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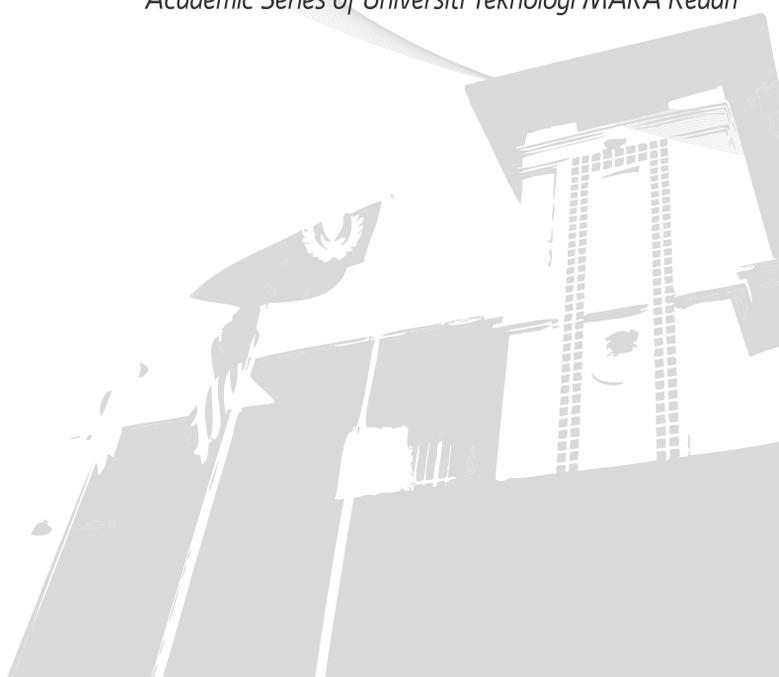
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# Product Quality Dimensions Ranking: The Preference of National Motorcycle Brand Customers

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## ABSTRACT

*This study is about the findings on the perception of the customers towards the quality level of products of a Malaysian national motorcycle/scooter brand based on the eight quality dimensions framework. It helps in generalizing the standing of the product quality attributes among motorcycle/scooter customers in Malaysia which is crucial in determining the factors of selecting motorcycle/scooter products in the market. Large numbers of studies in the past have mentioned consumers' ambiguity about the definition and understanding of quality. Hence, it is difficult to meet the customers' expectation on quality since their understandings is varied and inconsistent. In this study, the result shows that conformance to specification dimension was the highest rating in associating high product quality as compared to the rest. On the other hand, customers have rated special feature dimension as the lowest factor in deciding to purchase the national motorcycle/scooter brand.*

**Keywords:** Aesthetics, Conformance to Specification, Durability, Perceived Quality, Product Quality.

## 1. Introduction

Product quality has a broad definition as it varies either from product to product or product to services. Apart from that, the level of consumer expectation is also one of the factors that could lead to a different level of quality of the same product or services based on the fulfillment of the consumer expectation.

Customers differentiate products based on their expectation of the product characteristic, functions, standard, parameter and nature of the product which would lead to a certain level of expectation towards the product. If the product has succeeded in fulfilling the customers' expectation, then the quality level is higher. However, if the product is performing lower than the consumer's expectation, the level of quality will be perceived as lacking or low. Product quality and the customer's satisfaction and loyalty are significantly related. A good quality product makes customers happy and more inclined to buy again in the future. However, a bad quality product diverts the customers away due to frustration with the past purchase. Nonetheless, the manufacturer or product producer would try to find the best solution to produce products that would meet all the consumer expectations.

Product quality can be defined as "Difference in quality amount to difference in the quantity in the desired ingredient or attributes" (Abbott, 1955, p. 129). It can be analyzed under the concept of two different perspectives; objective quality and perceived quality (Brunso, Bredahl, Grunert, & Scholderer, 2005). The objective to measure the quality is determined by intrinsic and extrinsic attributes. Perceived quality is defined as the consumer's judgment about a product's overall excellence or superiority (Zeithaml, 1988). Thus, consumer perceptions are essential to the definition of the concept of quality. However, the dynamic of the concept should be taken into consideration in defining the quality such as the varying customer's perceptions, additional product information, different type of products and changes in the customers' expectations. (Bello & Gomez, 1996; Zeithaml, 1988). The concept of perceived quality has been classified as extrinsic and intrinsic cues (Szybillo & Jacoby, 1974; Zeithaml, 1988). Extrinsic cues refer to the lower level cues that can be changed without changing the product (e.g. price, brand names, country of origin, product information). Intrinsic cues are higher level cues which are directly related to the product (e.g. colour, flavour form).

Product quality is the most important factor for the selection of each motorcycle brand/model especially in a market environment where the level of competition is intense and price-competitive (Shaharudin, M.R., Hassan, A.A., Mansor, S.W., Elias, S.J., Harun, E.H., & Aziz, N.A., 2010). However, it is difficult to meet the customers' expectation on quality since their understandings is varied and inconsistent. The differences of quality perspectives are pertinent in economic, technological, social and cultural

achievements (Wankhade & Dabade, 2006). Customers are seeking reliable products that suit the purpose and are able to withstand the intended functions. With the increase of customer purchasing power supported by multiple and flexible financing scheme, customers find themselves surrounded with many options to choose from.

