLEGE OF BUSINESS

Dear Sir/ Madam/ Ms:

I am inviting you to participate in my research related to green purchasing behaviour. Along with this letter is a short questionnaire that contained questions asking about your green purchasing behaviour. Please complete it and send it back to me. It should take you not more than 10 minutes to complete it.

This research project is part of my Master of Business Administration (MBA) course. As part of this research, I am trying to obtain consumer's intention in purchasing green products. Your views are very important to me in completing this research.

I guarantee that your responses will not be identified. All Information will be treated CONFIDENTIAL. I promise not to share any information that identifies you with anyone.

Your participation in this survey is very much appreciated.

Sincerely,

Cheah Ching Mun

College of Business

Universiti Utara Malaysia

PART I

DEMOGRAPHIC. (Circle the suitable answer for Question 1, 3 and 4. Fill in the blanks for Question 2, 5 and 6.)

1. Gender
    a. Male
    b. Female

2. Age: _____

3. Ethnic Origin
    a. Malay
    b. Chinese
    c. Indian
    d. Others: _____(Please specify)

4. Religion
    a. Islam
    b. Buddhist
    c. Christian
    d. Hindu
    e. Others _____ (Please specify)

5. Programme/ Course: _____

6. CGPA: _____ (Optional)

PART II

Choose the statement which you think accurate and circle the score provided for each question given.

Extremely Disagree	Very Disagree	Somewhat Disagree	Somewhat Agree	Very Agree	Extremely Agree
1	2	3	4	5	6

1	I am worried about the worsening of the quality of Malaysia's environment	1	2	3	4	5	6
2	Malaysia's environment is my major concern	1	2	3	4	5	6
3	I am emotionally involved in environmentally protection issues in Malaysia	1	2	3	4	5	6
4	I often think about how the environmental quality of Malaysia can be improved	1	2	3	4	5	6
5	I learn a lot about environmentally friendly **products** from my friends	1	2	3	4	5	6
6	I learn about environmental **issues** from my friends	1	2	3	4	5	6
7	I discuss with my friends about environmentally friendly **products**	1	2	3	4	5	6
8	I discuss with my friends about environmental **issues**	1	2	3	4	5	6
9	I always buy environmentally friendly products with my friends	1	2	3	4	5	6
10	I always share information regarding environmentally friendly products with my friends	1	2	3	4	5	6
11	Supporting environmental protection makes me more socially attractive	1	2	3	4	5	6
12	Supporting environmental protection makes me special	1	2	3	4	5	6
13	I will be perceived by others as 'out-dated' if I do not support environmental protection	1	2	3	4	5	6
14	Human beings need to understand the way of nature and act accordingly	1	2	3	4	5	6
15	We should maintain harmony with nature	1	2	3	4	5	6

Extremely Disagree	Very Disagree	Somewhat Disagree	Somewhat Agree	Very Agree	Extremely Agree
1	2	3	4	5	6

16	Being the master of the world, human beings are NOT entitled to deploy any of the natural resources as they like	1	2	3	4	5	6
17	Human beings are only part of nature	1	2	3	4	5	6
18	We should adapt instead of mastering the environment	1	2	3	4	5	6
19	I intend to buy environmentally friendly products because they are less polluting	1	2	3	4	5	6
20	I intend to switch to other brand for ecological reasons	1	2	3	4	5	6
21	When I want to buy a product, I look at the ingredient label to see if it contains things that are environmentally-damaging	1	2	3	4	5	6
22	I prefer green products (environmentally friendly products) over non-green products when their product qualities are similar	1	2	3	4	5	6
23	I choose to buy products that are environmentally-friendly	1	2	3	4	5	6
24	I buy green products (environmentally friendly products) even if they are more expensive than the non-green ones	1	2	3	4	5	6

Thank you very much for the help given

APPENDIX B

RELIABILITY

Environmental Attitude

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.376	.416	9

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Question1	29.64	17.254	.101	.396	.367
Question2	29.59	17.907	.028	.470	.391
Question3	29.60	18.188	-.012	.414	.404
Question4	32.36	15.670	.116	.372	.367
Question5	32.74	16.382	.091	.365	.376
Question6	32.05	14.367	.128	.257	.372
Question7	30.62	15.113	.330	.200	.273
Question8	30.67	14.955	.321	.341	.273
Question9	30.60	15.560	.290	.347	.293

Environmental Concern

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.721	.722	4

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Question10	12.91	5.850	.396	.182	.727
Question11	13.20	5.144	.596	.358	.606
Question12	13.46	5.370	.552	.337	.634
Question13	13.26	5.655	.503	.286	.664

