

FACTORS THAT INCREASE PURCHASE INTENTION OF ELECTRIC CARS IN JAKARTA

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ABSTRACT

Global warming has become an issue for the whole world until now. The cause of global warming is air pollution produced by engine fuels from various automotives that can produce carbon dioxide. This encourages people to be more concerned about the environment, including the automotive industry. The rise of the movement to care for the environment encourages automotive companies to make electric car products which can be a solution to reduce pollution. In recent years, electric cars have started to enter the market in Indonesia. However, this is not well received by the Indonesian people. This is related to the low purchase intention of the electric car itself. The purpose of this study was to determine empirically the effect of attitude, subjective norm, perceived behavioral control, and price sensitivity on consumer purchased intention of electric cars in Jakarta. This study uses data collected from 153 respondents who are people who at least are undergoing undergraduate studies and have knowledge of electric cars in Jakarta. The data was obtained by distributing an online questionnaire in the form of a google form through social media. The data is then processed using SmartPLS 3.2.9 software. The results of this study are attitude, subjective norm, and price sensitivity have a positive and significant influence on the purchase intention of electric cars in Jakarta. Meanwhile, perceived behavioral control has no effect on the purchase intention of electric cars in Jakarta.

Keywords: *Purchase Intention, Attitude, Subjective Norm, Perceived Behavioral Control, Price Sensitivity*

1. INTRODUCTION

Global warming has become an issue for the whole world until now. The cause of global warming is air pollution produced by engine fuel from various vehicles, both motorcycles, cars, and other vehicles that can produce carbon dioxide. According to an article in news one in 2021, the condition of air quality in Indonesia has continued to deteriorate since the last two decades, and is currently ranked as the 20th country with the worst air quality in the world.

This encourages people to be more concerned about their environment, such as the go green movement or green campaign. The movement or campaign is a movement that supports the improvement of our earth's environmental conditions. The rise of the movement to care for the environment encourages companies to make environmentally friendly products, including the automotive industry which makes electric car products. One solution to reduce pollution in Indonesia is to switch to electric vehicles, because electric cars do not use emissions that can cause global warming. In recent years, electric cars have started to enter the market in Indonesia. However, this is not well received by the Indonesian people. Electric car sales in that period were only 0.48% of the total car sales, which was 393,469 units.

[1] This is related to the low purchase intention of the electric car itself. According to a survey by research company Milieu Insight, in Indonesia only 47% expressed interest in buying an electric vehicle in their next vehicle purchase [2].

Marketers will be able to provide consumers with pertinent information to assist them in making the best purchasing decisions by having a thorough understanding of the elements that affect buy intention [3].

[5] said that subjective norms affect the purchase intention of environmentally friendly products. Subjective norm relates to perceived social pressure to perform certain behaviors [6]. Research conducted by [3] also said that subjective norms significantly affect the purchase intention of consumers in China.

Research conducted by [7] said that perceived behavioral control affects purchase intention of sponsored products based on American and Korean audiences at the 2010 FIFA World Cup. Perceived behavioral control indicates consumer perceptions of the availability or lack of opportunities and resources needed to behave in a certain way [6].

Another factor that causes the low purchase intention of electric cars in Indonesia is the high price of electric cars [8]. According to [9] price sensitivity explains how consumers react to changes in the price level. [10] said that price sensitivity is one of the variables that influence consumers' purchase intention.

The Theory of Planned Behavior (TPB) developed by [6] is the theory that becomes the theoretical reference in this study. This theory says that attitude, subjective norm, and perceived behavioral control are the three main factors in predicting a person's intentions. The greater a person's intention to engage in a behavior, the more likely that behavior will occur.

2. LITERATURE REVIEW

Attitude

Attitude refers to the degree to which a person has a favorable or unfavorable appraisal of the action in question determines their purchasing intentions and behavior [6]. [11] say that attitude is related to the positive or negative assessment of customers in buying environmentally friendly products. So, it can be concluded that attitude is the extent to which a person has a positive or negative assessment of behavior in buying environmentally friendly products. Research conducted by [5] said that, when consumers have a positive attitude towards environmentally friendly products, there will be extra opportunities for consumers to buy them.

Research conducted by [5] says that attitude has a positive and significant influence on consumer purchase intention of hybrid vehicles in Pakistan. When someone buys an electric car and the behavior is considered good by the surrounding environment, it will increase the purchase intention of an electric car. Research conducted by [20] says that attitude had a positive and significant influence on intention to purchase green products in Jakarta. So, it can be said that the higher the positive attitude of a consumer towards environmentally friendly products, the higher the chances for consumers to buy them. Therefore, the first hypothesis in this study is as follows: H1 (+): Attitude has a positive and significant influence on purchase intention of electric cars in Jakarta.

