Analysis Of The Effect Of Design With Lifestyle As A Moderating Variable On Purchasing Decisions For Electric Motorbikes In Purwokerto

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ABSTRACT

This study aims to examine the effect of electric motorcycle design and consumer lifestyle as moderating variables on purchasing decisions in Purwokerto. Informasi was collected through a survey conducted on consumers World Health Organization are considering or have purchased an electric motorcycle. Regression analysis was used to identify the effect of design on purchasing decisions and the role of lifestyle in moderating this relationship. The results show that design attributes significantly influence the purchase decision of an electric motorcycle, and lifestyle acts as a significant moderating variable linking design with purchase decision. The implication is that manufacturers and marketers should focus on attractive designs that align with consumers'. lifestyles to increase purchase intentions, while considering lifestyle as a key factor in developing customized marketing strategies. However, this study is limited by its geographical coverage, restricted to Purwokerto, and the potential exclusion of other factors that influence purchase decisions. Future research should expand its geographic coverage and include additional variables for a more comprehensive understanding of consumer behavior in electric motorcycle purchasing decisions. Overall, this study provides insight into the complex relationship between design, lifestyle, and purchase decisions of electric motorcycles, which offers practical implications for industry practitioners and researchers. The results of the research will be explained further in this paper.

Keywords: *Electric motor, design, lifestyle, purchase decision, moderation, consumer behavior*

1. Introduction

In an era of climate change uncertainty and sustainability awareness, electric vehicles have emerged as one of the promising solutions to reduce environmental impact and dependence on fossil fuels. Electric motors, as a part of sustainable mobility, are increasingly gaining attention from consumers seeking greener transportation alternatives. Amid the emergence of this trend, design and lifestyle elements are increasingly recognized as factors that influence the decision to purchase an electric vehicle. According to Azany (2014: 45) product design can be said to be an improvement or simplification. The intended improvement can be in the form of adding functions and uses to the product. Meanwhile, simplifying product design aims to make it easier to use a product.

According to Sudaryono (2014: 152) Lifestyle is a pattern of life that determines how a person chooses to use time, money and energy and reflects values, tastes and preferences, when the industry is able to see people's lifestyles, people will not hesitate to spend their money. This context becomes even more important in a regional context like Purwokerto, where growing urbanization and increasing awareness of environmental impacts have changed the way people view transportation. The decision to purchase an electric motorcycle is no longer based solely on functional factors, but is also influenced by aesthetic elements of design and consumer lifestyle fit. Therefore, this research aims to dig deeper into how electric motorcycle design and individual lifestyles can interact with each other in shaping the decision to purchase an electric vehicle in Purwokerto.

In this case, analyzing the influence of design and the role of lifestyle as a moderating variable is important to understand the extent to which these two factors can influence the decision to purchase an electric motorcycle. This research will provide a more holistic view of consumer preferences and the factors that shape them, as well as their impact on the acceptance and adoption of electric vehicles in the community.

Against this backdrop, this research will provide valuable insights for electric motorcycle manufacturers and marketers to design products that match consumer preferences and lifestyles. In addition, this research also has the potential to provide guidance for better policy making in encouraging the adoption of electric vehicles as an integral part of a sustainable transportation infrastructure in Purwokerto.

2. Literature Review

2.1 Product design in Purchasing Decisions.

Suharso (2010: 83) says that the purchase decision is the stage where the buyer has made his choice and purchased the product and consumed it. The purchase itself can be physically carried out by consumers, but it can also be the choice of others. Product Design Design is giving a different appearance or determination to a product (Kotler, 2005). According to (Saladin, 2007) design is part of the technical product development. Product design has been recognized as having an important role in influencing consumer purchasing decisions. In the context of vehicles, design aspects can include exterior aesthetics and innovative features that combine comfort and safety. Previous research has highlighted that attractive design can influence consumers' perception of

product value and quality. Therefore, strong product design in electric motors can be a decisive factor in influencing consumers' decision to adopt electric vehicle technology.

