



Effect of Product Design and Fuel Economy on Purchasing Decisions on Honda Vario Motorcycles

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Abstract: *The increasingly complex and rapid development of science and technology has a huge impact on the business sector. This encourages entrepreneurs to produce products in large quantities and more varied types and of adequate quality. The development of industry today has led to increasingly competitive competition in the industrial world where companies compete to attract as many consumers as possible. The purpose of this research is to analyze effect of product design and fuel economy on purchasing decisions on Honda Vario Motorcycles. The research results show that product design variable has a significant effect on purchasing decisions. Fuel economy variable has a significant effect on purchasing decisions. The subjects in this research were Honda Vario Motorcycles Buyers. The sample in the research was 100 respondents. The data collection technique for this research was obtained in the following way observation, interview, and questionnaire. The analysis in this research uses multiple linear regression analysis.*

Keywords: *Product Design, Fuel Economy, Purchasing Decisions.*

1. INTRODUCTION

The increasingly complex and rapid development of science and technology has a huge impact on the business sector. This encourages entrepreneurs to produce products in large quantities and more varied types and of adequate quality. The



development of industry today has led to increasingly competitive competition in the industrial world where companies compete to attract as many consumers as possible. Business people in the industry continue to strive so that what they produce and offer is desired and accepted by consumers, who will then purchase at maximum purchasing levels with high purchasing frequency (Alimuddin et al., 2023).

An important management task in this regard is to design a system that supports the successful introduction of new products. It cannot be denied that the development of time shows a general trend, namely product life cycles are getting shorter. Product development in a modern productive system is becoming increasingly important in maintaining the survival of a company amidst intense competition.

Consumer behavior is determined by three factors that influence consumer behavior. The first factor that influences consumers is stimuli. Stimuli show the reception of information by consumers and information processing occurs when consumers evaluate information from advertising, friends, and their own experiences. The second influence comes from consumers' personal characteristics including perceptions, attitudes, benefits, and consumer characteristics. The third influence on consumer response is the final result of the consumer decision process and a comprehensive consideration. In understanding consumer behavior, there are many influences that underlie a person's decision to purchase a product or brand. For most people, consumer purchasing behavior is often initiated and influenced by many stimuli from outside themselves, both in the form of marketing stimuli and stimuli from other environments (Dudung, 2012). These stimuli are then processed within oneself, according to personal characteristics, before a purchasing decision is finally made. The personal characteristics of consumers used to process these stimuli are very complex, and one of them is the consumer's motivation to buy. If a person has high motivation towards a certain object, then he will be encouraged to behave in control of that product. On the other hand, if his motivation is low, then he will try to avoid the object in question. The implication in marketing is whether the person is interested in buying the product or brand offered by marketing or not (Pandiangan et al., 2024).

The design of a product has become one of the factors that needs serious attention from management, especially the new product development team, because quite a few target consumers are starting to question the issue of designing a product that is able to meet consumer needs and desires. This is the appearance and function of a product in meeting customer needs (Daryanto. 2013).

Product design is product development designed to meet consumer satisfaction. The ability of a product to survive a market cycle is determined by how a design is able to adapt to changes that occur in the market. The importance of determining product design is an advantage for a company in increasing its sales. The design aspect in



marketing activities is a form of attraction to a product. Design is needed by manufacturers in order to maintain or increase market share by identifying consumer needs for product benefits, designing it, right down to the planning level of making the product. This is also closely related to the product life cycle. Good design will produce superior products that suit consumer desires or needs.

Fuel is any material that can be converted into energy. Usually fuel contains heat energy that can be released and manipulated. Most fuels used by humans go through a combustion process where the fuel releases heat after being reacted with oxygen in the air (Handoko, 2019). Fuel economy is the efficient use of energy and sustainability of resources which is important to ensure energy needs can be met, without excessive damage to the environment. These are some examples of energy saving in everyday life that can be applied to preserve the environment.

The purpose of this research is to analyze effect of product design and fuel economy on purchasing decisions on Honda Vario Motorcycles.

2. RELATED WORKS

Effect of Product Design on Purchasing Decisions

Consumer decisions after purchase will produce a positive or negative response which in turn will determine satisfaction or dissatisfaction. Design is needed by manufacturers to maintain or increase market share by identifying consumer needs for product benefits, and designing it, right down to the planning level of making the product. For companies, a well-designed product will be easy to produce and distribute. For customers, a well-designed product is pleasing to look at and easy to open, install, use, repair, and dispose of. Product design is one aspect of forming a product image. With a unique design, different from the others, varied, it can be the only distinguishing feature of the product (Nitisusastro, 2012). Supported by good product design, it can improve product marketing in various ways, for example simplifying product marketing operations, increasing product quality and durability, and increasing product appearance. To generate high purchasing interest, producers can make products that suit consumers' needs and desires in terms of product design so that consumers will continue to make purchasing decisions.

