



The impact of product quality, risk perception, perceive of usefulness on electric motorcycles purchase intention in Surabaya

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INFO ARTIKEL

Abstract

Keywords:

Perceive of usefulness,
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The increasing of population growth has an impact on increasing demand for the use of motorized vehicles in Indonesia. This situation also endangers the environment where pollution due to vehicles fueled by petroleum or often found as gasoline is increasing. This has encouraged many companies to innovate as a form of solution to environmental pollution, one of which is the innovation of electric motorbikes. With an electric power source as the main driver, electric motorbikes are a new opportunity in the vehicle industry, especially in Indonesia, where people still rarely find regular users of electric vehicles. However, there are still many doubts among consumers before trying new products such as electric motorbikes in Indonesia.

The aim of this study was knowing the influence of product quality, risk perception, and perceive of usefulness on electric motorbikes purchase intension in Surabaya. Study carried out on consumers motorbike users in Surabaya who know the existence of an electric motor. The data collection method will be carried out through a purposive sampling technique and analyzed using the multiple linear regression method. The research results found that product quality, risk perception, and perceive of usefulness had a positive and significant influence on electric motorbikes purchase intention in Surabaya.

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Introduction

Indonesia, as the country with the largest population in the world have a lot of problems that always grow every year, one of them is phenomenon of environmental pollution. This phenomenon always occurs in Indonesia because it is balanced by the increase with the people who own motorized vehicles from year to year. According to BPS (2021), there has been an increase in the number of motorized vehicle ownership, with an increase of around 2 million motorbikes every

year. In 2019, the total number of motorbike ownership was found to be around 133 million units and in 2021 it will jump to 141 million motorbike units.

As a result of the increasing use of fossil fuel motorbikes, world oil reserves continue to decrease and air pollution increases, so environmentally friendly vehicles are needed. An electric motorbike is an innovative vehicle whose charging does not use petroleum and environmentally friendly, charging costs are more economical, and maintenance is cheaper. It can be a solution to air pollution and energy scarcity in the world Yusuf (2022). Product quality is the potential value of an item which is a strategic weapon in increasing comparative advantage compared to products from other competitors (Kotler, 2016). The quality aspect is an important value for consumers in knowing whether the product can meet their needs and be useful in the future.

Perception is a process involving managing the message or information obtained and leaves an impression of it. There are several considerations before consumers can make a decision to buy or use a product. This concern is based on various things ranging from concerns about quality, safety, or ease of using the product. According to Nasri and Charfeddine (2012) in research by Rajendra Prasada Bangkara and Ni Putu Sria Harta Mimba (2016) explained that Perceived Benefits can be defined as the extent to which a person believes that using a new system will improve their work performance.

Purchase intention (willingness to buy) is the consumer's tendency to act and think before deciding to buy, use or consume a product, including goods and services (Tjiptono, 2016). This behavior can usually be realized due to influence from other people or from the producer himself through the marketing strategies carried out. Several determining factors that can influence purchasing intention are transactional interest, referral interest, preferential interest, and exploratory interest (Yusnidar et al., 2014)

RESEARCH METHODS

The method for determining respondents used in the research is using a non-probability method. And the sampling technique uses accidental sampling and purposive sampling techniques. The research will use a population is Surabaya residents who know about electric motorbikes and those who are still active starting from the Forces. From the total population several samples will be selected using the rule of thumb determination technique is the sample size must be at least 10 times larger than the number of variables (Sugiyono, 2018).

The type of data used in this research is primary data obtained that questionnaires distributed to respondents. Primary data was obtained from respondents through online surveys, while secondary data took the form of literature studies and documents from research-related agencies.