Subjective Norm

According to [6], The term "subjective norm" refers to the pressure that classmates, friends, family members, and other powerful members of society may put on a person to engage in (or

refrain from engaging in) particular action. [12] also say that subjective norms are social pressures on individuals to perform or not to perform certain behaviors. It can be concluded that, Subjective norm refers to the social pressure faced by individuals to perform or not perform the behavior that other people think the individual should do. Research conducted by [5] says that subjective norms have a positive and significant influence on consumer purchase intention of hybrid vehicles in Pakistan. The higher the influence of the environment that encourages someone to use environmentally friendly products or in this study an electric car, the higher the purchase intention of the electric car. Therefore, the second hypothesis in this study is as follows:

H2 (+): Subjective norm has a positive and significant influence on purchase intention of electric cars in Jakarta.

Perceived Behavioral Control

[6] says that perceived behavioral control is people's perception of the ease or difficulty of performing a behavior. According to [11], perceived behavioral control is the customer's perception of the difficulty and ease of doing green purchase behavior. According to [13], perceived behavioral control is a person's estimation of their level of control over their conduct, as well as their perception of how simple or complex their activity is to carry out. So, it can be concluded that perceived behavioral control is the ease or difficulty in carrying out environmentally friendly behavior.

Research conducted by [5] says that perceived behavioral control has a positive and significant influence on consumer purchase intention of hybrid vehicles. When someone finds it easy to do something, or in this case use and buy an electric car, the more likely someone is to buy an electric car. Therefore, the third hypothesis in this study is as follows:

H3 (+): Perceived behavioral control has a positive and significant influence on purchase intention of electric cars in Jakarta.

Price Sensitivity

According to [14], the degree of awareness and response displayed by consumers when they discover a difference between the costs of the goods or services offered is known as price sensitivity. According to [9] how consumers respond to changes in the price level is explained by price sensitivity. According to [15] price sensitivity can also be said as a willingness to pay more for environmentally friendly products. So it can be concluded that price sensitivity is the level of awareness and reaction shown by consumers when receiving price differences for environmentally friendly products.

Research conducted by [5] says that price sensitivity has a positive and significant effect on consumer purchase intention of hybrid vehicles in Pakistan. Consumers who are willing to pay higher prices for environmentally friendly products will have a greater chance of buying an electric car. Therefore, the fourth hypothesis in this study is as follows:

H4 (+): Price Sensitivity has a positive and significant influence on the purchase intention of electric cars in Jakarta.

Purchase Intention

[16] define purchase intention as the possibility of an individual to obtain a certain product. [17] say that purchase intention is related to the possibility that a consumer plans or is willing

to buy a certain brand in the future. Therefore, purchase intention can be defined as the possibility of a consumer planning or willing to buy environmentally friendly products.

3. RESEARCH MODEL AND HYPOTHESES DEVELOPMENT

The framework of the hypothesis above is as follows:

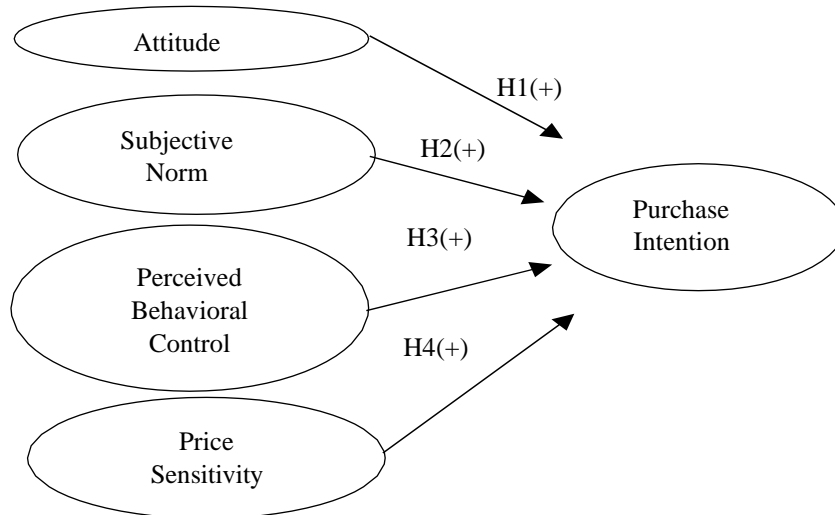


Figure 1 The Conceptual Framework

4. METHODOLOGY

This research uses descriptive research with cross-sectional method. The population in this study are people who are at least undergoing undergraduate studies and have knowledge of electric cars in Jakarta. This study also uses a sampling technique, namely non-probability sampling with a purposive sampling technique. The criteria for respondents in this study are people who at least are undergoing undergraduate studies and have knowledge of electric cars in Jakarta. After distributing online questionnaires through social media, the researchers managed to collect data from 153 respondents.

