Impact of Key Purchasing Determinants on Purchase Intention of Hybrid Vehicle Brands in Sri Lanka, an Empirical Study

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Abstract

According to Researchers knowledge this is the first research on purchase intentions of Hybrid Vehicles in Sri Lanka. This research has been done to determine the purchase intention of Hybrid Vehicles in Sri Lanka. This research article focuses mainly on determining the links between customer's environmental attitudes, subjective norms, price perception, preferences, knowledge, perceived risk, intentions as well as expectations of the customers given to the environment while buying a hybrid vehicle. The research survey questionnaires were developed to get information for each and every aspect mentioned in the objectives. To go deep in to the study areas researcher referred secondary data sources such as other research studies that were done in Tokyo Japan and India. The data for the present work has been collected personally by the researcher as well as helps has been taken from others in getting structured non- disguised questionnaire filled properly. By using the snowball sampling, 200 survey questioners were distributed and 150 useable responses were taken in to this research. All the responses were collected online and taken them to one data base for the purpose of analyzing. For this study, respondents who were identified as "being in the market" and other potential respondents who intended to purchase cars in the near future. After the analysis has been done researcher has identified the impact of predetermined variables over buying intention of Hybrids vehicles in Sri Lanka. As per the results, researcher has also come up with the managerial implications of the study and recommendations.

Keywords: Customer Buying Behaviour, Purchase Intention, Consumer Buying Decision Making, Information Sources, Social Influence

1. Introduction

1.1. Background of the Study

Global warming is produced by green-house gasses and it has been a critical issue around the globe from the past decade. Every year people dispose adequate garbage to cover a huge part of the Earth. Most of the waste material ends up in landfills which are very exorbitant and which may have a bad impact on the environment and on the wellness of the people living on this planet. As per the United Nation Environment Programme, protection of the environment has become a big issue in recent times. Originally Japan is the one and only country that identified and actively implemented measures to reduce the carbon dioxide emissions that will reduce the greenhouse effects. From this successful start the need of low pollution private cars went through all over the world rapidly. However, the penetration rate of hybrid cars is significantly low compared to other vehicles. Hybrid cars are positioned as the eco-friendly solution to diminish the world's dependency on oil and gas, but it is a question whether it does deliver that certain guarantee or not.

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The car engineering organizations, at a moment will believe that the hybrid cars will be the future of the transportation industry, at the same time there are various types and models that offers higher fuel efficiency and mileage with the confidence of providing the vision "we are the future of the industry".

The questions to be projected inside the customers minds will be: which hybrid car do I need buy, what benefits will I gain through the purchase, how long will it last, how will be the after purchase service etc. When researcher analyzed the market there are few significant hybrid types that can be identified. In simple consumers' knowledge they are Electric-gas, fully electric, hydrogen and hydraulic. Each type has its own significant advantages and disadvantages. After the initial research measurements researcher found out that electric-gas hybrid vehicles are currently dominate the market place around the globe. Hybrid vehicles are defined as vehicles which are powered by both, an internal combustion engine plus a battery powered electric motor. Other types of hybrid solutions are possible, such as the blend of fuel cell and electric motors or the combination of different fuels, but here researcher mostly concentrates on hybrid electric vehicles (HEVs) and particularly on hybrid electric passenger cars. It has been known that promoting the acceptation of environmentally favourable products is a key challenge for the behavioural men of science. This gets along to be why there has been a quite a little of research into the reasons behind this adoption. This research seeks to add to this knowledge by researching the reasons that drive adaptation of environmentally friendlier automobiles, especially, the petrol-electric hybrids that are earning recognition. This information may possibly be useful to increase acceptance paces for other environmentally friendly products and ideas. As for the research done by Heejey Kang, Bachelor of Science at the Massachusetts Institute of Technology, purchasing an optional energy consuming vehicle is the best way to put out a message to the world; the modern customer does not depend only on oil and will help alternative energy. This research article will guide the consumer through the existing and future hybrid possibilities to search a solution that will fit their needs and simultaneously help to green marketers to apply the most suitable strategy for their marketing programmes in different manner.

