



## Analysis of the factors that influence consumers in purchasing motorcycles in Jakarta Utara

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### ABSTRACT

Research's objective is to find factors which affect consumer buying of motorcycles in South Jakarta. In general, researchers have made questions that are based on variables that form the group of factors which finally became factors affecting consumer buying. This research uses the quantitative approach with non-probability sampling technique, convenience type. The amount of respondents is 200; consisting of 64 women and 134 men. Statistics's quantified by SPSS and factor analysis method. Research's results are that there are six factors affecting consumer buying of motorcycles; first is aftersales, second is type, third is reference group, fourth is feature, fifth is design, and sixth is price.

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### 1. INTRODUCTION

The journey of the automotive world began with two four-stroke engine experts from Germany. Just like the world's first car, the world's first motorcycle was born in Germany. Gottlieb Daimler and his partner, Wilhelm Maybach, two German four-stroke engine experts created the world's first motorcycle. In 1885, Daimler installed a small four-stroke engine on a wooden bicycle. The motorized wooden bicycle was named Reitwagen (riding car) and was the first motorcycle in the world. Maybach tried the Reitwagen for 3 kilometers along the Neckar River, from Cannstatt to Untertürkheim, at 12 kilometers per hour.

In 1893, the first motorcycle sold to the public was built by the Hildebrand und Wolfmüller motorcycle factory in Munich, Germany. The propulsion system on this motorbike does not use a chain like motorbikes in general. But using the crankshaft (crankshaft) to drive the rear wheels. This motorbike was owned by John C Potter, the first engineer at the Oemboel sugar factory, Probolinggo, East Java, in 1893. He ordered the motorbike himself directly from his factory in Munich. John Potter was recorded as the first person to own a motorbike in Indonesia, which at that time was still under Dutch occupation, and was named the Dutch East Indies.

The development of motorcycles continued even during the periods of World War I (1914-1918) and World War II (1939-1945). At that time motorcycles were made for military purposes. In 1949, Honda produced a motorcycle with a two-stroke engine with a capacity of 98 cc, which was called the Dream or Model D. However, the noisy sound of a two-stroke engine and strong-smelling smoke coming from the exhaust made Honda develop a four-stroke engine. Three years later, in 1951,

Honda produced a motorcycle with a four-stroke engine, the Dream E, with a capacity of 146 cc. In 1952, Honda produced a motorcycle known as the "cub".

In 1955, Suzuki produced a motorcycle with a 125 cc, four stroke, 1 cylinder engine. However, 10 years later, Suzuki has also ventured into two-stroke engines, which is his specialty. At the same time, in 1955, Yamaha produced the YA-1, a motorcycle with a two-stroke engine with a capacity of 125 cc. In 1970, 15 years later, the Yamaha XS-1 was produced, which had a four-stroke engine with a capacity of 650 cc, in a V configuration. Kawasaki only produced its first motorcycle, the B8, in 1961. The motorcycle produced by Kawasaki had a two-stroke engine. with a capacity of 125 cc. In 1973 or 12 years later, Kawasaki produced the Kawasaki Z1, which had a four-stroke engine with a capacity of 900 cc.

It is from the history of this development that until today we can see that in everyday life many people use motorbikes for their activities. Motorcycle sales in Indonesia are currently increasing from year to year. This increase cannot be separated from the role of government, society, and also the automotive industry itself.

Table 1. Development of Motorcycle Sales in Indonesia

| Motorcycle Sales Data |                  |                           |                              |
|-----------------------|------------------|---------------------------|------------------------------|
| Year                  | Number of units) | Enhancement Sales (units) | Enhancement Sale(percentage) |
| 1998                  | 517,914          | -                         | -                            |
| 1999                  | 587,402          | 69,488                    | 13.42%                       |
| 2000                  | 979,422          | 392,020                   | 66.74%                       |
| 2001                  | 1,650,770        | 671,348                   | 68.55%                       |
| 2002                  | 2,317,991        | 667,221                   | 40.42%                       |
| 2003                  | 2,823,702        | 505,711                   | 21.82%                       |
| 2004                  | 3,900,518        | 1,076,816                 | 38.13%                       |
| 2005                  | 5,089,426        | 1,188,908                 | 30.48%                       |
| 2006                  | 4,427,342        | -662,084                  | -13.01%                      |
| 2007                  | 4,688,263        | 260,263                   | 5.88%                        |
| 2008                  | 6,215,865        | 1,527,602                 | 32.58%                       |
|                       | Average          | 569,795                   | 30.50%                       |

Source: various sources

In the table above, it can be seen that motorcycle sales in Indonesia continue to increase. Although there is still a gap for sales to decline as experienced in 2006. Despite a decline in sales in 2006, the average increase in sales per year was 569,795 units or experienced an average increase of 30.50% per year. This increase shows that there are still quite good opportunities in the automotive business, especially motorcycles. Even in the midst of the global financial crisis, national motorcycle sales in 2008 experienced an increase (Republika 22 Jan 2009, p. 22).

