

DEVELOPING THE MODEL ON FACTORS INFLUENCING CONSUMERS' PURCHASE INTENTION OF ELECTRIC VEHICLES IN MALAYSIA

LOH PEI ZHEN, WONG CHEE HOO and TAN SENG TECK

Faculty of Business and Communications, INTI International University, Malaysia.

*Corresponding author: cheehoo.wong@newinti.edu.my

Abstract

Consumer buy intention refers to a person's actions when making a purchase choice for goods or services after carefully considering their preferences, needs, and desires, and then beginning the search for goods or services that suit their requirements. From both a global and regional perspective, research has been undertaken on consumer purchasing behaviour. As climate change and global warming worsen in ASEAN countries, the transport sector's high energy use is a major concern. Consumers who are environmentally sensitive and want to buy green automobiles may be influenced by social influence, incentives, environmental attitude and environmental knowledge. But the results presented in the literature on green marketing are conflicting, leading some to wonder. The goal of this study is to fill a gap in Malaysian research on consumers' intentions to purchase environmentally friendly vehicles. Environmental awareness, eco-label, mind-set, eco - labelling, and pricing will all be examined to see how they affect Malaysian consumers' decisions to buy green cars. Malaysian customers' purchasing behaviour for green products is supported by the Reasoned action Theory and a conceptual model designed to explain the relationship between environmental awareness, eco-label, attitudes, green advertising, the pricing Customers in Malaysia's green car market were studied utilizing multiple regression analysis to see what effect environmental awareness, eco-labelling, attitudes, green advertising, or pricing had on their purchasing decisions. From the 212 people who filled out an online questionnaire, data was collected, analysed, and tested. The results of this study can assist green vehicle firms and manufacturers in taking the appropriate actions. To capture the attention of young buyers, makers of eco-friendly vehicles must position themselves appropriately. The Malaysian government must provide both incentives and infrastructure to encourage customers to choose eco-friendly automobiles. Additionally, this research contributes to the United Nations Development Program's (UNDP) SDG efforts to achieve universal access to quality, dependable, but current energy resources by 2030.

Keywords: Consumer purchase intention, green car, environmental consciousness, eco-label, attitude, green advertising and price

INTRODUCTION

According to estimates from the Malaysian Automotive Association, the number of passenger cars on Malaysian roads has increased by 6 million in the last decade (Malaysia Automotive Association, 2021). This is a problem because Malaysia is still behind the curve when it comes to selling green cars. Other countries, such as Norway or China, are encouraging environmentally friendly vehicles to the fullest extent. New green vehicles accounted for 51.4 percent of all new registrations in Norway in 2017. Data from China's Road Traffic Data Council shows that about half of the world's electric vehicle sales occur in China (Lim, Perumal, & Ahmad, 2019).

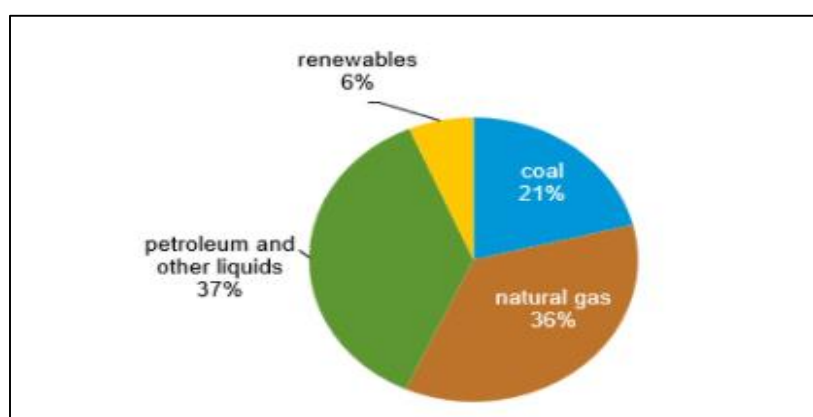
A 45 percent aim in 2025 and a 100 percent target in 2030 have been set by the government for recently registered hybrid - electric vehicles, according to the Green Technology Master Plan (GTMP). In order to promote green cars, the Malaysian government has been building public charging stations for electric cars and has not charged sales tax on locally made cars (Prime Minister's Office Malaysia Official Website, 2019). To avoid confusion in this study, the terms "green car" and "electric vehicle" are interchangeable and have the same meaning.

A population of 15.8 million people drove in 2019, according to the Mamat (2021), whereas Malaysia possessed 32.3 million automobiles since about December 31, 2021, according to the Mamat. There were around 32.6 million vehicles registered in the United States in 2019, which equates to almost one automobile for every 2.25 persons in the country and nearly one vehicle for every person. Malaysians buy the most common vehicle type, which uses petroleum.

However, a vehicle that consumes petrol will have a lot of negative effects. All the petrol cars will emit many gases which pollute the air. The carbon monoxide will cause photochemical smog, which will affect human health (An Australia Government Initiative, 2022). Other than carbon monoxide, carbon dioxide is also being emitted by vehicles, which will trap the heat from the sun in the atmosphere of the earth and cause the greenhouse effect. Furthermore, petrol and diesel are categorized as fuel, which is a non-renewable energy. It cannot be replaced by natural gas at a pace quick enough to keep up with consumption.