1.2. Research Problem

It is evident that as we enter to the new era, that with government media and other avenues really pushing the environmental issue channel, consumers are beginning to see their life affected by energy crisis. Tough cost does play a large factor there are so many other reasons that hybrid users make who they are. On top of the savings, most of the Sri Lankan car owners trying to make their selves with own statement. Also, the hybrid may be particularly convenient depending on life style. For an example city driver who drives at low speed in traffic will save fuel money than a highway driver.it is a fact that consumers are not given a binary option of conventional vehicles or hybrid vehicles. The diversity of the market place offers many ways to save money, whether it is in transmission design or weight reductions that increase efficiency. Consumers are always trying to maximize their utility and it is varies whether they are most sensitive to cost, availability, style, or any other vehicle attribute. Thus, depending on how hybrid vehicles are presented in the market place viewed through government policy will affect mainstream acceptance of hybrid vehicles in Sri Lanka. Today Sri Lankan Vehicle market opening up for various types of Hybrid Vehicles, Starting from middle range Toyota Hybrid vehicle to Luxuries Porsche hybrid vehicle. It is also representing all the segments in vehicle market. Sri Lankans are considering as "Risk Avers" where people reluctant to adopt for new technology and products but for the Hybrid vehicles it was totally different. Not only the people who concern about cost, people who are having high purchasing power and status are also tend to buy hybrid vehicles but though the current context is in the favour of hybrid market major Vehicle importers such as Stafford Motors, United Motors (Plc.) and Toyota Lanka yet to import brand new hybrid vehicles due to lack of the confidence about Sri Lankan hybrid vehicle market and its consumer behaviour.

This research article focuses mainly on determining the links between customer's environmental attitudes, subjective norms, price perception, Knowledge, preferences, Perceived risk as well as expectations of the customers given to the environment while buying a hybrid vehicle. Pervious researches concern for the environment in general and the environmental impact of cars which is evident does not often translate into behavioural change at an individual level. For an instant Kishi& Satoh (2005) explore the evaluation of willingness to buy a low-pollution car in Japan based on a price sensitivity measurement model through a questionnaire survey run in Tokyo and Sapporo. Their research illustrate that the correlation between environmental awareness and willingness to buy is high as well as not surprisingly the relationship between decrease in price and willingness to buy.

So, most of the researchers found that many people do express concern about the environmental impact of cars but do not think that it is their own responsibility to negate the impact. When it's come to Sri Lankan context there is not any empirical evidences to clearly understand the Key Purchasing determinants affecting to Hybrid Vehicles in Sri Lanka. Therefore this research will provide literature for further studies on hybrid vehicles in Sri Lanka, in which major research problem is "what are factors which are make an impact over buying intention of Hybrid Vehicle brands in Sri Lanka"

1.3. Research Objectives

1.3.1. Key Objective

- To identify the impact of consumer behaviour dynamics(KPD's) over buying intention of Hybrid vehicles in Sri Lanka

1.3.2. Specific Objectives

- To create a profile of the market for Hybrid Vehicles. Specifically, the decision-making process for these audiences.
- To Determine Key purchasing determinants in hybrid cars in Sri Lankan customer
- To compare and contrast relative impact of each KPD's on buying intention of Hybrid vehicles
- To analyses the moderating influence of demographic factors on the relationship between KPD's and buying intention of Hybrid cars.
- To make an analysis of the information purchasers requires prior to making a decision and to what extent this Hybrid product information is available.
- To find out how vehicle purchasers source information and gain product knowledge.
- To recognize what marketing methods, or other methods, could motivate the purchase of Hybrid Vehicles by customers who currently showing no or little environmental interest
- To identify the importance of peer-pressure, word of mouth and social acceptability in their decisions regarding hybrid vehicle purchase.

In this research article researcher is trying to find out solutions and information to the above said research objectives. The research survey questionnaires are supposed to develop to get information for each and every aspect mentioned in the objectives.

2. Literature Review

Review is according to specific measures to make the discussion logical. Article discussed in detail the theoretical background of the research. Researcher makes sure that all the major theoretical information on this research is covered.

2.1. Consumer Buying Behaviour

The study of consumer behavior focuses on how individuals make decisions to spend their available resources (time, money, effort) on consumption-related items (Schiffman and Kanuk, 1997). The field of consumer behavior covers a lot of ground. As per the Solomon (1996), consumer behavior is a study of the processes involved when individuals or groups, purchase, consumption, or dispose of products, services, or experiences to fulfill needs and desires. For many consumers, choosing an automobile is often a complex and high-involvement process. Although cars are often used products, they are also rarely bought products. Moreover, an automobile is costly, there is a large selection and the repercussions of not choosing well typically lasts a long period of time and may cost a lot to correct. Consumers enter into the process of keenly evaluating automobiles for purchase when they experience a strong aspiration or need for a car (Dholakia 2001; Frey &Jegen2001; Villacorta, Koestner & Lekes 2003). Joined with the ability and want to buy, the consumer is said to be "in the market" for a new car. This is emphasis the consumer is saving money or has access to funds for purchase, and they have strong intents to complete the purchase in the near future. Researcher have followed this definition of 'in the market' for purchase to pick out the sample for this research. To help them get into a final choice, several consumers will consider and evaluate different factors. While the factors that are appraised and their importance are expected to differ for individual consumers, as a group, they are likely to take into consideration some basic elements. These can admit cost, performance, the 'lifestyle-image' associated with some models, social influence and the car's environmental credentials like fuel efficiency/emissions.

