# TITLE: THE DETERMINANTS OF GREEN PURCHASE INTENTION OF GREEN VEHICLE

# TAN TIAN SENG

Report submitted in fulfilment of the requirement for the degree of

Bachelor of Technology Management (Hons)

In High Technology Marketing

Faculty of Technology Management and Technopreneurship

Universiti Teknikal Malaysia Melaka

**JUNE 2016** 

# **SUPERVISOR CONFIRMATION**

I hereby declare that I have read this thesis and in my opinion this project is sufficient in terms of scope and quality for the award Bachelor Degree of Technology Management (High Technology Marketing)

Signature	·
Supervisor Name	: PUAN RAJA HUDA BINTI RAJA SEHAR
Date	:
Signature	:
Panel Name	: DR.JUHAINI BINTI JABAR
Date	i

# **DECLARATION**

"I hereby declare that the report has been prepared by my own self except the
summaries and citations that I have been clarify the resource. "

Signature	· · · · · · · · · · · · · · · · · · ·
Name	: TAN TIAN SENG
Date	

# **DEDICATION**

I would like to dedicate the appreciation to my family members especially my parents Mr. Tan Kin Chye and Mrs. Phoy Kim Chia who supported me from spiritually and financially, beloved supervisor and panel who guided me throughout the research, housemates and course mates that assisted during the research.

## ACKNOWLEDGEMENT

I would like take the opportunity to express my sincere gratitude to my supervisor Puan Raja Huda Binti Raja Sehar for being there from the first to finish. She always provides me with valuable guidance and advice. In addition, I would like to thank Dr.Juhaini Binti Jabar, my panel, for her valuable comments in my final year project construction.

Besides, I sincerely thanks to housemate and classmate, for their moral support and sharing the knowledge to make the whole study more effective.

At last, I also want to thanks my family members for their motivation to my study. Without the encouragement provided by them, this research study would not have been possible.

Last but not least, the appreciation goes to those who involved toward this research. Hopefully, this research paper will be a reference in the future.

**ABSTRACT** 

one of the green technologies that use to reduce air pollution and greenhouse gas

Nowadays green technology is very common in many firms. Green vehicle is

emissions. In the research discuss about the determinants of green purchase intention

of green vehicle in Malacca, Malaysia. The aim of the research is to increase the

understanding of green purchase intention of green vehicle. Green purchase intention

which means the consumers is more concerning to the product that impact to the

environmental, if pollution is happen the consumer may not buy the product. Further,

200 respondents was selected to answer the questionnaire. Pilot test, descriptive

analysis and inferential analysis that including Reliability Analysis, Multiple

Regression Analysis, Correlate Analysis, Independent Sample T-Test, and One-Way

ANOVA had been discussed in chapter 4 in order to analysis the data collection. The

result of the analysis show that among all the factors subjective norm, environmental

awareness, collectivism and social influence have significant affect on green

purchase intention of green vehicle. However, only perceived behavioral control is

no significant relationship with green purchase intention of green vehicle.

Furthermore, the result also shows that social influence was the most influential

factor that affect on green purchase intention of green vehicle.

**Keywords:** Green Purchase Intention, Green Vehicle, Malaysia

**ABSTRAK** 

Pada masa kini teknologi hijau adalah sangat biasa di banyak firma.

kenderaan hijau adalah salah satu teknologi hijau yang digunakan untuk

mengurangkan pencemaran udara dan gas rumah hijau. Dalam kajian yang

membincangkan tentang penentu niat pembelian hijau kenderaan hijau di Melaka,

Malaysia. Tujuan kajian ini adalah untuk meningkatkan kefahaman tentang hasrat

pembelian hijau kenderaan hijau. Green pembelian niat yang bermaksud pengguna

adalah lebih berkaitan dengan produk yang memberi kesan kepada alam sekitar, jika

pencemaran berlaku pengguna boleh tidak membeli produk. Di samping itu, 200

responden telah dipilih untuk menjawab soal selidik. Kajian rintis, analisis deskriptif

dan analisis inferensi yang termasuk Analisis Kebolehpercayaan, Pelbagai Analisis

Regresi, Analisis Correlate, Independent Sample T-Test, dan One-Way ANOVA telah

dibincangkan dalam bab 4 untuk analisis pengumpulan data. Hasil analisis

menunjukkan bahawa di kalangan semua norma subjektif, kesedaran alam sekitar,

kolektivisme dan pengaruh sosial faktor mempunyai signifikan menjejaskan hasrat

pembelian hijau kenderaan hijau. Walau bagaimanapun, hanya dilihat kawalan

tingkah laku hubungan yang signifikan dengan niat pembelian hijau kenderaan hijau.