If everyone drives his or her vehicle alone daily, the existing mineral sources will be used up soon. The transportation sector's fuel consumption and carbon pollution are on the rise. To reduce increasing carbon energy consumption and emissions, car usage on the roads is considered as an effective option for optimal use of greener energy (Alganad, Isa, & Fauzi, 2021). So, to stop this from happening, most people think that the gasoline car will be replaced soon.

Table 1: Malaysian primary energy consumption in 2019 (EIA, 2021)



According to Table 1 by EIA (2021), Petroleum as well as other liquids plus natural gas make up the majority of Malaysia's energy consumption, accounting for 37% and 36% of the country's total in 2019. Coal, on the other hand, supplies 21% of a country's energy needs. 6 percent of total energy consumption is accounted for by renewable sources. Based on the above

data, it shows that the consumption of renewable energy is less than non-renewable energy. If the trend of energy consumption remains unchanged, non-renewable energy will run out one day in the future. Hence, it's believed that the petrol car will be replaced based on the abovementioned problem. As a developing country, People in Malaysia are increasingly opting for more environmentally friendly ways of life, making the country an ideal market for sustainable products. Green automobile manufacturers, for example, have a large number of global customers; find it hard to connect with Malaysian consumers because there isn't much information about how they buy green cars (Lim, Perumal, and Ahmad, 2019).

According to Bernama, It is estimated that 90% of Malaysian automobiles are currently powered by fossil fuels, which contributes significantly to greenhouse gas emissions. More aggressive steps are needed to help the transition beyond fossil fuels to renewable energy sources such as biofuels and hydroelectric and wind power. As seen by Malaysia's incentives, green cars as an alternative for gas-guzzling vehicles are still a low priority in the country (Alganad, Isa, and Fauzi, 2021).

Many scholars from many scientific disciplines have been interested in studying green consumption behaviour as predictors of sustainable green consumption in recent years. As a result, it's critical to elucidate any aspects that influence consumer views and increase their desire to buy green products. The current study used the Theory of Planned Behavior, which incorporates both attitude & behavioural intention components, to evaluate green car purchasing intentions.

In addition, despite the fact that consumer purchase behavior has been examined locally, there is still a contextual gap in Malaysia, where few studies have been conducted on consumer purchasing behavior for green automobiles. Consequently, in order to fill up the context gap, this research aims to determine if Malaysian customers' purchasing decisions for green cars are significantly influenced by environmental consciousness, eco-label, attitudes, green advertising, and pricing in Malaysia.

The appropriate research topic (RQ) for this study is if environmentalism, eco-label, mindset, green advertising, and pricing are important determinants of Malaysian consumers' green purchase intention cars?

LITERATURE REVIEW

Purchase Intention as the Dependent Variable

According to Malaysia's EPI scores, Malaysia's environmental performance is on the decline, falling from 9th place in 2006 to 68th place in 2020. Malaysia now has an EPI score of 47.9, which is a modest increase from a decade ago. Malaysia was placed third among Southeast Asian countries, but 68th overall among the 180 countries. Its position has deteriorated since 2006, when it was ranked 9th (Surienshah, 2021). In comparison to non-green items, Tan, Ojo & Thurasamy (2019) stated that most Malaysians saw green products as high-priced commodities aimed at high-net-worth consumers. So, the Malaysian government has taken a

number of steps to get people to use more green products and change their habits in ways that are better for the environment.

Young people seem to care more about the environment. This could be because their parents and other older people teach them about the value of buying and consuming things (Naderi & Steenburg, 2018). Customers have diverse perspectives on the embedded green features of a product they want to buy. Therefore, establishing the appropriate characteristics of green products from client demand remains a challenge for designers. Consumers may see and value the traits in a positive or negative way, depending on their own tastes.

Cultural value effects, as well as the natural surroundings of consumer characteristics, might produce these choices (Ghazali et al., 2021). Most countries have implemented green car laws to encourage the production of low-emission, energy-efficient vehicles. As green automobiles have grown in popularity in 2017, and several nations have announced plans to phase out internal combustion engines by 2040, the trend of becoming green has gradually spread throughout Asia, including Malaysia (Lim, Perumal, & Ahmad, 2019). This year's National Automotive Policy (NAP), that stresses the need of lowering carbon emissions and promoting environmentally friendly autos, represents the Malaysian government's acknowledgement of a growing number of passenger cars (EFVs) (Alganad, Isa, & Fauzi, 2021). In this study, purchase intentions are followed by other researchers who defined it as "consumers' willingness to acquire a certain product at a specific moment or in a specific situation." This is defined as a purchase intention in Puriwat and Tripopsakul (2021).

Factors influencing Purchase Intention

There are several factors that influence a consumer's decision to buy a product. For example, the product's function, its price, its brand, and so forth. The elements that influence Malaysian consumers' buying intentions for green products will be examined in this section. Eco-labels, green advertising, or price are all examples of green practises.