Consumers use weighting down of these factors under consideration as a form of shorthand to make their decision making process more comfortable. They use the degree of importance of the vehicles' components or groups of elements that form factors to help them reduce the items that are being considered. These weights can be seen to form main consideration sets and are likely to finally be applied to set up "purchase parameters". These purchase parameters tend to build the final decision-making or -breaking criteria for purchase.

In the evaluation process, the consumer looks for vehicles that finest address the decision-parameters that they have established. A popular method for presenting this process is as a trade-off between different factors and properties. If this trade-off process is driven by underlying intrinsic or extrinsic reasons, then it is probable that these reasons will demonstrate themselves in the factors or dimensions that are applied by consumers to appraise vehicles for purchase. These dimensions are some of the times named consumer consideration-sets. In this context, a person who is purchasing a car to "show-off" may look at very different consideration-sets to those used by a consumer who is intrinsically motivated and buys a hybrid vehicle since they wish to save the environment. This kind of decision making method gives researchers the opportunity to study the factors that enter into consideration for buying cars. It may even be possible to compare the choice sets used for the purchase of different models or types of cars. At this point, it is useful to introduce the possible dimensions and builds that consumers may use for selecting between different automobiles. Product performance and function includes evaluations of how the product is likely to perform (Lavidge & Steiner 1961). Functionality is a common measure product performance. The consumer can evaluate performance first hand by test-driving the car or may gain it second-hand through the media or over word-of-mouth. Product rating is closely related to performance and is the product's perceived quality and attributes (Lavidge & Steiner 1961; O'Brien 1971). Buyers might believe that hybrids produce lower emissions, making it a superior quality automobile. Typically, product quality is negatively connected with product price

## 2.2. The Theory of Planned Behaviour

The Theory of Planned Behavior was developed in response to a related existing model—The Theory of Reasoned Action. Briefly, the Theory of Reasoned Action (Ajzen & Fishbein, 1980) stated intention as the principal predictor of behavior. So conceived, the more one intends to engage in behavior, the more likely is the occurrence of the behavior. Determining intention are attitude and subjective norm. The attitudinal determinant of intention is defined as the overall assessment of behavior. This overall assessment, in turn, is composed of the salient beliefs: the perceived likelihood of particular consequences of the behavior occurring, weighted by an evaluation of the consequences. The subjective norm determinant of attitude is conceptualized as social pressure from significant others to perform or not perform the behavior. "Behavior Intention" means personal volition and the volition would influence customers final decisions. Behavior Intention is impacted by two factors. One is an internal factor named "Attitude", and the other one is an external factor named "Subject Norm". "Attitude" is combined "Salient Beliefs (or Behavioral Beliefs)" with "Outcome Evaluation", and it means the feelings of customers when they try to do the specific thing. It could be good and bad, advantage and disadvantage, interesting and boring, or else (Ajzen, 1985). "Subject Norm" is combined "Normative Belief" with "Motivation to Comply", and it means people are under the pressure what they try to do something. The pressure is created by the people's parents, spouses, children, relatives, religious belief and etc. These individual suggestions would influence the behavior intention.
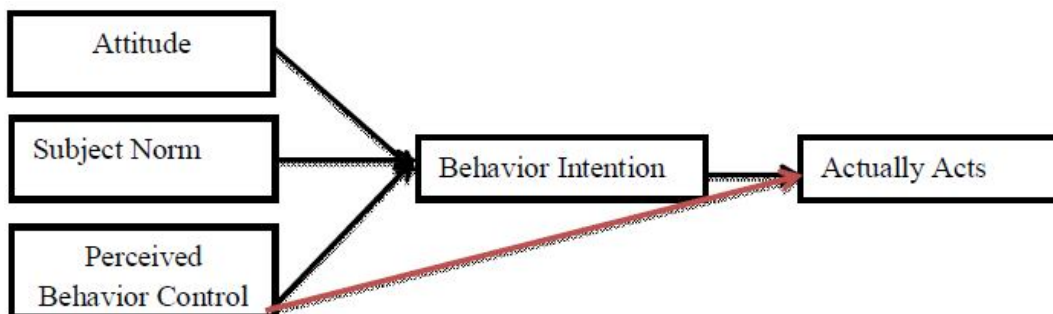
The structure of TPB: Source: Ajzen, I. (1991)