This study consists of 4 exogenous variables, namely attitude, subjective norm, perceived behavioral control, and price sensitivity and 1 endogenous variable, namely purchase intention. Attitude variable was measured using 3 indicators adapted from [5] and [4]. The next variable, namely subjective norm, is measured using 4 indicators adopted from [4] and [5]. Then, the perceived behavioral control variable was measured using 7 indicators adopted from research conducted by [5] and the price sensitivity variable were measured using 3 indicators adopted by the research of [5]. Finally, the purchase intention variable is measured using 3 indicators adopted from research conducted by [5].

5. DATA ANALYSIS

This study uses data obtained from respondents' answers through online questionnaires. The majority of respondents from this study are men aged 31-35 years, currently studying or who have graduated from S1, married, have incomes in the range above Rp. 18,800,000, and live in South Jakarta.

This research consists of validity and reliability tests, data analysis assumptions test consisting of multicollinearity test, and data analysis test consisting of coefficient of determination test, effect size test, predictive relevance test, and hypothesis testing.

Validity and Reliability Test

The outer model test in this study consisted of validity and reliability tests. Validity test consists of convergent validity test and discriminant validity test. Meanwhile, the reliability test consists of composite reliability and Cronbach's alpha. Convergent validity can be accepted if it has an Average Variance Extracted (AVE) of more than 0.50 and a loading factor of more than 0.50 [18]. Meanwhile, discriminant validity can be accepted if it has a heterotrait-monotrait ratio (HTMT) value that does not exceed 0.85 [19]. Then, for the reliability test, it can be accepted if it has a composite reliability value above 0.70 and Cronbach's alpha is above 0.70 as well [18] It can be seen from Table 1, Table 2, and Table 3, that this research has passed the validity and reliability test.

Table 1 Loading Factors Result

Variable	Indicator	Loading Factor
Attitude	A1	0.779
	A2	0.879
	A3	0.788
Subjective Norm	SN1	0.708
	SN2	0.723
	SN3	0.748
	SN4	0.750
Perceived Behavioral Control	PBC1	0.649
	PBC2	0.630
	PBC3	0.701
	PBC4	0.747
	PBC5	0.744
	PBC6	0.758
	PBC7	0.768
Price Sensitivity	PS1	0.785
	PS2	0.777
	PS3	0.820
Purchase Intention	PI1	0.829
	PI2	0.990
	PI3	0.801

Table 2 AVE, Composite Reliability, and Cronbach's Alpha

Variable	AVE	Composite Reliability	Cronbach's Alpha
Attitude	0.666	0.835	0.748
Subjective Norm	0.536	0.822	0.712
Perceived Behavioral Control	0.512	0.880	0.840

Price Sensitivity	0.631	0.837	0.707
Purchase Intention	0.701	0.835	0.786

Table 3 HTMT Result

Variable	Attitude	Perceived Behavioral Control	Price Sensitivity	Purchase Intention
Perceived Behavioral Control	0.811			
Price Sensitivity	0.604	0.689		
Purchase Intention	0.820	0.798	0.793	
Subjective Norm	0.679	0.824	0.586	0.777

Multicollinearity Test

Next is the multicollinearity test. The results of the multicollinearity test can be said to be good if it has a VIF value of less than 5 [18] The results of this test show that the VIF value on the attitude variable is 1.768, subjective norm is 1.749, perceived behavioral control is 2.404, and price sensitivity is 1.444. It can be concluded that all variables have passed the multicollinearity test because they have a VIF value of less than 5.

Data Analysis

The results of data analysis in this study consisted of the coefficient of determination test, effect size test, predictive relevance test, and hypothesis testing. According to [18], the results of the analysis of the coefficient of determination are divided into three parts, namely, 0.75 is large, 0.5 is medium and 0.25 is small. In Table 5, it can be seen that the R-square has a value of 0.585 so that attitude, subjective norm, perceived behavioral control, and price sensitivity have a moderate influence on purchase intention in this study.

Next is the effect size test whose results can be seen in Table 4. According to [18] that the results of this analysis are divided into three categories, namely, 0.02 is small, 0.15 is moderate, and 0.35 is big. So, from these data it can be concluded that the variables of attitude, subjective norm, perceived behavioral, and price sensitivity have a small effect on purchase intention because they have values above 0.02 but below 0.15.