Effect of Fuel Economy on Purchasing Decisions

Fuel is any material that can be converted into energy. Usually, the fuel contains heat energy that can be released and manipulated. Most fuels used by humans go through a combustion process where the fuel releases heat after reacting with oxygen in the air. Fuel economy is the efficient use of energy and sustainability of resources which is important to ensure energy needs can be met, without excessive damage to the environment. These are some examples of energy saving in everyday life that can be applied to preserve the environment. The more the product saves fuel, the higher the purchasing decision will be (Ishak, 2010).



3. METHODOLOGY

The research subject is something that is studied, whether people, objects or institutions (Pandiangan, 2023). The subjects in this research were Honda Vario Motorcycles Buyers.

Population is a complete group of elements, which are usually in the form of people, objects, transactions or events that are interested in studying or becoming research objects (Pandiangan et al., 2023). Apart from that, population is also defined as a generalized area consisting of objects or subjects that have certain qualities and characteristics determined by research to be studied and conclusions drawn. The population in this study were Honda Vario Motorcycles Buyers. The sample is part of the number and characteristics of the population (Tambunan et al., 2024). The sample in the research was 100 respondents.

The data collection technique for this research was obtained in the following way (Ratnawita et al., 2023):

1. Observation, namely the author makes direct observations of events that occur in the field.
2. Interview, namely the author uses interviews as a data collection technique with direct question and answer techniques.
3. Questionnaire, namely a list of questions created by the author to be distributed or given to other people who are willing to respond according to the user's request.

The analysis in this research uses multiple linear regression analysis which is to determine the accuracy of predictions of the influence that occurs between two more variables through the regression coefficient (Kurdhi et al., 2023).

$$Y=a+b.X$$

Information:

Y=Dependent variable.

a=Constant.

b=Coefficient of independent variable.

X=Independent variable.

4. RESULTS AND DISCUSSION

General Description

Honda Vario Motorcycles is an automatic transmission scooter produced by Astra Honda Motor in Indonesia since 2006. This scooter is intended to anticipate the increasing population of automatic scooters circulating in the Indonesian motorbike market. The Vario has appeared in various variants with engine capacities ranging from 108.0 cc (6.6 cu in) to 149.3 cc (9.1 cu in).

The advantages of Honda Vario Motorcycles can be seen from a person's interest in PT Astra Honda Motor, so they decide to buy Honda Vario Motorcycles products.



Quality is the main focus for companies to provide satisfaction to their consumers so that consumers will choose to buy the product. Consumers have a choice of products according to their wishes, such as the Honda Vario Motorcycles 110, 125, and 150. The choice of Honda Vario Motorcycles dealers is easy to find because PT Astra Honda already has branches in every region, spread throughout Indonesia, both cities and villages, so it is easier for consumers to get them.

The payment method for Honda Vario Motorcycles is also very easy because now you can make payments on credit, not just cash, this of course makes it very easy for someone to own a Honda Vario Motorcycle.

The Honda Vario Motorcycles 6 engine is durable, because the Honda Vario Motorcycles is a type of automatic motorbike produced by the Honda Motorcycle manufacturer, where the Honda Matic motorbike is equipped with an engine with a capacity of 125-150cc. So you can be sure that the performance of this Honda Matic motorbike engine will work extraordinary and be resistant in all terrains. The Honda Vario Motorcycles are equipped with a 4-stroke type engine using a fuel injection system, so the fuel consumption of this Honda motorbike will be very economical, however, we don't agree with the indicators that the design of the Honda Vario Motorcycles is attractive, because the design of the Honda Vario Motorcycles has a body that is quite large so makes it difficult for drivers when the roads are congested. And judging from its features, the Honda Vario Motorcycles have a wide and thick seat so that the rider is less comfortable when used when riding for a long time and also makes it difficult for riders who have a small body.

Multiple Linear Regression Test Result

Table 1. Multiple Linear Regression Test Result

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.275	1.100		.250	.803
	Product Design	.487	.063	.488	7.716	.000
	Fuel Economy	.352	.052	.425	6.722	.000

a. Dependent Variable: Purchasing Decisions

The research results show that product design variable has a significant effect on purchasing decisions. Product design is one aspect of forming a product image. With a unique design, different from the others, varied, it can be the only distinguishing feature of the product. Supported by good product design, it can improve product marketing in various ways, for example simplifying product marketing operations, increasing product quality and durability, and increasing product appearance. To generate high purchasing interest, producers can make products that suit consumers'



needs and desires in terms of product design so that consumers will continue to make purchasing decisions.