2.3. Technology Acceptance Model

TAM is one of the most influential models usually used in the studies of the determinant of IS/IT acceptance. Many previous studies have used and explained this model which was empirically proven to have high relevance to buying intention.
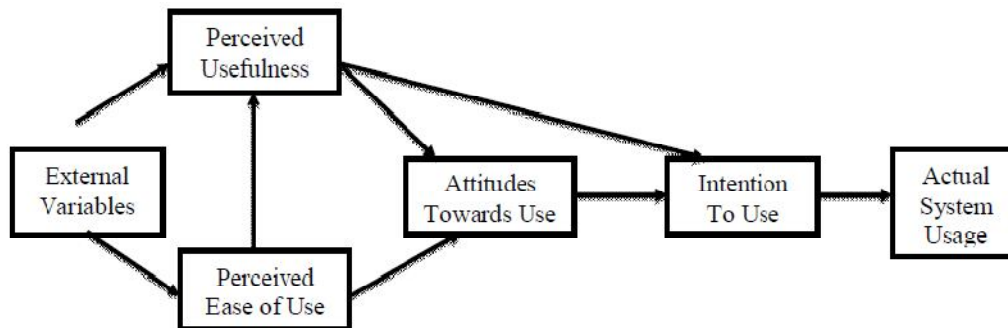
**Technology Acceptance Model: Source (Davis, 1989)**

3. Conceptualization & Operationalization

3.1. Introduction

In this section, Researcher proposed a complete model for measuring influencing factors and green car purchasing behavior intention. Researcher finds and collects related research to create the structure. Based on past research, hypotheses would be proposed in objectivity.

3.2. Conceptual Model

The conceptual model for this research was developed partly based on the Theory of Reasoned Action (TRA) model and other variables from the extant literature in the area of green purchase. The determinants that influence the green purchase intention in one country might be different in another due to the difference in cultural and socio-economies conditions of each country. Thus, following graph was undertaken to illustrate the tested conceptual framework that developed for this research.
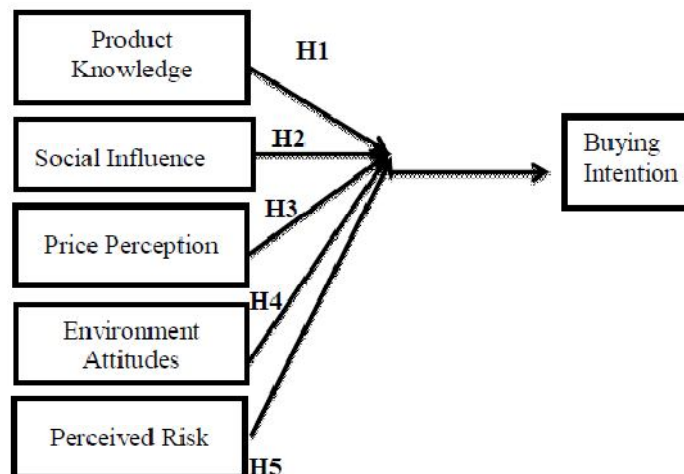
Proposed Research Model

3.3. Hypothesis

The combination of the research question and the findings and limitations of prior research lead to formulation of the hypotheses. A great deal of marketing research has focused on developing models for predicting the attitudes produced by this integration process. These are called **multi attribute attitude models** because they focus on consumers' beliefs about multiple products or brand attributes.

Martin Fishbein's model (1967) has been most influential in marketing.This multi attribute attitude model accounts for the integration process by which **product knowledge** (the evaluations and strengths of salient beliefs) is combined to form an overall evaluation or attitude. The model, nevertheless, does not claim that consumers really add up the products of belief strength and evaluation when forming attitudes toward objects.

Rather, this and linked models try to predict the attitude produced by the integration process; they are not meant to describe the actual cognitive operations by which knowledge is integrated. In this Model, further its say the strong point of consumers' product or brand beliefs is affected by their past experiences with the object. Beliefs about product features or consequences are tend to be stronger when based on actual use of the product, hence the following Hypothesis;

- H1: Product knowledge has a significant impact on Buying intention of Hybrid Vehicles.

Subjective norm, or the influence of others, has also been found to affect consumers' willingness to adopt a technology. Taylor. S. & Todd, P. (1995). "Others" has been represented by Family, Peer groups, colleagues and other social groups. An integrated model of waste management behavior: A test of household recycling and composting intentions. The model is based upon the theory of planned behavior. Data were collected from a sample of 761 respondents, using an environmental survey. Results reveal that both intention to recycle, and compositing were positively influenced by attitude and perceived behavioral control but was negatively influenced by subjective norms, attitude towards both recycling and compositing were strongly determined by relative advantage, and negatively influenced by complexity and hence the Following Hypothesis;

- H2: Social influence have a significant impact on Buying Intention of Hybrid Vehicles