RESULT

Description of Respondent's Identity

On this researchers has distributed 40 questionnaires and returned all of them. Based on the distribution of questionnaires carried out, an overview of the identity of the respondents regarding gender, occupation, age and monthly income was obtained which can be seen in the following table:

Table 1 Respondent Identity Data Gender

Number	Gender	Amount	%
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1	Female	16	40%
2	Male	24	60%
Total		40	100%

Source: Results of Respondents' Questionnaire Answers

Respondent Job Characteristics

Table 2 Job Identity Data of Respondents

Number	Job	Amount	%
1	Students	4	10%
2	College Students	10	25%
3	Employee	14	35%
4	Entrepreneur	12	30%
5	Unemployed	0	0%
Total		40	100%

Source: Results of Respondents' Questionnaire Answers

Validity Test

Table 3 Results of Validity Test of Product Quality Variables (X1)

Statement	r	r table	Explanation
1	0,881	0,2638	Valid
2	0,538	0,2638	Valid
3	0,669	0,2638	Valid
4	0,852	0,2638	Valid
5	0,517	0,2638	Valid
6	0,676	0,2638	Valid
7	0,795	0,2638	Valid

Source: Validity Test Results

From table 3 it can be seen that for the product quality variable statement item (X1) the calculated r value > r table, this means that overall the statement item is valid.

Table 4 Results of Validity Test of Perception of Risk Variables (X2)

Statement	r	r table	Explanation
1	0,784	0,2638	Valid
2	0,809	0,2638	Valid
3	0,616	0,2638	Valid

4	0,330	0,2638	Valid
5	0,400	0,2638	Valid

Source: Validity Test Results

From table 4 it can be seen that for the statement item for the variable perception of risk (X2) the calculated r value > r table, this means that overall the statement item is valid.

Table 5 Results of Validity Test of Perception of Usefulness Variables (X3)

Statement	r	r table	Explanation
1	0,499	0,2638	Valid
2	0,583	0,2638	Valid
3	0,373	0,2638	Valid
4	0,319	0,2638	Valid
5	0,485	0,2638	Valid
6	0,492	0,2638	Valid
7	0,443	0,2638	Valid

Source: Validity Test Results

From table 5 it can be seen that for the statement item for the variable perception of usefulness (X3) the calculated r value > r table, this means that overall the statement item is valid.

Table 6 Results of Validity Test of the Purchase Intention Variable (Y)

Statement	r hitung	r tabel	Keterangan
1	0,904	0,2638	Valid
2	0,771	0,2638	Valid
3	0,754	0,2638	Valid
4	0,911	0,2638	Valid
5	0,904	0,2638	Valid
6	0,741	0,2638	Valid
7	0,666	0,2638	Valid
8	0,671	0,2638	Valid

Source: Validity Test Results

From table 6 it can be seen that for the statement item of the purchase intention variable (Y), the calculated r value > r table, this means that overall the statement item is valid.

Reliability Test

Table 7 Reliability Test Results

Variables	Cronbach Alpha	Reliability minimum	Explanation
Product Quality (X ₁)	0,884	0,6	Reliabel
Perception of Risk (X ₂)	0,789	0,6	Reliabel
Perception of Usefulness (X ₃)	0,735	0,6	Reliabel
Purchase intention (Y)	0,941	0,6	Reliabel

Source: Reliability Test Results

From the results of tests carried out on the reliability of the questionnaire, it was found that the Cronbach Alpha value for all questionnaire items for each variable was greater than 0.6. Accordingly it can be decided that all questionnaire items for each variable are reliable.

Multiple Linear Regression

The impact of the independent variables consisting of product quality (X₁), perception of risk (X₂) and perception of usefulness (X₃) on the dependent variable purchase intention (Y),

Table 8 Multiple Linear Regression Test Results

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	13.788	6.723		2.051	.048
	TOTAL_X1	.560	.142	.524	3.955	.000
	TOTAL_X2	-.410	.196	-.273	-2.087	.044
	TOTAL_X3	.391	.180	.283	2.172	.037

a. Dependent Variable: TOTAL_Y

Source: SPSS data, 2023

Coefficient of Multiple Determination

The influence of product quality (X₁), perception of risk (X₂) and perception of usefulness (X₃) which together influence purchase intention (Y) can be seen from the magnitude of the multiple determination coefficient (R²). The value of the coefficient of multiple determination (R²)

Table 9 Coefficient of Multiple Determination

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.640 ^a	.410	.360	3.31685

a. Predictors: (Constant), TOTAL_X3, TOTAL_X2, TOTAL_X1

Source : SPSS data, 2023

The R value of 0.640 > 0.5 indicates a strong relationship between the three variables. And the value of R² is 0.410 or shows that the three research variables contribute 41% to purchase intention (Y). And 0.590 or 59% is influenced by other variables that are not included in the analysis model.