Environmental Consciousness and Purchase Intention

Environmental consciousness refers to a person's understanding of environmental challenges and the role of environmentally friendly actions in addressing them (Tan, Ojo, & Thurasamy, 2019). Environmental consciousness is important not just in terms of one's observation and knowledge of environmental challenges but also in terms of one's subsequent behaviour. As a result of their use of green products, consumers develop environmentally friendly ideas and beliefs (Lin & Niu, 2018). Environmental consciousness is defined by Shukla (2019) as a person's awareness of or expression of their concern for the environment and their desire to come up with possible solutions.

In general, the more concerned someone is about the environment, the more sensitive they are to contemporary environmental challenges. The more concerned consumers are about the environment, the more likely they are to buy green items (Lestari, KPU, & Hartawan, 2020). Making green products easier to grasp can help purchasers have more faith in the benefits of utilising green products and a better knowledge of their own role in solving environmental

problems. Unacquainted consumers won't be able to tell you how green products help the environment or harm it. This makes it hard for them to trust that certain green items are good for the environment (Wang, Ma, & Bai, 2019).

Eco-Label and Purchase Intention

According to Lim, Perumal, and Ahmad (2019), a label is more than just a piece of paper attached to a package; it's also a key factor in influencing consumer purchase decisions. This label was created with the goal of preventing consumers from becoming perplexed by promises regarding environmental friendliness (Tan, Ojo, & Thurasamy, 2019). Lestari, KPU, and Hartawan (2020) said that an eco-label is a certification symbol that is put on some products to tell consumers about the environmental qualities of the product, which can make them trust the product.

Lim, Perumal, and Ahmad (2019) used the Theory of Planned Behavior (TPB) to find that, among other things (environmental mind set and long-term orientation), the green label is the best predictor of green purchasing intentions among Malaysian customers. Eco-labeling is a type of environmental labelling that includes a seal of approval. Consumers find information about a product by reading the label, and this helps them decide what to buy (Wang, Ma, & Bai, 2019).

Tan, Ojo, and Thurasamy (2019) say that eco-labeling may have a big impact on people's decisions to buy green products because it teaches them about them. Marketers regularly use the eco-label to promote green products in order to entice consumers to purchase them. Lestari, KPU, and Hartawan (2020) say that consumers can use the information on an eco-label to learn more about how eco-friendly an item is.

Attitude and Purchase Intention

Individuals' and objects' attitudes are often defined as their propensity toward a specific direction. As a result, environmental attitudes incorporate people's attitudes toward environmental conservation (Tan, Ojo, & Thurasamy, 2019). In the context of the environment, the word "attitude" refers to a consumer's learned set of beliefs about environmental actions and problems (Yogananda & Nair, 2019).

Ecologically friendly products are more likely to be consumed by consumers who have a positive attitude toward green products (Lestari, KPU, & Hartawan, 2020). Customers' individual views and attitudes about environmental issues have long been considered important predictors of green product purchases in addition to environmental considerations (Tan, Ojo, & Thurasamy, 2019). As a result, people exercise greater caution while making purchasing decisions. As a result, buyers who care about the environment are much more likely to buy eco-friendly products (Lestari, KPU, & Hartawan, 2020).

Green Advertising and Purchase Intention

Advertising is a powerful instrument for communicating a brand's identity and suggested value, as well as for building brand equity (Tan, Ojo, & Thurasamy, 2019). Many businesses are increasingly using social media, such as Twitter, microblogs, Tencent, wikis, or multimedia

sites like YouTube, for green advertising as the Internet grows. People think that social media is a good place for green advertising because it lets people connect and network with each other. This creates a technology-based form of indirect communication that works well with word-of-mouth (Luo, Sun, Shen, and Xia, 2020).

Adverts that emphasise the relationship between the environment and green products, lifestyles, or represent a company commitment to environmental stewardship are referred to as "green advertising" (Tan, Ojo, & Thurasamy, 2019). Because of inflated, deceptive, and/or erroneous information in commercials that promote green products, people may be sceptical of green advertising, their perceived information utility level will be lower (Luo, Sun, Shen, & Xia, 2020). (Tan, Ojo, and Thurasamy, 2019) Because of this, "green" advertising has a better chance of getting customers' attention because it can improve the image of green brands and help young people understand how green products work.

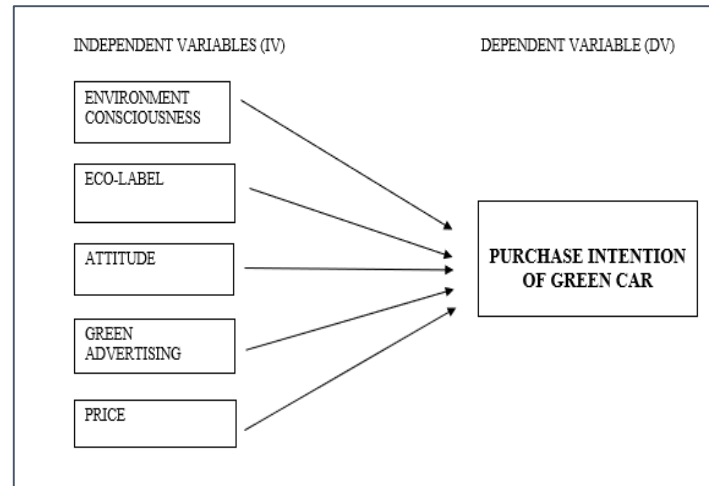
Price and Purchase Intention

In order to encourage price-conscious clients to get the most for their money or to purchase a specific item at the cheapest possible price, pricing is by far the most effective method (Liew & Falahat, 2019). Prices are often defined as the sum of money charged for a product or service, or the overall value consumers are prepared to pay for the benefit of using and owning a product (Graciola, Toni, Lima, & Milan, 2018). A product's or service's perceived worth at the time of purchase is the price, as according Ting, Thaichon, Chuah et al (2019).