Social Influence

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.863	.862	6

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Question14	19.02	18.989	.667	.553	.838
Question15	19.01	19.080	.660	.569	.839
Question16	18.84	18.275	.753	.643	.821
Question17	18.69	18.987	.682	.591	.835
Question18	19.03	20.342	.561	.420	.856
Question19	18.76	20.045	.611	.489	.847

Self Image

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.686	.694	3

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Question20	7.59	3.592	.518	.339	.576
Question21	7.73	3.154	.598	.391	.466
Question22	8.16	3.353	.405	.174	.730

Man-Nature Orientation

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.616	.696	5

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Question23	18.14	12.324	.505	.443	.514
Question24	17.86	13.061	.440	.410	.546
Question25	18.66	9.543	.259	.084	.713
Question26	18.60	11.909	.415	.200	.540
Question27	18.43	12.746	.469	.290	.532

Green Purchasing Intention

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.830	.834	6

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Question28	21.17	16.989	.552	.375	.812
Question29	21.45	16.776	.619	.405	.799
Question30	21.56	16.074	.562	.340	.812
Question31	21.21	16.388	.650	.457	.793
Question32	21.15	16.020	.724	.543	.778
Question33	21.72	16.620	.522	.301	.820

CORRELATIONS

Correlations

Correlations

		Environmental_Attitude	Environmental_Concern	Social_Influence	Self_Image	Man_Nature_Orientation	Green_Purchasing_Intention
Environmental_Attitude	Pearson Correlation	1	.301**	.316**	.363**	.099*	.271**
	Sig. (2-tailed)		.000	.000	.000	.015	.000
	N	603	603	603	603	603	603
Environmental_Concern	Pearson Correlation	.301**	1	.418**	.413**	.389**	.471**
	Sig. (2-tailed)	.000		.000	.000	.000	.000
	N	603	604	604	604	604	604
Social_Influence	Pearson Correlation	.316**	.418**	1	.592**	.185**	.478**
	Sig. (2-tailed)	.000	.000		.000	.000	.000
	N	603	604	604	604	604	604
Self_Image	Pearson Correlation	.363**	.413**	.592**	1	.263**	.507**
	Sig. (2-tailed)	.000	.000	.000		.000	.000
	N	603	604	604	604	604	604
Man_Nature_Orientation	Pearson Correlation	.099*	.389**	.185**	.263**	1	.454**
	Sig. (2-tailed)	.015	.000	.000	.000		.000
	N	603	604	604	604	604	604
Green_Purchasing_Intention	Pearson Correlation	.271**	.471**	.478**	.507**	.454**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	
	N	603	604	604	604	604	604

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

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

		Green_Purchasing_ Intention	Question 1	Question 2	Question 3	Question 4
Green_Purchasing_ Intention	Pearson Correlation	1.000	.275**	.372**	.369**	.378**
	Sig. (2-tailed)		.000	.000	.000	.000
	N	604.000	604	604	604	604
Question1	Pearson Correlation	.275**	1.000	.411**	.288**	.254**
	Sig. (2-tailed)	.000		.000	.000	.000
	N	604	604.000	604	604	604
Question2	Pearson Correlation	.372**	.411**	1.000	.494**	.434**
	Sig. (2-tailed)	.000	.000		.000	.000
	N	604	604	604.000	604	604
Question3	Pearson Correlation	.369**	.288**	.494**	1.000	.483**
	Sig. (2-tailed)	.000	.000	.000		.000
	N	604	604	604	604.000	604
Question4	Pearson Correlation	.378**	.254**	.434**	.483**	1.000
	Sig. (2-tailed)	.000	.000	.000	.000	
	N	604	604	604	604	604.000