Tambahan pula, keputusan itu juga menunjukkan bahawa pengaruh sosial adalah

faktor yang paling berpengaruh yang memberi kesan kepada niat pembelian hijau

kenderaan hijau.

Kata kunci: Pembelian Green Niat, Kenderaan Hijau, Malaysia

# CONTENT

CHAPTER	TITLE	PAGE
	CONTENT	i-v
	LIST OF TABLES	vi
	LIST OF FIGURES	viii
	REFERENCES	80-89
CHAPTER 1	INTRODUCTION	
	1.0 Introduction	1
	1.1 Background of Study	2
	1.2 Problem statement	3
	1.3 Research Questions	5
	1.4 Research Objectives	6
	1.5 Scope, Limitation and Key Assumptions of the Study	6
	1.5.1 Scope	7
	1.5.2 Limitation	7
	1.5.3 Key Assumption	8

	1.6 Importance of the Study	8
CHAPTER 2	LITERATURE REVIEW	
	2.0 Introduction	9
	2.1 Green Product and Green Consumer	10
	2.2 Green Vehicle	12
	2.3 Green Purchase Intention	13
	2.4 Factors Influencing Green Purchase Intention	15
	2.4.1 Subjective norm (IV)	15
	2.4.2 Perceived Behavioral Control (IV)	16
	2.4.3 Environmental Awareness (IV)	17
	2.4.4 Social Influence (IV)	18
	2.4.5 Collectivism (IV)	19
	2.5 Theoretical Framework	21
	2.6 Hypotheses	22
	2.7 Summary	24
CHAPTER 3	RESEARCH METHOD	
	3.0 Introduction	25
	3.1 Research Design	26
	3.2 Methodological Choices	27

	3.3Primary Data Sources and Secondary Data	29
	Sources	
	3.3.1 Primary Data Sources	29
	3.3.2 Secondary Data Sources	30
	3.4 Research Strategy	30
	3.5 Time Horizon	31
	3.6 Location of the Research	32
	3.7 Research Instrument	33
	3.8 Sampling Design	34
	3.8.1Sample Size	35
	3.9 Questionnaire Design	35
	3.10 Analysis Technique	37
	3.10.1 Multiple Regression	38
	3.10.2 Coefficient Analysis	39
	3.10.3 Independent Sample T-Test	40
	3.10.4 One-Way ANOVA	40
	3.11Pilot Test	41
	3.12 Validity	42
	3.13 Reliability	42
	3.14 Summary	43
CHAPTER 4	DATA ANALYSIS AND DISCUSSION	
	4.1 Introduction	44
	4.2 Pilot Test	45

4.	4.3 Descriptive Statistic Analysis		
	4.3.1 Gender	47	
	4.3.2 Age	48	
	4.3.3 Educational Level	49	
	4.3.4 Income	50	
	4.3.5 Type of Vehicles	51	
	4.3.6 Consideration	52	
	4.3.7 Knowledge	53	
4.	4 Data Analysis of Research Questions	54	
	4.4.1 Subjective Norm	54	
	4.4.2 Environmental Awareness	56	
	4.4.3 Perceived Behavioral Control	57	
	4.4.4 Collectivism	59	
	4.4.5 Social Influence	60	
	4.4.6 Descriptive Statistic	62	
4.	5 Inferential Statistic	63	
4.	6 Discussion of objectives	63	
	4.6.1 Objective 1	63	
	4.6.1.1 Multiple Regression Analysis	63	
	4.6.2 Objective 2	69	
	4.6.3 Objective 3	71	
	4.6.3.1 Independent Sample T-Test	71	

	4.6.3.2 One-Way ANOVA	72
	4.7 Summary	75
CHAPTER 5	CONCLUSION AND RECOMMENDATION	
	5.1 Introduction	76
	5.2 Limitation of the study	77
	5.3 Recommendation of the future research	77
	5.4 Conclusion	78
	APPENDIX	
	A Questionnaire	90
	<b>B</b> Pilot Test	98
	C Descriptive Statistic	99
	D Multiple Regression	101
	E Correlation	102
	F T-Test and One-Way ANOVA	103

# LIST OF TABLES

TABLE	TITLE	PAGE
3.1	Likert Scale	36
3.2	Summary of Data Analysis Method Based on Research Objectives	39
4.1	Pilot Test	45
4.2	Subjective Norm	54
4.3	Environmental Awareness	56
4.4	Perceived Behavioral Control	57
4.5	Collectivism	59
4.6	Social Influence	60
4.7	Descriptive Statistic	62
4.8	Summary Model	64
4.9	ANOVA <sup>a</sup>	64
4.10	Coefficients <sup>a</sup>	65
4.11	Pearson Correlation Analysis	69
4.12	Rules of Thumb of Pearson Correlation	70
4.13	Independent samples t-test for Gender	71