The price of a product is an important aspect to a consumer. Past studies on price have shown that they usually have a great impact on the consumer's purchase decision. There are studies in which the importance of price in purchase decision was divided and compared through other related variables which are; the attention consumers pay to prices, the use of price information, and the tendency to compare prices on a regular basis. One of the working premises of that study was that, if one pays attention to prices, and uses this information to make purchase decisions, it must be because prices are important. (Kent B. Monroe (1982),"The Influence of Price on Product Perceptions and Product Choice") Hence the following hypothesis

- H3: Price Perception has a significant impact on Buying Intention of Hybrid Vehicles

As per the researches already done, Hybrid car buyers want to be 'seen to be' helping the environment - a fashion choice with a real environmental choice. Marketers fill hybrids with unusual styling because these things appeal to the type of buyer, who would buy a hybrid vehicle, A study from Mostafa (2007) tested the issue of green purchase intention among Egyptian consumers and the result shows that consumers' attitude towards green purchase can influence their green purchase intention and directly affects their actual green purchase behaviour. Environmental attitude was not a solid determinant of young consumers' purchasing behaviour in Hong Kong as reflected from the survey results that it only ranked second last among other variables (Lee, 2008) However, Follow and Jobber (2000) found that the relationships did exist from value to attitude to purchase intention and to purchase behaviour. Hence the following hypothesis;

- H4: Positive Environmental Attitudes will make an influence on consumers' purchase decision on Hybrid automobile.

"Determinants of Perceived Risk in Purchase of Car" (T. Sunitha, T. Frank Sunil Justus, M. Ramesh; Pacific Business Review International Volume 5 Issue 2) (August 2012). In this research, Researchers have identified that there are several types of risks that can discourage consumers from making a choice or delaying the purchase decision. By a proper use of risk reduction factors the perceived risk can be reduced. Hence manufacturers should give adequate importance to factors of perceived risk and in each of their activity should endeavor to have a step that reduces the perceived risk influencing Consumer Behavior. Hence the following hypothesis;

- H5: Perceived Risk has a significant impact on Buying Intention of Hybrid Vehicles

4. Research Methodology

4.1. Research Design

In the present study, all the cars owners or prospective car buyer in considered as the population. The prospective car owners could be all those people who intend to buy a car in near future or are visiting the car showroom for a test drive o collecting the information of the cars. This population includes who wish to purchase a car.

To collect unbiased responses it is more important to reach for the people who are familiar with the subject and situation that researcher consider. In this case to have an effective result researcher believes that it is important to get the responses from the audience where they know about Hybrid vehicles & conventional vehicles. The past experiences of been involving in a vehicle purchasing will be helpful for respondent to make the responses to research questioner, Therefore better sampling method to adopt is ***snow ball sampling method***, snowball sampling works like chain of business referrals. At initial stage smallest of the groups is studied, and then looking for their help, another group is looked at, who share the similar type of qualities. Just like a snowball, in this kind of Non probability sampling, the size of the sample increases as we go forward with research process. The process carries on as long as the required sample size is obtained. Researcher is looking forward to collect responses of 150.

4.2. Why was this Method Chosen?

Purchase intention is something about future and it is most of time in between age 18-50 mostly. Due to the lack of financial resources researcher decided to do the online survey. With the snowball sampling it is believed that it is impossible to make unbiased estimates from snowball samples, but a variation of snowball sampling called "respondent driven sampling" has been shown to allow researcher to make asymptotically unbiased estimates from snowball samples under definite conditions. Snowball sampling and respondent driven sampling also allows us to make estimates about the social network connecting the hidden population. Researcher use some extent of the sample consisted on Facebook users. The rest of the surveys are supposed to spread throughout Hybrid owners, Car sale owners and other people who are related to the subject which researcher is studying.

5. Data Analysis & Discussion

5.1. Reliability Test

The reliability of a measure indicates the degree to which measures are free from random error and therefore yield consistent results (Zikmund, et al., 2007, p.231). All of the six constructs were tested for the consistency reliability of the items within the constructs by using Cronbach's alpha. In general, this value was used as a guideline in this research to ensure the stability and consistency of the adopted instruments. Cronbach's alpha for the six constructs were obtained and summarized below Table. Cronbach's alpha for the constructs ranged from the lowest of 0.702 In conclusion, the results showed that the scores of the Cronbach's alpha for all the constructs used in this research exceeded the preferable scores of 0.70 and they indicated that the measurements scales of the constructs were stable and consistent in measuring the constructs (Cavana, et. al., 2001).

