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‘ I/ We hereby declared that I/ We had read through this thesis and in my/ our opinion that this thesis is adequate in terms of scope and quality which fulfill the requirements for the award of Bachelor of Technology Management (High Technology Marketing)’

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GREEN AWARENESS ON GENERATION Y PURCHASING BEHAVIOR
TOWARDS GREEN BRAND PRODUCTS IN PENANG, MALAYSIA

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The thesis is submitted in partial fulfillment of the requirements for the awards of
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DECLARATION

“I admit that this report is the result of my own, except certain explanations and passages where every of it is cited with sources clearly.”

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DEDICATION

I would like to dedicate the appreciation to my family members who supported me spiritually, supervisor and panel who guided me throughout the journey of research.

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First and foremost, I would like to express the deepest appreciation to those who have guided and assisted me throughout the journey of completing this final year project.

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ABSTRACT

The aim of this research is to determine green awareness on generation Y purchasing behavior toward green brand products in Penang, Malaysia. Currently, the study of green awareness on generation Y purchasing behavior towards green brand products has become one of the major research topic as there are still a gap existed on the generation Y population in Malaysia and most of the research is less likely focusing on generation Y cohort. Moreover, generation Y is maturing a pragmatic generation that responsible to save the environment as well as benefit to world economic. Thus, this study is conducted to investigate the determinants that affect green awareness on generation Y purchasing behavior toward green brand products. There are six independent variables that had been determined in this research study which are social influence, price consciousness, health consciousness, environmental concern, eco-label and roles of government and NGOs. This research will be targeted on generation Y, with the age ranging from 18 to 35. This research adopted quantitative approach with collected sample of 384 respondents in Penang, Malaysia through questionnaire method. The data was analyzed by using descriptive analysis, factor analysis, Pearson correlation analysis and multiple linear regressions analysis. From the data analysis result, these research findings showed that all of the six determinants have positive relationship to affect green awareness on generation Y purchasing behavior toward green brand products in Penang. Lastly, several recommendations were suggested such as widening the research setting, broaden the target's group, increase environmental education and marketers should come up with the marketing efforts to increase green awareness among generation Y.

ABSTRAK

Kajian ini bertujuan untuk menentukan kesedaran hijau pada generasi Y pembelian tingkah laku terhadap produk jenama hijau di Pulau Pinang, Malaysia. Pada masa ini, kajian kesedaran hijau pada generasi Y tabiat pembelian terhadap produk jenama hijau telah menjadi salah satu topic penyelidikan utama kerana masih ada jurang yang wujud dalam kalangan penduduk generasi Y di Malaysia dan kebanyakan kajian adalah kurang memberi tumpuan kepada generasi Y kohort. Selain itu, generasi Y adalah matang generasi pragmatic yang bertanggungjawab untuk menyelamatkan alam sekitar serta memberi manfaat kepada ekonomi dunia. Oleh itu, kajian ini dijalankan untuk mengkaji penentu yang mempengaruhi kesedaran hijau pada generasi Y pembelian tingkah laku ke arah produk-produk jenama hijau. Terdapat enam pembolehubah bebas yang telah dikenal pasti dalam kajian ini iaitu pengaruh sosial, kesedaran harga, kesedaran kesihatan, kebimbangan alam sekitar, eco-label dan peranan kerajaan dan NGO. Kajian ini akan disasarkan pada generasi Y, dengan umur antara 18 hingga 35. Kajian ini menggunakan pendekatan kuantitatif dengan sampel yang dikumpul 384 responden di Pulau Pinang, Malaysia melalui kaedah soal selidik. Data dianalisis dengan menggunakan analisis deskriptif, analisis faktor, analisis korelasi pearson dan model regresi linear berganda. Dari hasil analisis data, hasil kajian ini menunjukkan bahawa kesemua enam faktor mempunyai hubungan positif dengan mempengaruhi kesedaran hijau pada generasi Y tabiat pembelian terhadap produk jenama hijau di Pulau Pinang. Oleh itu, perbincangan menjelaskan bahawa objektif kajian telah dicapai dalam kajian penyelidikan ini. Akhir sekali, beberapa cadangan telah dicadangkan seperti memperluaskan kawasan penyelidikan dan kumpulan sasaran, meningkatkan pendidikan alam sekitar dan pemarkar harus berusaha untuk meningkatkan kesedaran hijau dalam kalangan generasi Y.