Table 2. Growth of Motorcycle Users in Indonesia

| Year | Population | Enhancement (units) | Enhancement (percentage) |
|------|------------|---------------------|--------------------------|
| 1994 | 7,787,720  | -                   | -                        |
| 1995 | 8,784,456  | 996,736             | 12.80%                   |
| 1996 | 10,090,806 | 1,306,350           | 14.87%                   |
| 1997 | 10,808,558 | 717,752             | 7.11%                    |
| 1998 | 12,600,582 | 1,792,024           | 16.58%                   |
| 1999 | 13,053,148 | 452,566             | 3.59%                    |
| 2000 | 13,563,017 | 509,869             | 3.91%                    |
| 2001 | 15,336,872 | 1,773,855           | 13.08%                   |
| 2002 | 18,061,414 | 2,724,542           | 17.76%                   |
| 2003 | 23,312,945 | 5,251,531           | 29.08%                   |
| 2004 | 28,963,987 | 5,651,042           | 24.24%                   |
|      | Average    | 2,117,627           | 14.30%                   |

Source:www.AISI.co.id

From the data in table 2. it can be seen that there is a significant increase for motorbike users. In addition to motorbikes being a cheap transportation alternative, the increase in fuel prices has also been one of the factors for the increasing number of motorcycle users. Consumers judge that using a motorbike will save more fuel costs, so many consumers switch to motorbikes instead of having to use private cars. Currently, the DKI Transportation Agency records, motorbike users reach 5.5 million or an increase of around 300 percent over the last four years as of December 2008.

The high opportunity and potential for the automotive motorcycle market in Jakarta has made motorcycle manufacturers compete to increase their market share through various strategies. These strategies include product innovation, appropriate marketing techniques, offering different value added than usual, and others. One of the most important things before making a product is that producers must know the needs and wants of potential consumers. Based on the background above, this study aims to determine what factors influence consumers to buy a motorcycle.

## 2. RESEARCH METHOD

**Time and place of research.** The research location will be conducted in the South Jakarta area. The consideration for choosing this location is that the authors carry out more activities and educational activities in the South Jakarta area. **Data Collection Methods,** Data is divided into two types, namely primary data and secondary data. Primary data is data that is not yet available so that to answer the research problem, data must be obtained from the original source, while secondary data is data that is already available or has been collected for a previous purpose.

**Sampling method,** the sample can be said to be representative of a population. The population of this study is the area of South Jakarta. Researchers used a sample because researchers have limited manpower, time and costs. The sampling technique will use the non-probability sampling method, namely by using the Convenience Sampling method, which is a method of taking samples from convenience elements, namely those that are the easiest to contact, know, and willing to work with. **Questionnaire Design** Questionnaires are a number of formal written questions aimed at obtaining information from respondents (Bilson Simamora: 2004). This questionnaire was prepared based on the results of observations from the mass media,

**Data Analysis Methods** 1. Descriptive statistics, which is an analytical tool to display the profile of respondents from a study. Descriptive statistics applied in this research is frequency analysis. The purpose of this analysis is to provide an overview of the respondents taken in this study. 2. The reliability test is used to determine the consistency of the measuring instrument, whether the measuring device used is reliable and remains consistent if the measurement is repeated. There are several reliability testing methods including the retest method, the Spearman-Brown halved formula, the Rulon formula, the Flanagan formula, Cronbach's Alpha, the KR-20, KR-21 formula method, and the Anova Hoyt method. 3. Factor analysis is used to reduce variables, of variables that are large in number are changed into fewer variables without reducing the information contained therein. The reduction of this variable is intended so that the variables studied are easy to manage. Questions on the questionnaire will be declared valid if the factor loading is more than 50%. Factor loading is a factor that determines which attribute is included in a factor.