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

Correlations

		Green_ Purchasing_ Intention	Question 5	Question 6	Question 7	Question 8	Question 9	Question 10
Green_ Purchasing Intention	Pearson Correlation	1.000	.285**	.293**	.375**	.402**	.409**	.457**
	Sig. (2-tailed)		.000	.000	.000	.000	.000	.000
	N	604.000	604	604	604	604	604	604
Question5	Pearson Correlation	.285**	1.000	.704**	.573**	.456**	.433**	.418**
	Sig. (2-tailed)	.000		.000	.000	.000	.000	.000
	N	604	604.000	604	604	604	604	604
Question6	Pearson Correlation	.293**	.704**	1.000	.606**	.522**	.377**	.345**
	Sig. (2-tailed)	.000	.000		.000	.000	.000	.000
	N	604	604	604.000	604	604	604	604
Question7	Pearson Correlation	.375**	.573**	.606**	1.000	.742**	.437**	.510**
	Sig. (2-tailed)	.000	.000	.000		.000	.000	.000
	N	604	604	604	604.000	604	604	604
Question8	Pearson Correlation	.402**	.456**	.522**	.742**	1.000	.388**	.530**
	Sig. (2-tailed)	.000	.000	.000	.000		.000	.000
	N	604	604	604	604	604.000	604	604
Question9	Pearson Correlation	.409**	.433**	.377**	.437**	.388**	1.000	.613**
	Sig. (2-tailed)	.000	.000	.000	.000	.000		.000
	N	604	604	604	604	604	604.000	604
Question10	Pearson Correlation	.457**	.418**	.345**	.510**	.530**	.613**	1.000
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	
	N	604	604	604	604	604	604	604.000

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

		Green_Purchasing_ Intention	Question11	Question12	Question13
Green_ Purchasing_ Intention	Pearson Correlation	1.000	.477**	.389**	.341**
	Sig. (2-tailed)		.000	.000	.000
	N	604.000	604	604	604
Question11	Pearson Correlation	.477**	1.000	.577**	.308**
	Sig. (2-tailed)	.000		.000	.000
	N	604	604.000	604	604
Question12	Pearson Correlation	.389**	.577**	1.000	.408**
	Sig. (2-tailed)	.000	.000		.000
	N	604	604	604.000	604
Question13	Pearson Correlation	.341**	.308**	.408**	1.000
	Sig. (2-tailed)	.000	.000	.000	
	N	604	604	604	604.000

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

Correlations

		Green_ Purchasing_ Intention	Question 14	Question 15	Question 16	Question 17	Question 18
Green_ Purchasing_ Intention	Pearson Correlation	1.000	.445**	.379**	.185**	.218**	.417**
	Sig. (2-tailed)		.000	.000	.000	.000	.000
	N	604.000	604	604	604	604	604
Question14	Pearson Correlation	.445**	1.000	.623**	.198**	.278**	.442**
	Sig. (2-tailed)	.000		.000	.000	.000	.000
	N	604	604.000	604	604	604	604
Question15	Pearson Correlation	.379**	.623**	1.000	.118**	.262**	.397**
	Sig. (2-tailed)	.000	.000		.004	.000	.000
	N	604	604	604.000	604	604	604
Question16	Pearson Correlation	.185**	.198**	.118**	1.000	.252**	.177**
	Sig. (2-tailed)	.000	.000	.004		.000	.000
	N	604	604	604	604.000	604	604
Question17	Pearson Correlation	.218**	.278**	.262**	.252**	1.000	.391**
	Sig. (2-tailed)	.000	.000	.000	.000		.000
	N	604	604	604	604	604.000	604
Question18	Pearson Correlation	.417**	.442**	.397**	.177**	.391**	1.000
	Sig. (2-tailed)	.000	.000	.000	.000	.000	
	N	604	604	604	604	604	604.000

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

Correlations

		Green_ Purchasing_ Intention	Question 19	Question 20	Question 21	Question 22	Question 23	Question 24
Green_ Purchasing_ Intention	Pearson Correlation	1.000	.697**	.741**	.722**	.766**	.817**	.688**
	Sig. (2-tailed)		.000	.000	.000	.000	.000	.000
	N	604.000	604	604	604	604	604	604
Question19	Pearson Correlation	.697**	1.000	.530**	.327**	.457**	.511**	.301**
	Sig. (2-tailed)	.000		.000	.000	.000	.000	.000
	N	604	604.000	604	604	604	604	604
Question20	Pearson Correlation	.741**	.530**	1.000	.428**	.457**	.496**	.411**
	Sig. (2-tailed)	.000	.000		.000	.000	.000	.000
	N	604	604	604.000	604	604	604	604
Question21	Pearson Correlation	.722**	.327**	.428**	1.000	.480**	.514**	.387**
	Sig. (2-tailed)	.000	.000	.000		.000	.000	.000
	N	604	604	604	604.000	604	604	604
Question22	Pearson Correlation	.766**	.457**	.457**	.480**	1.000	.627**	.402**
	Sig. (2-tailed)	.000	.000	.000	.000		.000	.000
	N	604	604	604	604	604.000	604	604
Question23	Pearson Correlation	.817**	.511**	.496**	.514**	.627**	1.000	.500**
	Sig. (2-tailed)	.000	.000	.000	.000	.000		.000
	N	604	604	604	604	604	604.000	604
Question24	Pearson Correlation	.688**	.301**	.411**	.387**	.402**	.500**	1.000
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	
	N	604	604	604	604	604	604	604.000