T test

To find out or test the influence of the variable product quality (X1), perception of risk (X2) and perception of usefulness (X3) partially on the dependent variable purchase intention (Y), the t test is used. Based on the t test, the test results can be seen in the following table:

Table 10 Results of t test analysis

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	13.788	6.723		2.051	.048
	TOTAL_X1	.560	.142	.524	3.955	.000
	TOTAL_X2	-.410	.196	-.273	-2.087	.044
	TOTAL_X3	.391	.180	.283	2.172	.037

a. Dependent Variable: TOTAL_Y

Source : SPSS data, 2023

DISCUSSION

Based on the t test, the results show that product quality (X1) partially has a significant effect on purchase intention (Y). This means that the better the product quality perceived by consumers as related to quality, the higher the online consumers' to purchase intention in that product.

Product quality according to Kotler and Armstrong (2014) is the meaning of a product's ability to perform of the function, this includes overall durability, reliability, accuracy, ease of operation and product repair as well as other product attributes. And then Kotler and Keller (2016) define product quality as a product or service that satisfy or exceeds customer expectations, thereby generating purchase intention.

The results of this research support research conducted by Sumual et al., (2023), Shakeel (2022) and Chen et al. (2017) with research results that there is a significant influence of product quality variables on purchase intention.

Based on the t test, the results show that perception of risk (X2) partially has a significant effect on buying interest (Y). This is because electric motorbike manufacturers are starting to evaluate their products so that buying interest increases and if the product is not evaluated then the risk will increase which will result in decreased buying interest. The results of this research support research conducted by Yusuf (2022), Priambodo & Prabawani, (2016) and Chen et al., (2017) research results show that there is a significant influence of risk perception variables on purchase intention.

Based on the t test, the results show that the perception of usefulness (X3) partially has a significant effect on purchase intention (Y). This means that the higher the consumer's perception of the intention of using an electric motorbike, the greater the intention to buy an electric motorbike.

According to Jogiyanto, (2007) perceived usefulness is defined as the extent to which someone believes that using a technology will improve their work performance. If someone already believes and makes that decision then someone will use it or take advantage of it. On the other hand, if someone can not trust and can not make decisions then that person will not use it. The results of this research support research conducted by Priambodo & Prabawani, (2016) with research results that perceptions of usefulness have an influence on purchase intention

CONCLUSION

From the results of the research and discussion described in the previous chapter, conclusions were drawn from the research, including research showing that the results of the analysis show that product quality has a significant effect on purchase intention in electric motorbikes in Surabaya. This is due to the consideration of quality as a reference for consumers to determine to purchasing decisions. It can also be said that in this way the hypothesis proposed is accepted.

Based on the results of the analysis, it was also found that perception of risk has a significant effect on purchase intention in electric motorbikes in Surabaya. There is information regarding the risks that will be obtained from related products makes it easier for consumers to choose and decide to make a purchase or not. And the hypothesis proposed is accepted.

The results of the research analysis also show that perceptions of usefulness have a significant effect on purchase intention in related products, and consumers believe that will be when making a purchase intention. And the hypothesis proposed is accepted.

Suggestion

From the results of the research, discussion and conclusions outlined in the previous chapter, there is suggestions can be given is that companies need to minimize the perception of risk in purchasing products with increase promotions, product quality can be improved and the perception of risk for transactions will have a positive influence and purchase intention will also increase.

For further research, it would be better to examine factors other than product quality, perception of risk and perception of usefulness which are thought to influence purchase intention, for example: marketing techniques, customer satisfaction, etc.

Research Limitations

The limitation of this research is that the data was collected through a questionnaire method, so it is possible that filling out the questionnaire may be subjective, sometimes the answers given by respondents do not show the real situation.

The number of respondents was only 40 people, and this will probably be increased in future researchers and the factors that influence purchase intention in this study only consist of three variables that is product quality, perception of risk and perception of usefulness, while there are many other factors that influence purchase intention

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