## 3. RESULTS AND DISCUSSION

### General Description of the Research Object

The journey of the automotive world began with two four-stroke engine experts from Germany. Just like the world's first car, the world's first motorcycle was born in Germany in 1885. In 1893, the first motorcycle sold to the public was made by the Hildebrand und Wolfmüller motorcycle factory in Munich, Germany. The development of motorcycles continued even during the periods of World War I (1914-1918) and World War II (1939-1945). At that time motorcycles were made for military purposes. And, at that time, motorcycle manufacturer BSA (Birmingham Small Arms) made 126,000 units of M20 motorbikes for the British Armed Forces.

Table 3. Development of Motorcycle Sales in Indonesia

| Year | Number of units) | Enhancement Sales (units) | Enhancement Sale(percentage) |
|------|------------------|---------------------------|------------------------------|
| 1998 | 517,914          | -                         | -                            |
| 1999 | 587,402          | 69,488                    | 13.42%                       |
| 2000 | 979,422          | 392,020                   | 66.74%                       |
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| 2007 | 4,688,263        | 260,263                   | 5.88%                        |
| 2008 | 6,215,865        | 1,527,602                 | 32.58%                       |
|      | Average          | 569,795                   | 30.50%                       |

Source: various sources

Over the years, production and sales of motorbikes in Indonesia have also increased. Despite the decline in sales in 2006, the average increase in sales per year was 569,795 units or experienced an average increase of 30.50% per year. This increase shows that there are still quite good opportunities in the automotive business, especially motorcycles.

### Reliability Test and Factor Analysis.

#### Reliability Test

Table 4. Reliability Statistics Research Reliability Test

| Cronbach's Alpha | N of Items |
|------------------|------------|
| .901             | 32         |

Source: processed data

The reliability of questions from a study is very important to do. The reliability test is an instrument that can be used to measure the reliability of scaled questions when retesting the same group of respondents. The 32 questions were obtained by the researcher after conducting a pretest on 30 respondents and by reading related references. Based on testing of the 32 questions on the research questionnaire which are the criteria for selecting a motorcycle, it can be seen that the Cronbach's Alpha value is  $> 0.5$ , which is 0.901.

#### Factor Analysis.

Table 5. KMO and Bartlett's Test

| Kaiser-Meyer-Olkin Measures of Sampling Adequacy. |                    |         |
|---|--------------------|---------|
|   |                    | .806    |
| Bartlett's Test of Sphericity                     | approx. Chi-Square | 2.545E3 |
|   | df                 | 325     |
|   | Sig.               | .000    |

Source: processed data

Based on the table Based on the Rotated component matrix table, it can be obtained the results of grouping the attribute variables into six factors, namely the first factor (after-sales), second factor (type and brand), third factor (reference), fourth factor (features), fifth factor (design /model), and the sixth factor (price). From the rotated component matrix table, it can be seen that the distribution of variables is clear and real as well as significant factor loading, factor loading is said to be significant if the minimum factor loading is 50%.

### **Managerial Implications.**

Marketing a product or service is very important for companies so that their products can be recognized and accepted by the wider community. Because of that, many companies continuously promote their products through various kinds of advertising media. However, there are things that are no less important than promotion, namely understanding the needs and wants of consumers. Understanding consumer needs and wants is the basis of marketing activities. A promotion that is carried out on a large scale will not be effective if the product offered does not match what is needed by potential customers. Moreover, because of technological developments, currently the needs and desires of consumers for a product or service are becoming increasingly diverse, and the automotive world is no exception.

The Indonesian automotive world, especially motorcycles, is still continuing to conduct research to always be able to find out what its potential customers need and want. One way is to look at what factors influence consumers in purchasing a motorcycle. This is of course done to maintain the image and assessment of the company, maintain and increase consumer loyalty, and also expand their market share.

In this study, an analysis of the factors that influence consumers in purchasing motorbikes in South Jakarta has been carried out by using 32 question variables. The source that underlies the researchers to make these 32 questions is the result of the pretest to 30 respondents. The results of using these variables create six factors that influence consumers in purchasing motorcycles. These six factors are aftersales factors, type and brand factors, reference group factors, feature factors, design factors, and finally the pricing factor. Companies must pay attention to these six factors in order to compete in the automotive industry, especially the motorcycle industry.