4.14	One-Way ANOVA for Age	72
4.15	One-Way ANOVA for Education Level	73
4.16	One-Way ANOVA for Income	74

# LIST OF FIGURE

FIGURE	TITLE	PAGE
2.1	The factors that affect on green purchase intention of green vehicle in Malacca, Malaysia.	21
4.1	Gender	47
4.2	Age	48
4.3	Education Level	49
4.4	Income	50
4.5	Type of Vehicles	51
4.6	Consideration	52
4.7	Knowledge	53

## **CHAPTER 1**

## **INTRODUCTION**

# 1.0 Introduction

In this chapter, the researcher briefly introduces the research background. Next, the vital elements in this chapter are the research objective and research questions. This illustrates the aim of the whole research report, and the reason researcher needs to carry on in this study. Furthermore, the researcher explains about the limitation, scope and key assumption that have to determine in the initial study. Lastly, the importance of study about this report and the contribution of this research report towards publics are also discussed in this chapter.

## 1.1 Background of Study

In the recent years are witness the economic growth rapidly through increasing consumers" consumption in Malaysia. However, over-consumption and exploit of natural resources are the reasons to deteriorate the eco system in our country. Moreover, environment deterioration also depends on the type of materials and products used and it is influenced by specific condition of processing and use (Moncmanová, 2007). Meanwhile, the environment issues have become a persistent public concern in developed countries. Therefore, nowadays many companies they conduct corporate social responsibility to reduce the carbon footprint in their business operation, replace the non-renewable natural resources to renewable natural resources, and use the recycles material to produce the products.

According to Albino, Balice and Dangelico (2009), a green product is designed to minimize its environmental impacts during entire product life cycle. Meanwhile, the researcher has chosen green vehicle industry to conduct in this research paper. Green vehicle are designed to burn less fuel than conventional gasoline or diesel-powered vehicles. There are a number of green vehicles available today in Malaysia such as hybrid car and electric car.

Based on (Tyler cicerello, 2012) adds since late 2011, the Malaysian government has been promoting the establishment of a local electric vehicle manufacturing capacity. Moreover, Mustapa Mohamad, the minister of international trade and industry, he advocates that the government would offer incentives to Malaysians to purchase green vehicles (Tyler cicerello, 2012). In additional, green vehicles can minimize the harmful emissions of burning that fuel, and reduce air pollution (Automobile club of southern california's, 2015). Based on Automobile Club of Southern California's (2014) articulates there are two reasons to purchase a green vehicle. The two reason consumer purchase green vehicles are to save money and concern about the planet like environment, health, and energy security benefits.

Also, consumer who are purchase green vehicle can spend less money on fuel, it is because green vehicle burn lesser fuel than the conventional gasoline-vehicle. Therefore, consumers who are purchase green vehicle can save money in the long-run on petrol refill. Since all products processing will have some impact on the surrounding environment. Besides, the conventional gasoline-vehicles produce carbon dioxide, methane, and nitrous oxide to the environment. These types of gases produce will increase the greenhouse gases that cause climate change (Automobile club of southern california's, 2014). Therefore, this happen will increase consumer concern about the environment and make them willing to purchase green vehicle instead of conventional-gases vehicles. Meanwhile, the final purchase decision is depend on the consumer purchase intention. The degree of importance and interest in a product will influence the consumer purchase intention.

Therefore, the purpose of this research is to investigate the factors that affect green purchase intention of green vehicle and identify the most influential factor that affects the green purchase intention for green vehicle. Last but not least, this research needs to determine the relationship between demographic and the consumer purchase intention.

#### 1.2 Problem Statement

Nowadays, environmental issues becoming more popular it comes to unusual climate change, global warming, natural resources and other ecological challenges that caused by human consumption. Human consumption have greatly associate to the environmental issues, thus it make the company has concern about the environment aspect in their business. Meanwhile, the current environmental issues in Malaysia are air pollution problems. The environmental issue like air pollution has

emerged in Malaysia due to rapid economic development, higher mobility and urbanization.

Based on Market Watch (2010), it stated the major sources of pollution are from traffic which contributes 49% to the overall pollution while power plants, industrial branches using fossil burning and the uncontrolled burning of communal and industrial waste contributes are responsible for the remainder of the pollution. The exhaust gas from mobile emission sources like motor vehicles also is the reason to cause the air pollution in urban areas. Therefore, automobile industries are being studied and regulated with plans of minimizing pollution levels. In the Ninth Malaysia Plan (2006-2010), the government aimed to improve the air quality by promoting the use of cleaner technologies and by limiting the emissions of hazardous gases.