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LIST OF ABBREVIATIONS AND SYMBOLS

SI	=	Social Influence
PC	=	Price Consciousness
HC	=	Health Consciousness
EC	=	Environmental Concern
EI	=	Eco-Label
RGN	=	Roles of Government and NGOs
H ₀	=	Null Hypothesis
H ₁	=	Alternative Hypothesis
α	=	Alpha

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CHAPTER 1

INTRODUCTION

1.1 Background of Study

Nowadays, environmental concern has become a prevalent phenomenon around the world as a consequence of the deterioration of the environment. The severities of environmental problems are caused by depleting of natural resources. According to TNS Market Report (2008), the biggest of environmental deterioration are air pollution, with 28% of global consumer naming this as the problem causing them most concern today, while deforestation is ranked second (19%), water pollution and overdevelopment equal third at 16% each (Cooper, 2008). According to Ministry of Foreign Affairs Statistic, the global temperature has been rise because of greenhouse gases and carbon dioxide trap have affected the global climate. Therefore, increasing the awareness of the severities of environmental issues has led to the number of consumer's attitude towards environmentally friendly products (Rezai et al., 2013; Kalafatis et al., 1999).

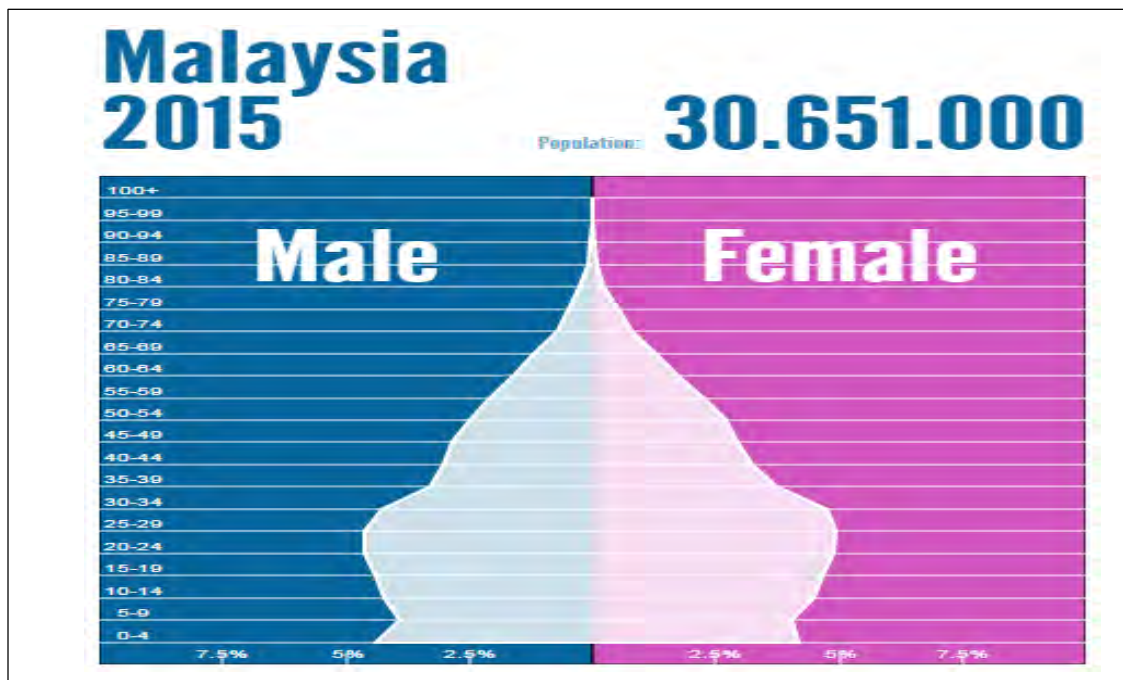
Malaysia is one of the first nations in South-East Asia conscious of the vital of environmental protection for future generation (Golnaz et al., 2008). Air pollution in Malaysia has emerged as a serious environmental problem due to the trans-boundary pollution from neighboring country. According to Bernama News Agency, Malaysia has been suffering the choking haze each year from August until October, which is caused by forest fires in Indonesia. Tan and Lau (2010) cited that during haze period, the air quality at Klang Valley area is only good 23% of the time,