In developing countries, pricing is frequently the most important factor affecting customer decisions (Kim, 2019). It is an important factor to consider when evaluating a product. Also, most online buyers expect to pay less than they would in a physical store since they believe e-commerce operating costs are cheaper (Qian, 2021). Wang, Hu, and Liu (2017) also think that price changes have a big effect on how happy customers are, and that the more appropriate the price, the bigger the effect.

There aren't many research on how people decide whether or not to buy a green automobile. We want to find out if environmental awareness, eco-labeling and attitude along with green advertising and pricing have a major impact on Malaysian consumers' decision to buy green cars. The Theory of Planned Behaviour, which incorporates attitudes and behavioural intentions, was used to evaluate green car purchase intentions in the current study. Thus, the forming of a research framework (Figure 1) from the reviewed literature and the theory mentioned above

Figure 1: Research Framework



RESEARCH METHODOLOGY

Cooper and Schindler (2018) say that a research design is a plan for how to collect, measure, and analyze data to answer research questions and reach research goals. The goal of the study was to investigate the factors that can predict green car purchase intention in Malaysia. So, in order to do this study, quantitative research was needed. Qualified respondents would be given an online survey questionnaire to fill out.

Sample sizes can vary a lot depending on how the study is set up. The goal is to choose a sample that will give you enough information to understand what is being studied (Monique M. Hennink, 2019).

Hair & Anderson (2010) recommended that the number of samples be 10 times the number of things tested, with a minimum of 5 times. The intended sample size should be 150, taking into account the 30 items being tested. It was recommended by Boomsna and Hoodland (2001) to include at least 200 participants in a statistical study to ensure appropriate statistical power and minimise knock-on effects as well as erroneous conclusions in both a healthy and unhealthy population. Because of all of the above results and suggestions, more work will be done to make sure that at least 200 people take part in the study.

Despite the fact that, according to Lim (2020), Malaysia's population is expected to reach 32,6 million in 2019, one car will be owned by every 2.25 persons. As of 2019, there were 31.2 million registered vehicles in Malaysia. Mamat (2021) estimates that there are around 32.3 million automobiles and 15.8 million people in Malaysia. However, because the population is so large, we will only be able to collect data from 200 people using the sample size determined by the previous study. It was decided to take one last sample, totaling 212.

The questionnaire is administered just once to each respondent in this cross-sectional research. Due to the pandemic of COVID-19, particular standard operating procedures (SOP) must be

followed for the data gathering for the online questionnaire. It prevents the researcher from moving on to the in-person questioning. In order to accomplish the study objectives, the questionnaires would be changed based on reports of comparable studies found in the literature. All of the surveys have been modified from prior studies.

The questionnaires are designed to guarantee that data is collected efficiently and that respondents do not spend an excessive amount of time completing them. Four questions, including age, gender, and monthly income, will be posed to respondents in order to better understand their demographic profile. A five-point Likert scale will be used for measuring both independent and dependent variables. The scale from 1 to 5 indicates "Strongly Disagree" and "Strongly Agree" respectively. To ensure respondent confidentiality, online surveys were performed.

RESEARCH FINDINGS

Descriptive Analysis

The survey questionnaire is created through a Google form. This is a fully online questionnaire. Due to pandemic COVID-19, people need to follow Standard Operating Procedure (SOP), such as wearing masks when communicating with others and keeping a social distance when communicating. It causes researchers to find it hard to proceed with the questionnaire face-to-face. The process of collecting data took place in April 2022, and 212 people were able to fill out the questionnaire.

Respondent Demographic Profile

Table 2: Demographic Profile of the Respondents (N = 212)

Variable	N	%
Age		
17-21	3	1.4
22-26	36	17
27-31	110	51.9
32-36	28	13.2
37 and above	35	16.5
Gender		
Male	82	38.7
Female	130	61.3
Marital Status		
Single	135	63.7
Married	77	36.3
Monthly Income		
Below RM 2000.00	13	6.1
RM 2000.00 – 3000.00	27	12.7
RM 3000.00 – 4000.00	59	27.8
RM 4000.00 – 5000.00	40	18.9
RM 5000.00 and above	73	34.4

In this study, the demographic variables for personal statistics included age, gender, monthly income, marital status, and others. The respondents of the questionnaire are all Malaysian. While below, table 4 shows the complete demographic profile of the respondents.