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

REGRESSION

Model Summary [b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.659[a]	.434	.429	3.61780	1.921

a. Predictors: (Constant), Man_Nature_Orientation, Environmental_Attitude, Social_Influence, Environmental_Concern, Self_Image

b. Dependent Variable: Green_Purchasing_Intention

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5994.522	5	1198.904	91.600	.000[a]
	Residual	7813.820	597	13.088		
	Total	13808.342	602			

a. Predictors: (Constant), Man_Nature_Orientation, Environmental_Attitude, Social_Influence, Environmental_Concern, Self_Image

b. Dependent Variable: Green_Purchasing_Intention

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.299	1.413		1.627	.104
	Environmental_Attitude	.051	.037	.046	1.365	.173
	Environmental_Concern	.266	.059	.166	4.473	.000
	Social_Influence	.196	.036	.213	5.377	.000
	Self_Image	.409	.076	.218	5.406	.000
	Man_Nature_Orientation	.334	.039	.287	8.521	.000

a. Dependent Variable: Green_Purchasing_Intention

Residuals Statistics[a]

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	13.4172	37.9604	25.6434	3.15558	603
Residual	-14.37945	12.93146	.00000	3.60274	603
Std. Predicted Value	-3.874	3.903	.000	1.000	603
Std. Residual	-3.975	3.574	.000	.996	603

a. Dependent Variable: Green_Purchasing_Intention

ONE WAY

Descriptives

Green_Purchasing_Intention

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Malay	354	26.2571	4.56914	.24285	25.7795	26.7347	10.00	36.00
Chinese	192	24.6302	4.93133	.35589	23.9282	25.3322	6.00	36.00
Indian	28	26.3929	5.14486	.97229	24.3979	28.3878	15.00	35.00
Others	30	24.3667	4.95833	.90526	22.5152	26.2181	13.00	36.00
Total	604	25.6523	4.79029	.19491	25.2695	26.0351	6.00	36.00

Test of Homogeneity of Variances

Green_Purchasing_Intention

Levene Statistic	df1	df2	Sig.
.272	3	600	.845

ANOVA

Green_Purchasing_Intention

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	394.989	3	131.663	5.877	.001
Within Groups	13441.997	600	22.403		
Total	13836.987	603			

Descriptives

Green_Purchasing_Intention

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Islam	365	26.1836	4.49808	.23544	25.7206	26.6466	10.00	36.00
Buddhist	182	24.6703	4.93170	.36556	23.9490	25.3916	6.00	36.00
Christian	14	25.6429	4.18067	1.11733	23.2290	28.0567	16.00	32.00
Hindu	32	25.9063	5.41420	.95710	23.9542	27.8583	13.00	35.00
Others	11	23.5455	7.77642	2.34468	18.3212	28.7697	8.00	36.00
Total	604	25.6523	4.79029	.19491	25.2695	26.0351	6.00	36.00

Test of Homogeneity of Variances

Green_Purchasing_Intention

Levene Statistic	df1	df2	Sig.
1.854	4	599	.117

ANOVA

Green_Purchasing_Intention

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	329.405	4	82.351	3.652	.006
Within Groups	13507.581	599	22.550		
Total	13836.987	603			

Descriptives

Green_Purchasing_Intention

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
BBA	226	25.3407	4.58537	.30501	24.7397	25.9418	8.00	36.00
ENT	60	26.0333	4.67219	.60318	24.8264	27.2403	16.00	36.00
MAR	52	24.1154	5.19673	.72066	22.6686	25.5622	9.00	36.00
ACT	68	26.0882	4.60932	.55896	24.9725	27.2039	14.00	36.00
BIBM	33	26.6061	5.47117	.95241	24.6661	28.5461	6.00	36.00
BOM	7	25.5714	3.90969	1.47773	21.9556	29.1873	21.00	33.00
BHRM	14	28.2143	2.11873	.56625	26.9910	29.4376	24.00	30.00
BFIN	32	26.7188	4.82088	.85222	24.9806	28.4569	19.00	36.00
BIFB	46	26.0000	5.05964	.74600	24.4975	27.5025	15.00	36.00
ECON	7	27.1429	4.41318	1.66803	23.0613	31.2244	24.00	36.00
BMA	20	24.9000	4.86556	1.08797	22.6228	27.1772	16.00	36.00
BRMI	4	26.7500	2.75379	1.37689	22.3681	31.1319	24.00	30.00
LOG	4	28.0000	5.88784	2.94392	18.6311	37.3689	20.00	34.00
MOT	16	26.2500	5.70964	1.42741	23.2075	29.2925	18.00	36.00
BAIS	15	23.1333	5.13902	1.32689	20.2874	25.9792	10.00	29.00
Total	604	25.6523	4.79029	.19491	25.2695	26.0351	6.00	36.00