moderate 70% of the time and remaining 7% at an unhealthy level. Developing country like Malaysia has undergone an excellent development followed governmental efforts to attract foreign investor to come and invest for green brand products but the green awareness of environmental attitude is still low among Malaysian consumers.

A green brand, according to Grant (2008) and Hartman and Ibanez (2006), is a brand which offers a notable eco-advantage and comprise of a set of green attributes that minimize adverse environment impact in order to create a positive impression to consumer toward green purchasing behavior. In other word, green brand products are known as environmentally products or ecological products that bring less adverse effect to human and environment (Wong, 2012). Since 1960s, green awareness has grown worldwide with increasing concern on the aftermath of environmental degradation, negative impact of consumption pattern and impact of the economic growth on the environment (Dileep, 2013; Cohen, 2001). Malaysia government targets half a million Malaysians for green awareness campaign with a rapid improving in the consumer awareness toward green brand products (The Star Online, 2013). Recently, marketers have started to step on green movement due to the change of regulation, education system and environment standards in order to encourage the Malaysian consumer toward pro environmental behavior and their willingness to purchase for green brand products. Wong (2010) cited that consumer play a critical role to look for green brand products in which expected to generate a new market demand in the future.

The Census provides that the population of Malaysia in 2015 is recorded 30.65 million where generation Y is dominated around 11 million or 37.1% of the total Malaysia population (Department of Statistical Malaysia, 2015). Thus, this statement proves that generation Y has made up the largest segment of Malaysia's population as compare with generation X and generation Z. In addition, Penang population comprises around 1.61 million of the total Malaysia population and estimated 442.1 thousands or 27.4% is dominated by generation Y in that population (Department of Statistical Malaysia, 2012). Generation Y is also known as the Millennial and Echo Boomers, are the individual who born from 1980 to 1997 (Wong, 2010; Archana and Heejin, 2008). Generation Y have grown up in the era of

technologies such as the internet, e-commerce, cable television, mobile phones, digital cameras and so forth. The previous study indicates that generation Y is a significance important to marketers as they represent the future of green consumerism in market segment. This statement is supported by Leong et al. (2009) who stated that the statistics in 2009 revealed generation Y will represent approximately 26% to 30% of total global consumer market in which equivalent to trillions of dollar market worldwide.



(Source: Population Pyramid of the World 1950 to 2100)

Figure 1.1: Population of Malaysia 2015

Figure 1.1 shows that the population of Malaysia in 2015 is recorded 30.65 million, which is dominated by male and female from different age range. Besides, generation Y is dominated around 11 million or 37.1% of the total Malaysia population.

Table 1.1: Estimated population in Penang 2012

District	2011		2012	
	'000	% share	'000	% share
Timur Laut	527.3	33.09	529.4	32.86
Barat Daya	206.3	12.95	209.1	12.98
Seberang Perai Utara	300.4	18.85	303	18.81
Seberang Perai Tengah	380.3	23.86	384	23.83
Seberang Perai Selatan	179.4	11.26	185.6	11.52
Penang	1,593.60	100.0	1,611.10	100.0

(Source: Department of Statistics, Malaysia)

Table 1.1 shows that the estimated population by district in Penang 2012. Penang population comprises around 1.61 million of the total Malaysia population. Penang state consists of five different districts which are Timur Laut, Barat Daya, Seberang Perai Utara, Seberang Perai Tengah and Seberang Perai Selatan. Among the five district, Timur Laut is made up of the most population which is 529.4 thousands and the lowest population is Seberang Perai Selatan in which made up of 185.6 thousands.