Table 2 gives an overview of the demographic data gathered as explained above. Sekaran & Bougie (2013) stated that the demographic types of tests a profile of respondents in order to determine if the respondents are suitably representative again for study. Based on the data collected, 100% is from Malaysia. There were 130 female respondents (61.30%) and 82 male respondents (38.70%). In between the age range, the age between 27 and 31 is the highest, which is 51.90%, while the lowest is 17–21, which is 1.40%. Then, followed by 32-37 (13.20%), 22-26, and 37 and above are the same respondent, which is 17.0% (36 respondents) and 16.5% (35 respondents). For the marital status, single respondents have 135 people, which is 63.7%, while married respondents have 77 people, which is 36.3%. Monthly income of RM 5000.00 and above has the highest percentage, which is 34.4%, followed by RM 3000.00–2000.00 (27.8%), RM 4000.00–RM 3000.00 (18.9%), RM 2000.00–3000.00 (12.7%) and the lowest percentage, which is 6.1% of monthly income below RM 2000.00.

Reliability Analysis

The purpose of a dependability test is to determine whether or not survey takers can comprehend the questions and items contained within the survey. Reliability testing demonstrates, as well, that this study can be completed.

Table 3: Summary of Results of the Reliability Analysis

Variables		Cronbach's Alpha	Number of Items
Independent Variables	Environment Consciousness	0.846	5
	Eco-Label	0.886	5
	Attitude	0.886	5
	Green Advertising	0.891	5
	Price	0.896	5
Dependent Variable	Consumer Purchase Intention	0.898	5
All Variables		0.957	30

In Table 3 above, Using Cronbach's alpha values above 0.8, the scale has a strong internal consistency. Cronbach's alpha of 0.70 or above, according to Bland and Altman (1997) research, indicates good internal consistency and the items are now considered meaningful. The final data collection for this study came out the same as the pilot test reliability test.

Conclusion for the Preliminary Test

In this study, 300 questionnaires were distributed to Malaysians who live in Malaysia. There were a total of 217 replies, of which 212 were used for this research. These replies were submitted for a preliminary examination consisting of a factor analysis and a reliability test. The cumulative variance for consumer purchase intention is 71.3% and the cumulative variance

for environmental consciousness, eco-label, attitude, green advertising, and price is 68.07%, also meeting the rule of thumb of more than 60% for social sciences. As a result, the data is sufficiently stable, acceptable, and adequate for further examination.

Consumer purchasing intention has a Cronbach's Alpha value of 0.898, whereas environmental awareness, eco-label, attitude, green advertising, and pricing have values between 0.846 and 0.896. These high values indicate that the items are positively associated with one another. All early tests generate statistically significant and reliable findings, enabling hypothesis testing.

Hypothesis Testing

According to the results of this study, the generated data is dependable, accurate, and acceptable for testing hypotheses. In this part, SPSS will be used to examine five previously presented hypotheses. These hypotheses are examined using multiple linear regression, analysis ANOVA, beta values, and multicollinearity regression.

Multiple Regression

Multiple regression is utilized to see whether there is a correlation between the variables and if the framework can explain the phenomena observed in the investigation. The model is fit if R² is larger than 0.4. If R² is less than 0.4, the model is unsuitable for the phenomenon, and the framework cannot explain it. If R² is near to 1, the model will fit better (Hair et al. 2010). In this study, five independent factors were used to assess a consumer's purchase intent (i.e., attitude, eco-label and price are all factors that contribute to an eco-friendly image).

Table 4: Regression Model Executive Summary

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.741 ^a	.550	.539	.40926
a. Predictors: (Constant), P, EC, GA, EL, A				

The R and R square values of the research are detailed in Table 4 above. The r value and r square are +0.741 and +0.550, respectively, based on the findings. It indicates that 74.1 percent of the consumer's purchase intention is influenced by the IVs and that the model has a positive linear pattern with 55.0 percent data variance. At a minimum of 0.4, this also satisfied the variation rule of thumb. This example is study-worthy.

Multiple Regressions ANOVA

Table 5: Anova Test

ANOVA ^a						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	42.129	5	8.426	50.306	.000 ^b
	Residual	34.504	206	.167		
	Total	76.633	211			
a. Dependent Variable: PI						
b. Predictors: (Constant), P, EC, GA, EL, A						

According to Saunders (2015), One-way anova is a statistical tool that examines the similarities and differences between three or more measures. If indeed the p-value is much less than 0.05, the result is considered significant. This number is less than 0.05, according to the results in Table 5. As a result, the test result is statistically significant. Lastly, this study's IVs are real, and there is a big difference between customer purchase intention (DV) and convenience, security, social impacts, and speed (IVs).

In multiple regression, to determine which variable has the biggest impact on DV.