Nevertheless, eco-friendly as a component of their product value proposition makes the consumer think about conservation to the environment. Moreover, the potential alternative is generating which are standard combustion engine vehicles in hybrid cars that can reduce the carbon dioxide which it will cause the air pollution. According to data by the Malaysian Automotive Association (MAA), hybrid vehicle sales fell 11.7% in the first six months of 2014 to 6,007 units from 6,803 units in the previous corresponding period. The drop in sales can be attributed to the excise duty exemption removal on completely-built-up (CBU) hybrid cars – a policy that was announced under the National Automotive Policy 2014 in January (Eugene Mahalingam, 2014). This shows that Malaysian government also can influence the green purchase intention of green vehicles.

Besides that,Lim Chia Ying (2015) illustrates an electric bus was used as a sightseeing bus in Malacca. This can be explains the Malaysian government is supporting the green vehicles launch in Malacca. Furthermore, these environmental issues are the factors which have led the consumer focus to behave ,green" in their purchasing decisions. (Do Paco and Raposo, 2009; Barber, 2010; Okada and Mais, 2010). Subsequently, the demand for green products has increased significantly

(Dangelico and Pontrandolfo, 2010). Nevertheless, consumer buying decision is playing an important role to the environment. Hence, consumers feel have the responsibility to reduce environmental damage through consumption of eco-friendly products.

## 1.3 Research Question

According to the statement, the researcher has a notion about the research question. The question is directly related to the topic. The researcher has come up with 3 questions based on the title as show below:

- 1. What are the factors that affect on green purchase intention of green vehicle?
- 2. What is the most influential factor that affect on green purchase intention of green vehicle?
- 3. What are the differences between demographic variables and green purchase intention of green vehicle?

# 1.4 Research Objectives

Based on this research, there are three objectives that need to achieve to solve the questions. These objectives have had significant relationship to the research questions. Those objectives are:

- 1. To investigate the factors that affect on green purchase intention of green vehicle.
- 2. To identify the most influential factor that affect on green purchase intention of green vehicle.
- 3. To test the difference between the demographic variables and green purchase intention of green vehicle.

# 1.5 Scope, Limitation and Key Assumptions of the Study

In this section, the researcher will briefly about scope, limitation while doing the research and key assumptions in the whole research.

## **1.5.1 Scope**

This research is concentrate on vehicles industry. Vehicles industry nowadays also concern about environment issues. Therefore, the researcher chose green vehicles like hybrid car as the studies sample. The reason researcher chose green vehicles it is because it can solve the environment issues. The location is conduct in Malacca state it is because government Malaysian encourages the establishment of a local electric vehicle manufacturing capacity (Tyler cicerello, 2012). The data collection will get from 200 samples of vehicle user. They will be send an online survey and questionnaire to collecting data.

## 1.5.2 Limitation

This research can be longitudinal studies that have to carry out in the future. Besides that, there are too narrow market firm can access in this research. The obstacle to obtain the correct data is depending on respondents. The honesty of respondents is under suspicion during questionnaires answering. Moreover, the knowledge of the respondent toward green vehicles is limit. Therefore, the research data collection will occur inadequate and incorrect. Moreover, the researcher faces on time constraint and lack of financial support during conducting this research. In summary, the researcher had to be emphasized only at Malacca vehicle user.

## 1.5.3 Key Assumption

The key assumption of the research is green vehicles. A green vehicle is a road motor vehicle that produces less harmful impacts to the environment than comparable conventional internal combustion engine vehicles running on gasoline or diesel, uses certain alternative fuels(R.I.C. one that or Publications ,2005).

# 1.6 Importance of the study

This research is aim to let us know more detail about the factors that affect green purchase intention of green vehicle. In addition, it also illustrates which factor is the most influential that affect green purchase intention of green vehicle. Besides that, this research also has state out the relationship between demographic variables and green purchase intention of green vehicle. Lastly, this research paper may become a reference paper for the vehicle company to determine the most influential factor that affect on green purchase intention of green vehicle and thus they can do some marketing strategy adjustment to approach the customer to buy green vehicle.

## **CHAPTER 2**

## LITERATURE REVIEW

## 2.0 Introduction

Literature review is an essential component of dissertations. The term "literature review" are include literature search, analysis of papers, referencing, formulation of research proposals and writing thematic reviews by critical constructive synthesis (Fink, 2013). In this part of the research, previous research in green product and consumer is briefly presented and discussed. Next, the researcher is focusing on the factors that can affect the green purchase intention of green vehicle. The factors are included subjective norms, perceived behavioural control (control on availability and perceived consumer effectiveness), environmental awareness (consumer's environmental concerns, environmental knowledge), social influence and collectivism. The literature is aim to advance understand the term, definition, and the attribute of the research topic. Lastly, hypotheses development will be the last section.