dependent Variables	Composite Reliability(α) in progress		Delete (Yes/No)	Final Composite Reliability (α)
	Before Delete	After Delete		
Product Knowledge	**0.702**			.702
• Knowledge About Different Hybrid Technologies			No	
• Awareness About New Technologies			No	
Social Influence	**0.865**			**0.865**
• I was recommended to buy Hybrid Vehicles by my family			No	
• I was recommended to buy Hybrid Vehicles by my friends			No	
• Most people who are important to me would appreciate me if I bought Hybrid Vehicle			No	
• I will influenced by word of mouth when I buying a hybrid vehicle			No	
Price Perception	**0.651**	0.714		**0.714**
• The price of a product is very important to me			No	
• The hybrid car price should be cheaper than the price of normal car			No	
• If the price of hybrid cars is not expensive, I would buy one			No	
• I would like to pay higher price for hybrid cars than a conventional car			Yes	
Environmental Attitudes	**0.706**			**0.706**
• It is necessary to buy green Products			No	
• It is very important to raise environmental awareness among Sri Lankan people			No	
• Environmental attitude influences me to buy green products			No	
• Environmental protection issues are none of my business			No	
Perceived Risk	**0.784**			**0.784**
• Hybrid cars will success full in the future			No	
• There are too many mechanical problems in hybrid vehicles which are import to Sri Lanka			No	
• Hybrid Cars do have lesser second hand vale in vehicle market			No	
• Driving a Hybrid Vehicle will make a negative impact over my status or the reputation			No	
• There are sufficient Hybrid vehicle maintenance centers in Sri Lanka			No	

5.2. Correlation Analysis

Table 32: Table of Pearson Correlation

Correlations

		Preference	Perceived Risk	Knowledge	Social Influence	Price Perception	Environmental Attitudes
Preference	Pearson Correlation	1	.456**	.008	.443**	.441**	.191*
	Sig. (2-tailed)		.000	.925	.000	.000	.020
	N	149	149	149	148	149	147
Perceived Risk	Pearson Correlation	.456**	1	.084	.239**	.276**	.130
	Sig. (2-tailed)	.000		.309	.003	.001	.116
	N	149	150	150	149	150	148
Knowledge	Pearson Correlation	.008	.084	1	.026	-.179*	-.055
	Sig. (2-tailed)	.925	.309		.755	.029	.505
	N	149	150	150	149	150	148
Social Influence	Pearson Correlation	.443**	.239**	.026	1	.322**	.178*
	Sig. (2-tailed)	.000	.003	.755		.000	.031
	N	148	149	149	149	149	147
Price Perception	Pearson Correlation	.441**	.276**	-.179*	.322**	1	.188*
	Sig. (2-tailed)	.000	.001	.029	.000		.022
	N	149	150	150	149	150	148
Environmental Attitudes	Pearson Correlation	.191*	.130	-.055	.178*	.188*	1
	Sig. (2-tailed)	.020	.116	.505	.031	.022	
	N	147	148	148	147	148	148

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

As for the correlation table it has clearly indicated that perceived risk, Price Perception, Environmental attitudes and social influence variables having a positive relationship with Preference by giving the association of 46%, 44%, 19% and 44%. Knowledge factor has given Pearson correlation value of 0.008 which indicating there is not significant correlation with preference. Among other four variables except Environmental attitudes, rests of the three variables were having strong positive relationship with preference. The only negative correlation is between price perception and the Knowledge variable. As per the result shown in the correlation table, knowledge has not having any significant relationship with other variables.

5.3. Regression Analysis Descriptive Statistics

	Mean	Std. Deviation
Preference	3.5822	.93858
Knowledge	3.0890	.90150
Social Influence	3.2158	.87672
Price Perception	3.8219	.72415
Environmental Attitudes	3.9949	.60634
Perceived Risk	3.1959	.47239

Table 33: Descriptive Statistics

The above table illustrates the average mean value of the variables, accordance to the respondent's answers given for the questionnaire.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.619a	.383	.361	.75048

Table 34 : Model Summery

a. Predictors: (Constant), Perceived Risk, Knowledge, Environmental Attitudes, Social Influence, Price Perception

As per the above table the most important indicator is Adjusted R Square which has in accordance with the sample size and "n" and repressors (p). Since the value given in adjusted R square is 0.361, it can elaborate as 36% of the variation in dependent variable can be explained by all five independent variables. In order to evaluate proposed model researcher have also checked the R square, which indicates the proportion of variance in the dependent variable (intentions) that is explained by the model. In the model researcher have a somewhat high R-square value, with a measure of 0.383. This measure indicates that the model does fit the data very well

ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	48.884	5	9.777	17.359	.000a
Residual	78.852	140	0.563		
Total	127.736	145			

Table 35: Anova Table

ANOVA table shows that F=17.359 and is statistically significant. This indicates that the predictors combine together to predict hybrid vehicle purchase intention. Also model is considered to be good fit if significance value falls 0% to 5%. In Anova table shows the sig value of .000 which means that relationship between Independent and dependent variable is highly significant hence the model is fits perfectly As for the correlation table it has clearly indicated that perceived risk, Price Perception, Environmental attitudes and social influence variables having a positive relationship with Preference by giving the association of 46%, 44%, 19% and 44%. Knowledge factor has given Pearson correlation value of 0.008 which indicating there is not significant correlation with preference. Among other four variables except Environmental attitudes, rests of the three variables were having strong positive relationship with preference.