Fuel economy variable has a significant effect on purchasing decisions. Fuel is any material that can be converted into energy. Usually fuel contains heat energy that can be released and manipulated. Most fuels used by humans go through a combustion process where the fuel releases heat after reacting with oxygen in the air. Fuel economy is the efficient use of energy and sustainability of resources which is important to ensure energy needs can be met, without excessive damage to the environment. These are some examples of energy saving in everyday life that can be applied to preserve the environment.

5. CONCLUSION

The research results show that product design variable has a significant effect on purchasing decisions. Fuel economy variable has a significant effect on purchasing decisions.

6. REFERENCES

1. Alimuddin, Mariani, Sandra, Jana, Awom, Sarce Babra, Pandiangan, Saut Maruli Tua, Solehudin, Ahmad, Susanti, Evi, Fitriani, Itsna Rahma, Budiantoro, Risanda Alirastra, & Chasanah, Amalia Nur. (2023). *Pengantar Ekonomika*. ISBN: 978-623-8382-45-3. Batam: Penerbit Cendikia Mulia Mandiri.
2. Daryanto. (2013). *Manajemen Pemasaran*. Bandung: PT Sarana Tutorial Nurani Sejahtera.
3. Dudung, Agus. (2012). *Merancang Produk*. Bandung: PT Remaja Rosdakarya.
4. Handoko, T. Hani. (2019). *Dasar-dasar Manajemen Produksi dan Operasi*. Yogyakarta: BPPE.
5. Ishak, Aulia. (2010). *Manajemen Operasi*. Yogyakarta: Graha Ilmu.
6. Kurdhi, Nugthoh Arfawi, Sunarta, Desy Arum, Oktavianty, Nur, Nikmatullah, Jenita, Hatta, Heliza Rahmania, Ali, Helmi, Pandiangan, Saut Maruli Tua, Asrahmaulyana, & Rahman, Abdul. (2023). *Statistika Ekonomi*. ISBN: 978-623-8157-48-8. Batam: Penerbit Cendikia Mulia Mandiri.
7. Nitisusastro, Mulyadi. (2012). *Perilaku Konsumen dalam Perspektif Kewirausahaan*. Bandung: Alfabeta.
8. Pandiangan, Saut Maruli Tua. (2023). Effect of Packaging Design and E-Satisfaction on Repurchase Intention with Quality of Service as an Intervening Variable to the Politeknik Unggulan Cipta Mandiri Students Using E-Commerce Applications. *Journal of Production, Operations Management and Economics (JPOME)*, 3(4), 51-58. <http://journal.hmjournals.com/index.php/JPOME/article/view/2350>.



9. Pandiangan, Saut Maruli Tua, Wahdiniawati, Siti Annisa, Pratiwi, Ratih, Budiarto, Balla Wahyu, Arief, Ilham. (2023). Business Strategy Assistance and Training for Micro, Small, and Medium Enterprises. *Jurnal Pengabdian Mandiri*, 2(10), 2129-2134. <https://bajangjournal.com/index.php/JPM/article/view/6671>.
10. Pandiangan, Saut Maruli Tua, Gultom, Josua Alexander, Ariani, Dian, Dharmawan, Donny, & Butar-Butar, Ribka Sari. (2023). Effect of Problem-Based Learning Model on Learning Outcomes in Microeconomic Course. *Edumaspul: Jurnal Pendidikan*, 7(2), 5572-5575. <https://ummaspul.e-journal.id/maspuljr/article/view/7283>.
11. Pandiangan, Saut Maruli Tua, Sintesa, Nika, Abdulghani, Tarmin, Muhiban, Ayi, Pohan, Yuli Arnida, Suryathi, Wayan, Awa, Gultom, Josua Alexander, Prasetya, Prita, & Anjarwati, Sri. (2024). *Pengantar Bisnis Digital*. ISBN: 978-623-8576-18-0. Batam: Penerbit Cendikia Mulia Mandiri.
12. Ratnawita, Pandiangan, Saut Maruli Tua, Pratomo, Arief Budi, Saputra, Eka Kurnia, & Nuryanto, Uli Wildan. (2023). Analysis of the Experience of Teachers on Student Achievement in Economics at Private High School. *Edumaspul: Jurnal Pendidikan*, 7(1), 522-526. <https://ummaspul.e-journal.id/maspuljr/article/view/5555>.
13. Tambunan, Hotbona Novandi, Pandiangan, Saut Maruli Tua, Candra, Siagian, Mei Veronika Sri Endang, & Hendarti, Ricca. (2024). Upaya Peningkatan Perekonomian dengan Memanfaatkan Potensi Ibu Rumah Tangga di Era Digital pada Kelurahan Durian, Kecamatan Medan Timur. *E-Amal: Jurnal Pengabdian kepada Masyarakat*, 4(1), 1-6. <https://stp-mataram.e-journal.id/Amal/article/view/3084>.