Table 6: Analysis of Coefficients

Coefficients ^a									
Model		Unstandardized Coefficients		t	Sig.	95.0% Confidence Interval for B		Collinearity Statistics	
		B	Std. Error			Lower Bound	Upper Bound	Tolerance	VIF
1	(Constant)	1.208	.202	5.992	.000	.810	1.605		
	EC	.018	.063	.288	.774	-.107	.143	.517	1.933
	EL	.171	.075	2.292	.023	.024	.318	.361	2.770
	A	.299	.080	3.745	.000	.142	.457	.278	3.594
	GA	.042	.055	.755	.451	-.067	.150	.523	1.913
	P	.214	.044	4.874	.000	.128	.301	.625	1.601
a. Dependent Variable: PI									

The preceding table 6 shows if the independent variables are (environment consciousness, eco-label, attitude, green advertising and price). The multiple regression models are thus:

$$Y = \beta_0 + \beta_1 (\text{environment consciousness}) + \beta_2 (\text{eco-label}) + \beta_3 (\text{attitude}) + \beta_4 (\text{green advertising}) + \beta_5 (\text{price})$$

$$\text{Purchase intent} = 1,208 + 0.018 (\text{EC}) + 0.172 (\text{EL}) + 0.299 (\text{A}) + 0.42 (\text{GA}) + 0.214 (\text{P})$$

Except for eco-label, attitude, and pricing, environmental awareness and green advertising had a p-value greater than 0.05. This indicates that eco-label (0.023), attitude (0.000), and price (0.000) have significant correlations with purchase intention among Malaysian consumers. Attitude and pricing had the strongest associations with DV among these three IVs. While environmental awareness and green advertising have p-values greater than 0.05, their respective values are 0.774% and 0.451%. The beta-coefficients for EL and P are the highest in the table. This indicates that B and C have a bigger impact on consumer purchasing intention than A and GA.

Multiple Regression Based on VIF and Multicollinearity

When two or more independent variables in a regression model are significantly correlated, multicollinearity emerges. According to Hair et al. (2019), Multicollinearity is important when the Variance Inflation Factors (VIF) reach 5, although there is no link between this variable or the others if the VIF is equivalent to 1. The VIF value in table 4.34 ranges between 1 and 4, suggesting that there is no multicollinearity issue in any of these variables that would result in skewness.

Summary of Findings

Table 7: Summary of test results

Item	Hypotheses	Result	Status
H1a	Environment consciousness has a positive significant influence consumer purchase intention on green car in Malaysia.	Sig: 0.774; t: 0.288	Not Significant
H1b	Eco-label has a positive significant influence consumer purchase intention on green car in Malaysia.	Sig: 0.023; t: 2.292	Significant
H1c	Attitude has a positive significant influence consumer purchase intention on green car in Malaysia.	Sig: 0.000; t: 3.745	Significant
H1d	Green advertising has a positive significant influence consumer purchase intention on green car in Malaysia.	Sig: 0.451; t: 0.755	Not Significant
H1e	Price has a positive significant influence consumer purchase intention on green car in Malaysia.	Sig: 0.000; t: 4.874	Significant

Hypothesis 1b, 1c, and 1e are accepted while hypothesis 1a and 1d are rejected.

In short, eco label, attitude and price can used to build a model in predicting the purchase intention of green car in Malaysia.

Discussion

This study investigates if environment protection, eco-label, attitude, green advertising, and price influence Malaysian consumers' purchase behaviour for green cars. Green car purchases in Malaysia are influenced by several factors, including the consumer's environmental consciousness, the eco-label, their mindset, eco - labeling, and the pricing.

H1a: Consumers in Malaysia are more likely to acquire green cars if they have a strong sense of environmental responsibility. People's awareness of environmental issues and the need of environmentally-friendly measures in addressing them is known as environmental consciousness (Tan et al., 2019). Hypothesis 1a seeks to find out if a consumer's desire to buy a green automobile in Malaysia is influenced in any way by their awareness of the environment. According to statistical analysis, there is no strong correlation between environment protection and Malaysian consumers' intentions to purchase green automobiles in this study. Hypotheses 1a are not supported by the regression data, as their t was 0.288 and their significance value was 0.774. Some papers, on the other hand, argue in favour of environmental sensitivity.

H1b: Having an eco-label on a car increases the likelihood that consumers will buy one. Environmental performance can be evaluated by looking at a product's eco-label. In order to avoid customers from becoming confused by claims of environmental friendliness, this mark was designed (Tan et al., 2019). The purpose of assumption 1b is to find out if eco-labeling influences Malaysian consumers' desire to buy green cars. According to the results of our statistical analysis, eco-labeling has a substantial impact on Malaysian consumers' desire to buy green cars. Hypotheses 1b are confirmed by the regression results, with a significance level of 0.023 and a t of 2.292.

H1c: Customers in Malaysia are more likely to buy environmentally friendly vehicles if they have a positive attitude about them. A person's or an object's attitude can be described as a tendency to go in a particular way. As a result, people's perspectives on environmental conservation are included in environmental attitudes (Tan et al., 2019). Hypo 1c is to determine if Malaysian consumers' attitudes on green automobiles have a substantial impact on their purchase intentions. For this study, quantitative analysis demonstrates that customer attitudes & consumer purchase intentions for green automobiles in Malaysia are linked. Hypothesis 1c is supported by the regression data because its level of significance was 0.000 and its t is 3.745.