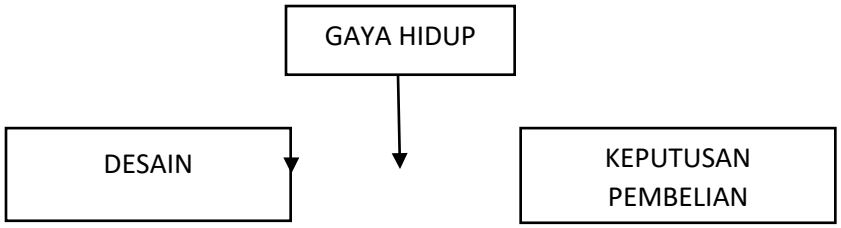
2.2 The Role of Lifestyle as a Moderating Variable.

According to Kotler and Armstrong (2016: 186) lifestyle is a person's pattern of living in the world which is shown through activities (activities), interests (interests), and opinions (opinions), According to Sudaryono (2014: 152) Lifestyle is a pattern of life that determines how a person chooses to use time, money and energy and reflects values, tastes and preferences. Individual lifestyles also have a significant influence on purchasing decisions. Lifestyle reflects the values, preferences and behaviors of individuals that can influence how they interact with products and services. In the context of electric vehicles, lifestyle can be a moderating variable that influences the relationship between electric motor design and purchase decisions. For example, an environmentally oriented lifestyle may increase the positive impact of eco-design on purchase decisions.

3. Research Methodology

3.1 Framework of Thought

This research framework describes the effect of the independent variable, namely the electric motor design and the moderating independent variable, namely lifestyle on the dependent variable, namely the electric motor purchase decision. Based on literature review and previous similar research studies, the following framework can be prepared:



Picture of Framework of Thought

3.2 Hypothesis

The hypotheses in this study are as follows:

H1 : Design and Lifestyle variables as moderating variables have a positive relationship with the decision to purchase an electric motorbike.

H2 : Design and Lifestyle variables as moderating variables have a partially significant effect on purchasing decisions for electric motorbikes.

H3 : Design and Lifestyle Variables as moderating variables have a significant effect simultaneously on Purchasing Decisions for electric motorbikes.

In this study, the population is the people of Purwokerto City who own electric motors. The sampling technique used is the Isaac and Michael method. The sample taken in this study was 400 respondents with a sampling technique using purposive sampling.

This study uses statistical calculations based on questionnaire answers from respondents, namely by using a research instrument test consisting of validity and reliability tests to test whether the question items are feasible or not to be used as measuring instruments in this study, after which a classical assumption test is carried out (normality, multicollinearity, heteroscedasticity) and then further analyzed by multiple linear regression methods. To determine the significance in this study, hypothesis testing is needed (t test, F test, correlation coefficient test and determination coefficient test).

4. Results

4.1 Research Instrument Test

- Validity Test

Validity is an instrument that reflects the suitability and accuracy of the measuring instrument used. From the output results it is known that the corrected item-total correlation value on the five variables is greater than 0.3, so this indicates that these five variables are valid, because they have met the 0.03 limit.

- Reliability Test

Reliability is a measuring instrument that can be trusted and reliable if the measuring instrument is used two or more times to measure the same variable. Based on the results of SPSS 17 output, it is known that the Cronbach's Alpha value is 0.644, so the instrument in this study is declared reliable in measuring respondents' perceptions of the variables studied.

4.2 Classical Assumption Test

One of the requirements for being able to use multiple linear regression equations is the fulfillment of the classical assumption test. The data for the equation must be BLUE (Best Linear Unbiased Estimator), meaning that decision making through the F test and t test cannot be biased. To produce a BLUE decision, three basic assumptions must be met, namely the residual value with Kolmogorov-Smirnov must be> 0.05 (normally distributed data), there must be no multicollinearity, and there must be no heteroscedasticity. If one of these basic assumptions is violated, the multiple linear regression equation obtained is no longer BLUE so that decision making through the F test and t test becomes biased.