5.4. Testing Hypothes

Table 35: Table of Coefficients

Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
	B	Std. Error	Beta			Lower Bound	Upper Bound
1 (Constant)	-1.012	.628		-1.612	.109	-2.253	.229
Knowledge	.016	.071	.015	.224	.823	-.124	.156
Social Influence	.281	.077	.262	3.666	.000	.129	.432
Price Perception	.329	.096	.254	3.429	.001	.139	.519
Environmental Attitudes	.092	.106	.059	.867	.387	-.118	.301
Perceived Risk	.631	.141	.318	4.471	.000	.352	.910

a. Dependent Variable: Preference

As for the coefficient table Beta (β) of knowledge of a product and its technology has given 16% with significant value of 0.823 which shows no relationship between knowledge variable and purchase intention of Hybrid vehicles.

Regression coefficient Beta (β) of Social influence has given a value of 28.1% with significant value of 0.000 which shows a positive and significant relationship between Social influence and purchase intention. Regression coefficient Beta (β) of Price perception has given the value of 33% whereas significant value of it is 0.001 which again shows a positive and significant relationship between price perception and buying intention. Beta (β) of environmental attitudes has generated the value of 92% with a significant value of 38.7 which shows no relationship between knowledge variable and purchase intention of Hybrid vehicles. Regression coefficient Beta (β) of perceived risk has given 63% whereas its significant value is 0.000 which shows a positive and significant relationship between Perceived risk and buying intention of hybrid vehicles.

So:

$$X = \alpha + \beta 1Y1 + \beta 2Y2 + \beta 3Y3 + \beta 4Y4 + \beta 5Y5$$

Where;

X= Hybrid Vehicle purchase intention
Y1= Knowledge
Y2= social influence
Y3= Price Perception
Y4= Environmental Attitudes
Y5= Perceived Risk
$$X = -1.012 + .016y1 + .281y2 + .329y3 + .092y4 + .631y5$$

Researcher concludes that, purchase intention of a hybrid vehicle is expected to increase by 0.016. If environmental concern increased by 1. Purchase intention is expected to increase by 0.281 if the social influence increased by 1. Purchase intention is expected to increase by 0.329 if the price perception increased by 1. Hybrid vehicle purchase intention is expected to increase by 0.92 if the environmental attitudes increase by 1, Purchase intention is expected to increase by 0.631 if the perceived risk increased by 1. As per the coefficient table significant values Since knowledge variable and environmental attitude variables significant values are 0.823, 0.387 which are higher than 0.5 there is no evidence of rejecting the null hypothesis of "Product Knowledge does not have a significant impact on Buying Intention of Hybrid Vehicles." and "Positive Environmental Attitudes will not make an influence on consumers' purchase decision on Hybrid automobile. Therefore researcher has to reject the alternative hypothesis. Price perception, social influence and perceived risk variables are given a higher significant values than 0.5, researcher can reject the null hypothesizes relevant for those three variables and accept the alternative hypothesis which says that those three variables are having positive impact over buying intention of hybrid vehicles in Sri Lankan consumers.

H0	Product Knowledge does not have a significant impact on Buying Intention of Hybrid Vehicles.	P =	Accepted
H1	Product Knowledge has a significant impact on Buying Intention of Hybrid Vehicles.	.823	Rejected
H0	Social influence does not have a significant impact on Buying Intention of Hybrid Vehicles	P =	Rejected
H1	Social influence have a significant impact on Buying Intention of Hybrid Vehicles	.000	Accepted
H0	Price Perception does not have a significant impact on Buying Intention of Hybrid Vehicles	P	Rejected
H1	Price Perception have a significant impact on Buying Intention of Hybrid Vehicles	=.001	Accepted
H0	Positive Environmental Attitudes will not make an influence on consumers' purchase decision on Hybrid automobile.	P =	Accepted
H1	Positive Environmental Attitudes will make an influence on consumers' purchase decision on Hybrid automobile.	.387	Rejected
H0	Perceived Risk does not have a significant impact on Buying Intention of Hybrid Vehicles	P =	Rejected
H1	Perceived Risk has a significant impact on Buying Intention of Hybrid Vehicles	.000	Accepted

Table 37: Hypothesis Testing

After the hypothesis testing researcher concluded that, only three of the alternative hypothesis can be accepted while two of the hypotheses are rejected. In Sri Lankan context it indicated that buying intention of hybrid vehicles do not get any impact by product knowledge and environmental attitudes where researcher had to accept the null hypothesis and reject the alternative hypothesis since there are not enough evidences to reject it.