The factor that must also be considered by the manufacturer is the type factor. In this factor, manufacturers must be observant to see what type of machine is suitable for current environmental conditions and can be liked by consumers. Many motorcycle manufacturers are campaigning for the go green program (a program to make the environment cleaner and greener) so that manufacturers produce more motorcycles with 4-stroke engine types with more environmentally friendly technology. For this type of motorcycle, manufacturers must see this as an opportunity to gain a large market share. Manufacturers can make motorcycles of the type needed by consumers today. Researchers obtained data that in February 2009, the best-selling motor scooter at that time was a scooter (matic scooter), more precisely the Yamaha Mio (detik.com).

For brands and experiences using certain brands, manufacturers can create them through increased brand loyalty. Of course there are many ways to increase brand loyalty. One way is to improve service, both before sales and after sales. With good service before and after purchase, it is hoped that consumers will be able to build brand loyalty towards a brand, so that consumers will always be reminded of that brand. The reference group factor is a factor that influences the purchase of a motorcycle. Suggestions from friends, suggestions from family, advertising figures, and also the frequency of advertisements are included in the reference group factor. For this factor, the thing that must be done by producers is to influence the consumer environment, starting from the closest friends, family, advertisements and others.

The types of transmission currently available are manual and automatic (matic). Based on the things mentioned above, scooter sales were the best-selling during February 2009. This can be used as an indication that currently automatic transmissions are quite popular with consumers. But unfortunately the type of motorbike offered for this type of automatic transmission is not far from the scooter. Maybe it's a good idea for manufacturers to try something different than usual, namely to make sport motorbikes with automatic transmissions, such as those produced by the Piaggio manufacturer called DNA 180, but at an affordable price. For this type of manual transmission, the availability of a hand clutch and the number of gearshifts (speed gear) are a consideration for consumers. Although motorbikes with automatic transmission types are increasing in number, but motorcycles with manual transmission types are not necessarily abandoned by consumers. Consumers who will choose a manual transmission motorcycle and have a hand clutch tend to be

men. By taking this into account, producers can make strategies that suit the market situation and consumers.

Aftermarket products to modify motorbikes turn out to be a consideration for consumers in choosing a motorbike. The trend of motorbike modifications in Indonesia is very fast spreading to the regions. Unfortunately this is not responded to by motorcycle companies. What happens is that these small industries or modification specialist workshops are always looking for loopholes to make aftermarket products to modify motorbikes. Industry and modification specialist workshops make products that will be marketed to modification shops so that they can bridge consumers who want to change the standard appearance of their motorcycle to be according to their wishes. The strategy that can be carried out by motorcycle manufacturers is to create a separate department in terms of making aftermarket products to modify motorbikes.

#### 4. CONCLUSION

Based on the preparation, analysis and discussion in this thesis about the factors that influence consumers in buying motorbikes in South Jakarta, it can be concluded that consumers make a decision, of course there are factors that influence it. The results of the factor analysis of the factors that influence consumers in purchasing motorbikes in South Jakarta yield six factors, these factors include aftersales factors, type and brand factors, reference group factors, feature factors. (features), design/model factors, and pricing factors (price). 1. The aftersales factor consists of several attributes, namely, resale price, free periodic service warranty, free periodic service warranty period, machine warranty, machine warranty period, and spare parts. 2. The type and brand factor consists of several attributes, namely, engine type (2 stroke/4 stroke), type of motorbike (duck, scooter, etc.), motorcycle brand, and experience using a particular brand. 3. The reference group factor consists of several attributes, namely trends, suggestions from family, suggestions from friends, advertising figures, and advertising frequency. 4. The feature factor consists of several attributes, namely, engine capacity (cc), type of transmission (manual/automatic), number of gear shifts in manual transmission, and hand clutch in manual transmission. 5. The design/model factor consists of several attributes, namely, the choice of motorbike color, motorbike shape, and aftermarket products to modify motorbikes. The reference group factor consists of several attributes, namely trends, suggestions from family, suggestions from friends, advertising figures, and advertising frequency. 4. The feature factor consists of several attributes, namely, engine capacity (cc), type of transmission (manual/automatic), number of gear shifts in manual transmission, and hand clutch in manual transmission. 5. The design/model factor consists of several attributes, namely, the choice of motorbike color, motorbike shape, and aftermarket products to modify motorbikes. The reference group factor consists of several attributes, namely trends, suggestions from family, suggestions from friends, advertising figures, and advertising frequency. 4. The feature factor consists of several attributes, namely, engine capacity (cc), type of transmission (manual/automatic), number of gear shifts in manual transmission, and hand clutch in manual transmission. 5. The design/model factor consists of several attributes, namely, the choice of motorbike color, motorbike shape, and aftermarket products to modify motorbikes.

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