- Normality Test

The normality test aims to determine whether in the regression model, the independent variable and the dependent variable have a normal distribution or not. The basic assumption for decision making in the Normality test is if the significance value (Sig.) ≥ 0.05, normal

distribution. And vice versa if the significance value (Sig.) <0.05, not normally distributed. From the results of the normality test using the Kolmogorov-Smirnov test, it shows that the significance value of 0.063 is greater than 0.05, it can be concluded that the data is normally distributed.

- Multicollinearity Test

The multicollinearity test was conducted to test whether the regression model found a correlation between independent variables. A good regression model should not have a correlation between the independent variables. From the results of the SPSS output in the Coefficients table, it can be seen that the independent variables in this study have a Variance Inflation Factor (VIF) smaller than 10 and a Tolarance value of more than 0.1, so it can be said that there are no symptoms of multicollinearity between the independent variables in this study.

- Heteroscedasticity Test

The purpose of the heteroscedasticity test is to test whether in a regression model, there is an inequality in the variance of the residuals from one observation to another. One way is to look at the Scatter Plot graph between the predicted value of the dependent variable (ZPRED) and its residual value (SRESID).Based on the regression residual scatterplot diagram, it can be concluded that there is no heteroscedasticity. This is based on the graph image where the points on the graph do not form a certain clear pattern (not wavy, widening and narrowing).

4.3 Multiple Linear Regression Test

Regression analysis is basically a study of the dependence of the dependent variable (dependent) with one or more independent variables (explanatory / free), with the aim of predicting the population average or dependent variable values based on the known values of the independent variables. The regression equation in this study is to determine how much influence the independent or independent variables, namely Design (X1), Lifestyle as moderation (X2), have on Purchasing Decisions (Y).

Tabel 1

Hasil Pengujian Regresi Linier Berganda

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	**5.264**	1.521			
	Desain	**.166**	.057	.144	2.939	.003

	Gaya Hidup	**.128**	.060	.105	2.152	.032

a. Dependent Variable: kep_pembelian

Sumber: Hasil Pengolahan Data SPSS, 2023

Based on the table, it can be seen that the regression equation formed is: Y = 5.264 + 0.166 X1 + 0.128 X2. The constant b0 of 5.264 means that if the price, brand image, product quality and advertising are constant or equal to zero (0), then the magnitude of the purchase decision is 5.264 units. Furthermore, the value of b1 which is the regression coefficient of variable X1 (design) of 0.166 means that if there is an increase in price by 1 unit, the purchasing decision will increase by 0.166 units, assuming that the other variables are constant or constant. Then the b2 value which is the regression coefficient of the X2 variable (lifestyle) of 0.128 means that if the brand image increases by 1 unit, the purchasing decision will also increase by 0.128 units assuming other variables remain constant.

4.4 Hypothesis Test

- Test t

The t test (Partial Test) is used to determine each contribution of the independent variable partially to the dependent variable. The t test is carried out by looking at the level of significance (p-value), if the level of significance resulting from the calculation is below 0.05 then the hypothesis is accepted, otherwise if the level of significance of the calculated results is greater than 0.05 then the hypothesis is rejected.

From the SPSS output, the results can be seen: (1) The Design variable shows a significance level value of 0.003, which means that the hypothesis in this study rejects Ho and accepts Ha.

Ho and accept Ha. This test statistically proves that price has a significant effect on purchasing decisions. This can be interpreted that in the decision to purchase an electric motorbike, design is one of the factors that determine purchasing decisions. Consumers will continue to make purchases of electric motors without paying attention to lifestyle factors as moderation. (2) Lifestyle variable as moderation shows a significance level value of 0.032, which means that the hypothesis in this study rejects Ho and accepts Ha. This test statistically proves that lifestyle has a significant effect on purchasing decisions. This can be interpreted that in the decision to purchase an electric motorbike, consumers no longer consider other factors of the electric motorbike to be purchased. This means that consumers will continue to make purchases of electric motors because they are interested in the factors of a good electric motor without prioritizing design factors, but lifestyle factors still play an important role in making purchasing decisions for electric motors.