Table 1.2: Distribution population by age and ethnic in Penang 2012

2012									
Umur	Jumlah	Warganegara Malaysia							Bukan Warga Negara Malaysia
		Jumlah Warga Negara Malaysia	Bumiputera			Cina	India	Lain - Lain	
			Jumlah	Melayu	Bumiputera Lain				
0-4	113.4	112.7	62.9	62.2	0.7	37.2	12.2	0.5	0.7
5-9	118.1	117.4	62.2	61.8	0.5	41.7	13.0	0.5	0.7
10-14	125.1	124.5	63.0	62.7	0.3	46.6	14.3	0.5	0.6
15-19	133.9	132.5	64.9	64.5	0.5	52.8	14.3	0.5	0.5
20-24	145.5	126.9	63.6	62.8	0.9	50.1	12.9	0.3	18.5
25-29	154.9	128.7	62.9	61.9	1.0	50.7	12.9	0.2	28.2
30-34	141.7	120.3	64.8	54.0	0.8	52.9	12.4	0.3	21.4
35-39	123.3	111.3	46.7	46.1	0.5	52.7	11.6	0.4	12.0
40-44	113.3	106.3	42.4	42.0	0.3	52.4	11.3	0.3	7.0
45-49	102.0	98.3	36.7	36.5	0.3	50.0	11.3	0.3	3.7
50-54	90.3	87.9	30.8	30.6	0.2	46.3	10.6	0.3	2.4
55-59	75.9	74.2	24.2	24.0	0.2	41.2	8.6	0.2	1.6
60-64	62.9	61.6	18.6	18.5	0.2	36.4	6.5	0.2	1.3
65-69	43.9	43.1	12.7	12.6	0.1	28.5	3.8	0.1	0.8
70-74	30.5	30.0	8.6	6.5	0.1	19.1	2.2	0.1	0.6
75-79	16.7	18.3	5.0	4.9	0.1	11.9	1.4	0.0	0.4

2012									
Umur	Jumlah	Warganegara Malaysia							Bukan Warga Negara Malaysia
		Jumlah Warga Negara Malaysia	Bumiputera			Cina	India	Lain - Lain	
			Jumlah	Melayu	Bumiputera Lain				
70-74	30.5	30.0	8.6	6.5	0.1	19.1	2.2	0.1	0.6
75-79	16.7	18.3	5.0	4.9	0.1	11.9	1.4	0.0	0.4
Jumlah	1,611.1	1,609.0	884.9	658.3	5.6	679.1	160.5	4.6	102.1

(Source: Department of Statistics, Malaysia)

Table 1.2 shows that distribution population by age and ethnic in Penang 2012. Penang population comprises around 1.61 million of the total Malaysia population and estimated 442.1 thousands or 27.4% is dominated by generation Y. Generation Y are the individual who born from 1980 to 1997, which aged from 18 to 35 years old (Wong, 2010; Archana and Heejin, 2008).

Furthermore, as this young population is born in the era of internet, the contents of green message for green brand products are considerably important for generation Y. This is because generation Y cohort is technology savvy population and any environmental friendly related information can be acquired through internet. Wong (2010) found that the green message related with the green brand products must be credible and able to convey the promise of green value by generation Y. Thus, the precise or vague of green message transmit may effect on generation Y's purchase decision toward green brand products.

The green awareness on generation Y purchasing behavior towards green brand products in Asian country is relatively low as compare to Western countries (Lee, 2008). Therefore, this study is conducted to narrow the research gap by investigating the determinants that influence green purchasing behaviors of Malaysian's Generation Y towards green brand products and the weight of these determinants.