Test of Homogeneity of Variances

Green_Purchasing_Intention

Levene Statistic	df1	df2	Sig.
.844	14	589	.621

ANOVA

Green_Purchasing_Intention

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	484.950	14	34.639	1.528	.096
Within Groups	13352.037	589	22.669		
Total	13836.987	603			

Descriptives

Green_Purchasing_Intention

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
2.50 - 2.99	134	25.7463	5.20076	.44928	24.8576	26.6349	6.00	36.00
3.00 - 3.49	369	25.7940	4.70844	.24511	25.3120	26.2760	8.00	36.00
3.50 - 3.99	97	25.1237	4.40941	.44771	24.2350	26.0124	13.00	36.00
4.00	4	22.2500	6.65207	3.32603	11.6651	32.8349	16.00	28.00
Total	604	25.6523	4.79029	.19491	25.2695	26.0351	6.00	36.00

Test of Homogeneity of Variances

Green_Purchasing_Intention

Levene Statistic	df1	df2	Sig.
1.200	3	600	.309

ANOVA

Green_Purchasing_Intention

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	82.001	3	27.334	1.192	.312
Within Groups	13754.985	600	22.925		
Total	13836.987	603			

POST HOC TESTS

Multiple Comparisons

Dependent Variable: Green_Purchasing_Intention

Tukey HSD

(I) Race	(J) Race	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Malay	Chinese	1.62685*	.42423	.001	.5339	2.7198
	Indian	-.13579	.92920	.999	-2.5296	2.2580
	Others	1.89040	.90004	.154	-.4283	4.2091
Chinese	Malay	-1.62685*	.42423	.001	-2.7198	-.5339
	Indian	-1.76265	.95750	.255	-4.2294	.7041
	Others	.26354	.92923	.992	-2.1304	2.6575
Indian	Malay	.13579	.92920	.999	-2.2580	2.5296
	Chinese	1.76265	.95750	.255	-.7041	4.2294
	Others	2.02619	1.24374	.363	-1.1780	5.2304
Others	Malay	-1.89040	.90004	.154	-4.2091	.4283
	Chinese	-.26354	.92923	.992	-2.6575	2.1304
	Indian	-2.02619	1.24374	.363	-5.2304	1.1780

*. The mean difference is significant at the .05 level.

Green_Purchasing_Intention

Tukey HSD[a,b]

Race	N	Subset for alpha = .05
		1
Others	30	24.3667
Chinese	192	24.6302
Malay	354	26.2571
Indian	28	26.3929
Sig.		.130

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 51.894.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

Multiple Comparisons

Dependent Variable: Green_Purchasing_Intention

Tukey HSD

(I) Religion	(J) Religion	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Islam	Buddhist	1.51323*	.43091	.004	.3342	2.6922
	Christian	.54070	1.29326	.994	-2.9978	4.0792
	Hindu	.27731	.87549	.998	-2.1181	2.6727
	Others	2.63811	1.45320	.366	-1.3380	6.6142
Buddhist	Islam	-1.51323*	.43091	.004	-2.6922	-.3342
	Christian	-.97253	1.31705	.947	-4.5761	2.6311
	Hindu	-1.23592	.91027	.655	-3.7265	1.2547
	Others	1.12488	1.47442	.941	-2.9093	5.1591
Christian	Islam	-.54070	1.29326	.994	-4.0792	2.9978
	Buddhist	.97253	1.31705	.947	-2.6311	4.5761
	Hindu	-.26339	1.52165	1.000	-4.4268	3.9000
	Others	2.09740	1.91331	.809	-3.1376	7.3324
Hindu	Islam	-.27731	.87549	.998	-2.6727	2.1181
	Buddhist	1.23592	.91027	.655	-1.2547	3.7265
	Christian	.26339	1.52165	1.000	-3.9000	4.4268
	Others	2.36080	1.65973	.613	-2.1804	6.9020
Others	Islam	-2.63811	1.45320	.366	-6.6142	1.3380
	Buddhist	-1.12488	1.47442	.941	-5.1591	2.9093
	Christian	-2.09740	1.91331	.809	-7.3324	3.1376
	Hindu	-2.36080	1.65973	.613	-6.9020	2.1804

*. The mean difference is significant at the .05 level.