There is a q-square test which shows the number 0.392. The results of the analysis of predictive relevance that can be said to be good are those with values above 0 [18] In this study, the results of the analysis show that the Q-squared has a value of 0.392 which means that the variables of attitude, subjective norm, perceived behavioral control, and price sensitivity can be used to predict purchase intention in this study because it has a value above 0.

Table 4 F-Squared Result

Variable	F-Squared
Attitude	0.107
Subjective Norm	0.056
Perceived Behavioral Control	0.037
Price Sensitivity	0.132

Hypothesis Testing

Hypothesis testing in this study consists of path analysis or path coefficient, p-value, and t-statistics. The results of the path coefficient test show values ranging from -1 to +1. If the results show +1, it means that there is a positive relationship between the variables in this study, on the otherhand, if the results show a -1 result, it means that the variables in this study have a negative relationship [18] Next, hypothesis testing is also seen from the p-value. According to [18], the hypothesis can be accepted if the value of the p-value test does not exceed 0.05. Conversely, if the value of the p-value test exceeds 0.05, then the hypothesis will be rejected. Then, there is also hypothesis testing seen from the t-statistic value. The hypothesis in this study can be accepted if the value of the t-statistic is greater than 1.96. The lower the results of the t-statistic test, the lower the significance of the hypothesis.

Table 5 The Results of Hypothesis Testing

Variable	Value	Conclusion
Attitude -> Purchase Intention	β : 0.281	Supported
	t-Statistics: 3.765	
	p-Value: 0.000	
Subjective Norm -> Purchase Intention	β : 0.281	Supported
	t-Statistics: 3.565	
	p-Value: 0.011	
Perceived Behavioral Control -> Purchase Intention	β : 0.281	Not Supported
	t-Statistics: 3.765	
	p-Value: 0.052	
Price Sensitivity -> Purchase Intention	β : 0.281	Supported
	t-Statistics: 3.765	
	p-Value: 0.000	

The results of the first hypothesis test show that there is an influence of attitude on the purchase intention of electric cars in Jakarta. This means that the more positive a person's assessment of the behavior of buying an electric car, the higher the probability of someone buying an electric car. The results of the second hypothesis test indicate that subjective norms have a positive and significant influence on purchase intention of electric cars in Jakarta. This means that the greater the social pressure faced by individuals to buy an electric car, the greater the likelihood that someone will buy an electric car. Next, the results of the third

hypothesis test show that perceived behavioral control has no effect on the purchase intention of electric cars in Jakarta. This is because in the third hypothesis test, the p-value is above 0.05 and the t-statistic is more than 1.96. Finally, the fourth hypothesis test. The results of the fourth hypothesis test show that price sensitivity has a positive and significant influence on the purchase intention of electric cars in Jakarta. This shows that the greater a person accepts the price difference for environmentally friendly products, in this study an electric car, the more likely someone is to buy an electric car.

6. DISCUSSION

Based on the outcomes of the analysis and hypothesis testing that have been described, the conclusions drawn from this study are as follows:

1. Attitude has a positive and significant influence on the purchase intention of electric cars in Jakarta.
2. Subjective norm has a positive and significant influence on the purchase intention of electric cars in Jakarta.
3. Perceived behavioral control has no influence on the purchase intention of electric cars in Jakarta
4. Price sensitivity has a positive and significant influence on the purchase intention of electric cars in Jakarta.

This study shows that price sensitivity, attitude, and subjective norm affect the purchase intention of electric cars in Jakarta. The results of this study are in line with the results of previous studies conducted by [5]. So, it is recommended for companies that produce electric cars to be able to emphasize the value where electric cars have many functions and are very easy to use, considering that in general the price of electric cars is more expensive than conventional cars. In addition, it is recommended for electric car companies to market electric cars by emphasizing the positive values. Then, it is also recommended for electric car companies to be able to choose the right consumer segment, such as a community that cares about the environment.

7. CONCLUSION

This study uses only 4 exogenous variables. So, for similar researchers in the future, it is suggested to add other exogenous variables, such as moral norm and environmental concern. By adding other exogenous variables, it is expected to be able to explain the purchase intention variable more broadly. Due to time constraints, this study only used 153 respondents. Thus, it is also recommended for similar researchers in the future to increase the number of research samples, so that the research can more closely resemble the original situation in the field. The scope of this research also only covers Jakarta. So, it is also recommended for similar researchers in the future to expand the scope of research. By expanding the research area, it is hoped that further research can explain more broadly the influence of exogenous variables on the purchase intention of electric cars throughout Indonesia or even the whole world.

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