1.2 Problem Statement

The study of green awareness on generation Y purchasing behavior towards green brand products has become one of the major current research topic as there are still a gap existed on the awareness of generation Y toward green brand products in Malaysia (Wong, 2012). Also, most of the studies are less likely focusing on generation Y population. Recently, Malaysian non-government organization (NGO) is organized 'Anugerah Hijau 2015' to encourage the young people who play a role in raising the green awareness for environment protection (BERNAMA, 2015). In addition, generation Y has become the target group mainly due to this group of population comprise of major demographic segment with high spending power and significant important to market segment as future environmentalism (Wong, 2012; Markert, 2004; Eastman and Liu, 2012).

Nevertheless, although Asia country like Malaysia has keep up the environmentalism practice, the study involving green awareness on Generation Y purchasing behavior toward green brand product remain noticeably low. This statement can be supported by Bartels and Hoogendam, (2011); Young et al. (2010) who state that although 40% of generation Y comprise of Malaysia population but only four percent of them are willing to buy into the green products. Besides, this statement can support by Kong et al. (2014), only one in five or 20% of consumers were willing to pay more for green brand products. Thus, this show that generation Y does not show much action in adopting green brand products.

Moreover, generation Y is maturing into a pragmatic generation that responsible to save the environment as well as benefit to world economic. There is lack of studies in green marketing issues in Asian countries as compared to the Western countries (Lee, 2008). Wong (2010) stated that the limited green marketing issues conducted among generation Y in Malaysia's context propose that the nation is significance to explore in predicting generation Y's purchasing behavior toward green brand products. Therefore, this study aims to investigate the determinants that affecting green awareness on generation Y purchasing behavior toward green brand products in order to take the initiative to fill up the gap in Malaysia and to ensure that the green awareness capable pass on to generation Y population.

1.3 Research Questions

The research question asked in this study as follow:

- i. What are the determinants that affect green awareness on generation Y purchasing behavior towards green brand products?
- ii. Which is the most determinant that affect green awareness on generation Y purchasing behavior towards green brand products?
- iii. What is the relationship between each determinant that affects green awareness on generation Y purchasing behavior towards green brand products?

1.4 Research Objectives

This study attempted to accomplish three main objectives as follow:

- i. To determine the determinants that affect green awareness on generation Y purchasing behavior towards green brand product.
- ii. To investigate the most determinant that affect green awareness on generation Y purchasing behavior towards green brand products.
- iii. To analyze the relationship between each determinant that affect green awareness on generation Y purchasing behavior towards green brand products.

1.5 Scope, Limitation and Key Assumption of The Study

This research conducted in the attempt to determine the determinants that affect green awareness on generation Y purchasing behavior toward green brand products in Penang, Malaysia.

There are several limitations in this study. The limitations of this research are the age group and geographical factor. This research will only focus on the population of generation Y which is age from 18 to 35 years old. This is due to generation Y is one of the population that comprise of large demographic segment with high spending power and to determine whether this population is willing to spend more by paying premium price on green brand products. Besides, the research will be applicably only to particular research area in which Penang of Malaysia, is mainly due to there is still few studies have been conducted in Penang as compare to others states such as Malacca. Therefore, the data collection for this research will limit and the data will applicable only to the cover research area.

Furthermore, the limitation of this research is time constraints. The research is given inadequate time to complete the survey and conduct the data collection. The limitation of the research is also lack of information as there are only few researches done by others related to generation Y purchasing behavior toward green brand products.

1.6 Importance of Research

This study is pivotal to outline the determinants that affect the green awareness on generation Y purchasing behavior towards green brand products in Asian countries especially in Malaysia. Throughout the study, researcher able to know the factors that influence on the green awareness among the consumer green purchasing behavior and gain some references seek for the solution towards environmental problems. In other words, this study facilitated the green awareness among consumer purchasing behavior especially generation Y towards green brand products and enable marketers to know in depth why previous efforts taken does not generate a huge impact on consumer green purchasing behavior.

Furthermore, this study is focus on generation Y cohort as this group of population dominated the market segment and acts as the green environmentalism in future. Meanwhile, by deeper understanding on the green purchasing behavior of