- Test f

This test is used to determine the joint effect of free variables on the dependent variable. The f test is carried out by looking at the level of significance (p-value), if the level of significance resulting

from the calculation is below 0.05 then the hypothesis is accepted, otherwise if the calculated significance level is greater than 0.05 then the hypothesis is rejected.

Table 2

Hasil Pengujian Uji F (Uji Simultan)

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	700.159	4	175.290	**29.262**	**.000[a]**
	Residual	2355.201	395	5.990		
	Total	3055.360	399			

a. Predictors: (Constant),Desan,gaya hidup sebagai moderasi

b. Dependent Variable: kep_pembelian

Sumber: Hasil Pengolahan Data SPSS, 2023

The results of hypothesis testing show a significance level value of 0.000. The significance level is smaller than 0.05, which means that the hypothesis in this study rejects Ho and accepts Ha. Thus it can be concluded that the hypothesis H3 - Design variables, and lifestyle as moderation simultaneously have a significant effect on purchasing decisions is accepted.

4.5 Coefficient Test

Tabel 3
Hasil Pengujian Koefisien
Model S ummary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	**.478[a]**	**.229**	.221	2.44753

a. Predictors: (Constant), Desain dan Gaya hidup sebagai moderasi

b. Dependent Variable: kep_pembelian

Sumber: Hasil Pengolahan Data SPSS, 2023

- Correlation Coefficient Test

The correlation coefficient is used to see the degree of relationship between the independent variable and the dependent variable partially. If the correlation coefficient (r) is close to 1 or one hundred percent, the degree of relationship is very strong. Based on the calculation results, in the Model Summary R section it can be seen that the linear correlation coefficient obtained is 0.478.

that the linear correlation coefficient obtained is 0.478. This figure shows that the relationship between the independent variable (X) and the dependent variable (Y) is positive, which means that the relationship between the two variables is unidirectional and sufficient.

- Test the Coefficient of Determination

The coefficient of determination is used to measure how far the independent variables are in explaining the dependent variable. The results of the regression calculation show that the coefficient of determination (R Square) obtained is 0.229. This shows that the percentage contribution of the influence of the independent variable (Design and Lifestyle as moderation) on the dependent variable (Purchase Decision) is 22.9%. While the remaining 77.1% is influenced by other variables not included in this study.

5. Discussion

This study provides an in-depth understanding of the complex relationship between electric motorcycle design and consumer lifestyle in the context of purchasing decisions in Purwokerto. The finding that design attributes influence purchase decisions highlights the urgency of the electric motorcycle industry to create products with designs that are not only aesthetically pleasing but also relevant to consumers' local preferences. The importance of understanding the diverse lifestyles of local consumers is highlighted, underscoring the need for marketers and manufacturers to develop marketing strategies tailored to the social and cultural context of Purwokerto. In the face of an era of increasing environmental awareness, these findings provide an opportunity for the electric motorcycle industry to dig deeper into the market potential by designing products that not only fulfill technical needs, but also create a strong emotional connection with consumers. Therefore, the implementation of these findings in marketing strategies and product development has great potential to create positive, sustainable and meaningful consumer experiences in Purwokerto.

6. Conclusion.

This study aims to determine the effect of Design and Lifestyle as Moderation on Purchasing Decisions for Electric Motorbikes (Case Study on Electric Motorbike Owners in Purwokerto City). Based on the data analysis that has been carried out with the help of theSPSS 25 program, the following conclusions can be drawn.

- Based on the data analysis carried out, the regression equation Y = 5.264

  + 0.166 X1 + 0.128 X2 From this equation, it results that between the Design variable (X1), Lifestyle as moderation (X2), with the Purchase Decision variable (Y) has a positive relationship.

- Based on the T Test (Partial Test) test, it is found that the Design and Lifestyle variables as moderation have a significant effect on Purchasing Decisions while the Product Quality Variable has no significant effect on Purchasing Decisions.

- Based on the F Test (Simultaneous Test) test, it was found that all the variables studied (Design and Lifestyle as moderation) had a positive and significant effect on the Purchasing Decision variable.

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