6. Conclusion and Recommendation

6.1. Conclusion

According to researchers knowledge this is the first research on purchase intentions of Hybrid Vehicles in Sri Lanka. This research has been done to determine the purchase intention of Hybrid Vehicles in Sri Lanka by using a sample respondent group of 150 people. This research article focuses mainly on determining the impact of customer's environmental attitudes, subjective norms, knowledge, price perception, preferences, Perceived risks, intentions as well as expectations of the customers given to the environment while buying a hybrid vehicle. To conduct the research, researcher has used snowball sampling technique which helped researcher to identified respondents as "being in the market" to buy a car or people who are having knowledge about the vehicles and looking forward to buy vehicles in near future. All the responses were collected online and taken them to SPSS data base for the purpose of analyzing. As for the analysis done by the researcher, it has clearly found that over the buying intention of hybrid vehicles price perception, social influence and perceived risk independent variables making a significant impact whereas knowledge and environmental attitudes do not make any significant influence over buying intention of hybrid vehicles.

Hypothesis	Variable	P value(significant)	Accept or Reject
H1	Knowledge	0.823	Rejected
H2	Social Influence	0	Accepted
H3	Price Perception	0.001	Accepted
H4	Environmental Attitudes	0.387	Rejected
H5	Perceived Risk	0	Accepted

Table 37: Summery of Hypothesis Testing

In the process of getting data for the analysis the sample group which has taken for this research is pretty much similar to the population since having closer relationships with the population characteristics. 85% of the sample group in this research has represents the male category whereas 15% represents the females. As for the age categories for the respondents, 18 – 24 represents 36% of sample group respondents. As for the researchers point of view since this research focusing on buying intention factor future decision makers representation of this age group category is very important for an accurate result. Age group representation was 46-50, giving 2%. Age 36-50, representing 17% of sample group.

6.2. Key Findings

After the analysis has been made, researcher has found following key findings relate to current Sri Lankan vehicle market and buying behaviour of customers.

- In Sri Lankan Vehicle market most popular vehicle brand is "Toyota" followed by "Honda" and "Benz" most importantly in Sri Lankan Vehicle market top two popular vehicle brand do have hybrid vehicles.
- Most of the Sri Lankan use vehicles for home purposes. There are considerable proportion of a population who are using vehicles for long distance travelling and office uses.
- Since Sri Lanka has not became as a developed country, most of the citizens are really price conscious than quality. Through this research researcher has found that majority of the customers considering price, brand & most importantly fuel efficiency before they buying a vehicles.
- Researcher has found that most of the Sri Lankan vehicle buyers proffered to get themselves with petrol vehicle. Most probably due to lack of maintenance cost and repairs may influenced people to buy a petrol vehicle than other types of vehicles.
- The most significant finding is 39% of the people would like to buy hybrid vehicles in the future. Whereas only 17% said that they would preferred to buy diesel vehicle.
- Hybrid technology knowledge among the Sri Lankan people are not up to the expected level.
- When it's come to social influence, researcher has found out that peer group influence is the most significant than any other group in the society. Even Family influence is also second to peer influence when making a purchase decision over a hybrid vehicles in Sri Lanka.

▪ Researcher has found most of the Sri Lankan people think that hybrids car do have mechanical problems than a conventional vehicles. It is a negative attitude which embedded in customers mind.
▪ Most of the people do believe that in Sri Lankan vehicle market, hybrid vehicles are getting lesser second hand value than conventional vehicles.

6.3. Managerial Implications

Price Perception and Social Influence strongly make an impact on the adoption of hybrid vehicle in Sri Lanka. Besides, hybrid vehicle have significant prospects because of their excellent mileage and low emissions. Therefore, marketers can use the fuel economy and environmental friendly cars as one of their promotional tools in marketing to encourage consumers to adopt hybrid vehicle. For promotion, they need to develop more informative advertising to educate the buyers on the benefits and important features of hybrid vehicles. In terms of product strategy, the manufactures should introduce more hybrid vehicle models to attract the consumers. The hybrid vehicles need to have these features; fuel efficiency, easy operation and high quality in terms of durability and reliability. In Sri Lanka, the price of hybrid vehicle is lower than conventional vehicle. In order to avoid over-pricing, the manufacturers should offer more affordable hybrid vehicles. This is because most of the buyers are looking for a more acceptable and affordable price. Government incentives are also one of the factors that influence the adoption of hybrid vehicle in Sri Lanka. As a result, the government should continue providing incentives for hybrid car buyers. Besides, another incentive such as rebate on personal income tax can be considered by the government. For those car manufacturers who assemble hybrid vehicles in Sri Lanka. The government can give special incentives like low manufacturing plants tax, and low corporate tax for five to ten years.

7. References

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