Green_Purchasing_Intention

Tukey HSD[a,b]

Religion	N	Subset for alpha = .05
		1
Others	11	23.5455
Buddhist	182	24.6703
Christian	14	25.6429
Hindu	32	25.9063
Islam	365	26.1836
Sig.		.289

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 24.774.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

Green_Purchasing_Intention

Tukey HSD[a,b]

Programe	N	Subset for alpha = .05
		1
BAIS	15	23.1333
MAR	52	24.1154
BMA	20	24.9000
BBA	226	25.3407
BOM	7	25.5714
BIFB	46	26.0000
ENT	60	26.0333
ACT	68	26.0882
MOT	16	26.2500
BIBM	33	26.6061
BFIN	32	26.7188
BRMI	4	26.7500
ECON	7	27.1429
LOG	4	28.0000
BHRM	14	28.2143
Sig.		.310

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 12.770.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

Multiple Comparisons

Dependent Variable: Green_Purchasing_Intention

Tukey HSD

(I) CGPA	(J) CGPA	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
2.50 - 2.99	3.00 - 3.49	-.04777	.48292	1.000	-1.2919	1.1963
	3.50 - 3.99	.62256	.63830	.764	-1.0218	2.2670
	4.00	3.49627	2.42947	.475	-2.7626	9.7552
3.00 - 3.49	2.50 - 2.99	.04777	.48292	1.000	-1.1963	1.2919
	3.50 - 3.99	.67033	.54632	.610	-.7371	2.0778
	4.00	3.54404	2.40694	.455	-2.6568	9.7449
3.50 - 3.99	2.50 - 2.99	-.62256	.63830	.764	-2.2670	1.0218
	3.00 - 3.49	-.67033	.54632	.610	-2.0778	.7371
	4.00	2.87371	2.44286	.642	-3.4197	9.1671
4.00	2.50 - 2.99	-3.49627	2.42947	.475	-9.7552	2.7626
	3.00 - 3.49	-3.54404	2.40694	.455	-9.7449	2.6568
	3.50 - 3.99	-2.87371	2.44286	.642	-9.1671	3.4197

Green_Purchasing_Intention

Tukey HSD[a,b]

CGPA	N	Subset for alpha = .05
		1
4.00	4	22.2500
3.50 - 3.99	97	25.1237
2.50 - 2.99	134	25.7463
3.00 - 3.49	369	25.7940
Sig.		.184

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 14.788.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

T-TEST

Group Statistics

	Gender	N	Mean	Std. Deviation	Std. Error Mean
Green_Purchasing_ Intention	Male	145	24.9034	5.07352	.42133
	Female	459	25.8889	4.67814	.21836

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
Green_Purchasing_ Intention	Equal variances assumed	1.080	.299	-2.166	602	.031	-.98544	.45495	-1.87893	-.09196
	Equal variances not assumed			-2.077	226.601	.039	-.98544	.47455	-1.92054	-.05034

DESCRIPTIVE STATISTICS

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Question1	604	1	6	4.70	1.047
Question2	604	1	6	4.41	1.022
Question3	604	1	6	4.15	1.006
Question4	604	1	6	4.35	.979
Valid N (listwise)	604				

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Question5	604	1	6	3.65	1.155
Question6	604	1	6	3.66	1.149
Question7	604	1	6	3.83	1.153
Question8	604	1	6	3.98	1.136
Question9	604	1	6	3.64	1.087
Question10	604	1	6	3.91	1.068
Valid N (listwise)	604				

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Question11	604	1	6	4.15	.998
Question12	604	1	6	4.01	1.064
Question13	604	1	6	3.58	1.193
Valid N (listwise)	604				

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Question14	604	1	6	4.78	1.021
Question15	604	1	6	5.06	.951
Question16	604	1	45	4.26	2.043
Question17	604	1	6	4.32	1.239
Question18	604	1	6	4.49	.980
Valid N (listwise)	604				

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Question19	604	1	6	4.49	1.061
Question20	604	1	6	4.20	1.014
Question21	604	1	6	4.09	1.203
Question22	604	1	6	4.44	1.041
Question23	604	1	6	4.50	1.016
Question24	604	1	6	3.93	1.166
Valid N (listwise)	604				