H1d: In Malaysia, green marketing has a big impact on consumers' desire to acquire green cars. Brand identity and proposed value can be communicated through advertising, and brand equity can be built through advertising. The credibility of the advertisement can influence whether or not customers believe the claims made in it are accurate and genuine (Tan et al., 2019). It is hypothesised that Malaysian consumers are more likely to purchase environmentally friendly vehicles if they are exposed to green advertising. Consumers' intentions to buy green automobiles are unrelated to the amount of money spent on environmental advertising in Malaysia, according to our statistical analysis. Hypo 1d is not supported by the regression data because of its significant level of 0.451 and its t of 0.775.

H1e: Consumers in Malaysia are more likely to buy green cars if the price is right. The cost of green goods is among the most major barriers to their widespread acceptance. One of the most crucial factors in a customer's decision to buy is the cost of the goods (Tan et al., 2019). Customer perceived value has always included pricing as an important consideration, as it's the first to be included in equation (Chen, Ren, Gu, & Zhang, 2019). It is hypothesised that the pricing of green automobiles in Malaysia has a positive, statistically significant impact on consumers' intentions to buy. Statistical investigation demonstrates that the price of green

automobiles in Malaysia has a substantial impact on consumers' willingness to acquire them. Since the significant level of 0.000 was found and the t was 4.874, hypotheses 1e and 2e are both accepted results of the regression results.

Implications

Again, the model below shows the things that led people in Malaysia to buy green cars.

Purchase intention = 1.208 + 0.171 (Eco Label) + 0.299 (Attitude) + 0.214 (Price)

For academicians and marketers, consumer environmental values should be used responsibly by businesses with a dialectical mindset. Values play a large role in influencing consumer purchasing decisions. When it comes to altruistic or biospheric values, the interests of humanity as a whole will be taken into account, along with those of nature. Customers that care about the environment are more inclined to purchase environmentally friendly vehicles. Since customers' desire to buy green automobiles is driven by their values, businesses should take advantage of the promotion benefits of altruistic or biospheric values, offer relevant customer support to those with diverse values, or improve level of service quality.

Environmental values characterised by rational thought, health, and civilization should be cultivated by the relevant administrative depts. in order to promote green consumption between many residents; and education and publicity initiatives associated with green of whether should be promoted to cultivate public opinion and investors can purchase to support environmental consumption among residents.

Governments should work to raise consumer awareness of green cars and corresponding policy incentives using this model. This might be accomplished through developing and disseminating information about green automobiles as well as demonstrating how green cars can help the environment while also lowering the cost of ownership. Green car establishment and experience bases are also crucial in boosting consumers' understanding of green cars.

Public service advertisements, scientific talks, and expert forums could also be used to raise awareness of EV-related incentives policy initiatives among the general public. The UNDP's Sustainable Development Goal (SDG) of providing affordable, dependable, but modern energy services to all people by 2030 is furthered by this study.

Monetary incentive policies should be strengthened in order to increase customer interest in buying green cars. As a commercial product, green automobiles are in their infancy. As a result, substantial government support is still needed. Expansion of tax breaks for electric vehicles and other environmentally friendly transportation options, such as green charging station subsidies and toll exemptions, should be prioritised by governments around the world. High-performance EVs should be the focus of EV subsidies, which will also assist businesses improve the performance of EVs (Huang & Ge, 2019).

Recommendation

This is a cross-sectional study, which means that the data for this study was only collected once. As a result, the analysis based on the acquired data may no longer be applicable in the future because it will become irrelevant and probable as time passes. Researchers in the future should do a longitudinal study in the same setting to get results that can be used at different times.

Research Limitations of the Study

There are a few limitations to this study. Firstly, the implementation of the data collection method. The researcher was inexperienced in collecting the data via online forms such as Google Forms. While collecting data, we need to share it with a lot of public groups to ensure that the result is accurate. Second, because of the COVID-19 pandemic, a standard operating procedure needs to be followed. For example, when talking to other people, you should wear a mask and stay at least 1 meter away.

Future Research Direction

Environmentalism, eco-label, attitude, eco - labeling and price are the only variables examined in this Malaysian green car buyer's guide. However, consumers' intentions to buy cars in Malaysia haven't covered all bases. In the future, it will be necessary to have a larger sample to identify and highlight the most essential associations in the dataset. Future researchers can think of distributing the questionnaire through a different method rather than just online. Purposive sampling was used to acquire data for this investigation. So, researchers in the future should think about using different sampling methods to test how reliable and applicable the study's results are.

REFERENCE

- Alganad, A. M., Isa, N. M., & Fauzi, W. I. (2021). Boosting green cars retail in Malaysia: The influence of conditional value on consumer's behaviour. *Journal of Distribution Science*, 1-14.
- An Australia Government Initiative. (2022). Vehicle emissions. *GreenVehicleGuide*. Retrieved from *GreenVehicleGuide*.
- Bernama. (17 October, 2019). Green transport the way forward. Retrieved from *New Straits Times*: <https://www.nst.com.my/cbt/2019/10/530681/green-transport-way-forward>
- Boomsma, & Hoogland. (2001). the Robustness of LISREL Modeling Revisited. *Research Gate*, 1-26.
- Chen, K., Ren, C., Gu, R., & Zhang, P. (2019). Exploring purchase intentions of new energy vehicles: From the perspective of frugality and the concept of "mianzi". *Journal of Cleaner Production*, 1-9.
- Cooper, D. R., & Schindler, P. S. (2018). *Business Research Methods* 13th edition. McGraw Hill Education.
- EIA. (25 January, 2021). Malaysia. Retrieved from *Independent Statistics & Analysis U.S. Energy Information Administration*: <https://www.eia.gov/international/analysis/country/MYS>
- Environmental Performance Index. (n.d.). 2020 EPI Results. Retrieved from <https://epi.yale.edu/epi-results/2020/component/epi>

- Ghazali, I., Abdul-Rashid, S. H., Dawal, S. Z., Huda, N., Shariff, A. H., Herawan, S. G., . . . Sakundarini, N. (2021). Guidelines for Designing Green Products Considering Customers' Cultural Preferences. *Sustainability*, 1-27.
- Graciola, A. P., Toni, D. D., Lima, V. Z., & Milan, G. S. (2018). Does price sensitivity and price level influence store price image and repurchase intention in retail markets? *Journal of Retailing and Consumer Services*, 201-213.
- Hair, J. F., & Anderson, R. E. (2010). *Multivariate Data Analysis*. . New York: 7th Edition, Pearson. .
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2019). *Multivariate Data Analysis*. 8th edition. UK Cengage Learning, EMEA.
- Huang, X., & Ge, J. (2019). Electric vehicle development in Beijing: An analysis of consumer purchase intention. *Journal of Cleaner Production*, 1-12.
- Kim, J. (2019). The impact of different price promotions on customer retention. *Journal of Retailing and Consumer Services*, 95-102.
- Lestari, E. R., KPU, H., & Hartawan, S. (2020). Antecedents of Attitude toward Green Products and its Impact on Purchase Intention. *International Conference of Sustainability Agriculture and Biosystem*, 1-9.
- Liew, Y. S., & Falahat, M. (2019). Factors influencing consumers' purchase intention towards online group buying in Malaysia. *Int. J. Electronic Marketing and Retailing*, 1-18.
- Lim, A. (2 April, 2020). Vehicles registrations in Malaysia – 31.2 mil as of 2019. Retrieved from paultan.org: <https://paultan.org/2020/04/02/vehicles-registrations-in-malaysia-31-2-mil-as-of-2019/#:~:text=With%20the%20country's%20population%20in,one%20motor%20vehicle%20per%20person>.
- Lim, Y. J., Perumal, S., & Ahmad, N. (2019). The Antecedents of Green Car Purchase Intention among Malaysian Consumers. *European Journal of Business and Management Research*, 1-8.
- Lin, S.-T., & Niu, H.-J. (2018). *Green consumption: Environmental knowledge, environmental consciousness, social norms, and purchasing behavior*. Wiley, 1-10.
- Luo, B., Sun, Y., Shen, J., & Xia, L. (2020). How does green advertising skepticism on social media affect consumer intention to purchase green products? Wiley, 1-11.
- Malaysia Automotive Association. (2021). Malaysia Automotive Association. Retrieved from Sales & Production Statistics: <http://www.maa.org.my/statistics.html>
- Monique M. Hennink, B. N. (2019). What Influences Saturation? Estimating Sample Sizes in Focus Group Research. *Qualitative Health Research*, 1-14.
- Naderi, I., & Steenburg, E. V. (2018). Me first, then the environment: young millennials as green consumers. *Young Consumers*, 280-295.
- Puriwat, W., & Tripopsakul, S. (2021). The Impact of Digital Social Responsibility on Preference and Purchase Intentions: The Implication for Open Innovation. *Journal of Open Innovation: Technology, Market, and Complexity*, 1-11.
- Prime Minister's Office Malaysia Official Website. (12 July, 2019). Green Technology Master Plan Malaysia 201-2030. Retrieved from Green Technology Master Plan Malaysia: <https://www.pmo.gov.my/2019/07/green-technology-master-plan-malaysia/>
- Qian, M. (2021). Understanding Customer Experience and Repurchased Intention in Live Streaming Shopping: An Empirical in Study China. 1-57.
- Shukla, S. (2019). A Study on Millennial Purchase Intention of Green A Study on Millennial Purchase Intention of Green Behavior Model. *JOURNAL OF ASIA-PACIFIC BUSINESS*, 1-30.

Surianshah, S. (2021). Environmental awareness and green products consumption behavior: A case study of Sabah State, Malaysia. *Biodiveritas*, 1-8.

Tan, C. N., Ojo, A. O., & Thurasamy, R. (2019). Determinants of green product buying decision among young consumers in Malaysia. *Young Consumers*, 1-17.

Ting, H., Thaichon, P., Chuah, F., & Tan, S. R. (2019). Consumer behaviour and disposition decisions: The why and how of smartphone disposition. *Journal of Retailing and Consumer Services*, 212-220.

Wang, H., Ma, B., & Bai, R. (2019). How Does Green Product Knowledge Effectively Promote Green Purchase Intention? *Sustainability*, 1-13.