This study utilized the eight quality dimensions framework developed by Garvin (1984) as the basis to measure the product quality level. The quality dimensions are performance, features, reliability, conformance, durability, serviceability, aesthetics and perceived quality. Performance refers to the primary operating characteristic, feature is known as a supplement characteristic, reliability is the probability of a product's failing within a specified period of time; conformance refers to internal and external design and operating character match standards. Durability is a measure of product life, serviceability is associated with speed, courtesy and competence of repair, aesthetics refers to look, sound, taste, feeling etc towards a product. The last dimension is perceived quality which refers to the consumer's perception towards reputation of company, brand and etc.

The main objective of this study is to determine the ranking of preference according to the eight product quality dimensions framework. This study will reveal the product quality perception among Malaysians towards the motorcycle/scooter industry.

## **2. Research Methodology**

### **2.1 Research Design**

This research is a quantitative research where sources of information are gathered from questionnaires. The instrument utilized was through the self-administered questionnaire containing enclosed-ended and scales to matrix questions. This study is interested in describing the characteristic of a population or phenomenon, thus the study is a descriptive study. The type of sampling is stratified random sampling with data collected among national motorcycle/scooter brand buyers living at ten towns representing the six segregated districts in Kedah such as Alor Setar, Sungai Petani, Baling, Gurun, Sik, Padang Serai and Pendang. Each location was identified based on the top sales performance by the dealers in the state of Kedah.

The questionnaires were self-administered through mail and personally-administered through interviews with the Malaysian national motorcycle/scooter owners. The survey questionnaire was structured into five separate areas. This structure was established so that the profile of the respondents' were reviewed, along with the respondents' perceived price as the determination of purchase, understanding on quality dimensions, perception towards national motorcycle manufacturer product quality and the purchase decision as a result of the overall perceptions.

As proposed by Krejcie and Morgan (1970), the sample of this study totaled 300 national motorcycle/scooter brand users were taken on a basis of sampling formula of 5% from the estimated 10,000 national motorcycle/scooter brands registered with the Road Transport Department from the year 1996 until 2000 in the state of Kedah. Out of the total population, 116 respondents responded to the research survey. The sample size fits the rule of thumb as proposed by Roscoe (1975), for which sample sizes larger than 30 and less than 500 are appropriate for most research. The scale was piloted amongst a sample of twenty (20) private workers and university students.

### ***2.1 Data Analysis Method***

For the purpose of this study, the researcher used the Statistical Software Package for Social Sciences (SPSS) Version 17 to compute all the data gathered from the questionnaires. The techniques of analysis used in this study were descriptive (mean, standard deviation) and inferential analysis (regression) to sum up the data collected. The questionnaires on product quality were based on the eight dimensions of product quality framework developed by Garvin (1984). Pre- testing of the questionnaire was made during the pilot study.

## **3. Results**

### ***3.1 Pilot Study***

Improvement was made based on the feedback by reducing the Likert scale rating from 1-7 to 1-5 in order to ease respondents' understanding and interpretation of each question.

### 3.2 Response Rate

In this study, 116 responses were received from 300 questionnaires distributed. According to Hussey and Hussey (1997), for mail distribution method, in order to avoid sample bias, response rate should be more than 10 percent. Therefore, as the response, the response rate for this study was 38.7 percent sample bias was avoided and the responses received represent the population adequately and appropriately.

### 3.3 Demographic Profile

The result of the demographic profile shows that majority of the respondents are at the age bracket of 26 to 35 (44%). Private sector workers formed the largest group at 78.4%, followed by government staff (12.9%) and self-employed at 6.9%. Respondents with monthly income less than RM1,000.00 were the largest group at 56.9% and majority of them were out of town residents at 41.4%. The details of demographic information are shown in Table 1.

Table 1: Demographic information of respondents (N=116)

Variable		Frequency	Percentage
Age	18~25	33	28.4
	26~35	51	44
	36~45	22	19
	45 and above	10	8.6
Total		116	100
Employment	Private sector employees	91	78.4
	Government servants	15	12.9
	Self-employed	8	7.0
	Students	2	1.7
Total		116	100
Monthly Income	< RM1,000	66	57
	> RM1,000 < RM2,000	33	28.4
	> RM2,000 < RM3,000	13	11.2
	> RM3,000	4	3.4
Total		116	100
Place of Residence	Out of Town	48	41.4
	Town	39	33.6
	City	29	25
	Total	116	100

### 3.4 Descriptive Analysis

The findings obtained from the questionnaire have been evaluated according to mean (X) and standard deviation (S.D) in order to determine the respondents' score level of quality perceptions towards the national motorcycle/scooter brand. From a five-point scale, the study has taken a position that the highest score indicates the highest ranking and the lowest score represented the last ranking preferred by the customers. On the other hand, the result between the two extremes indicated the order of ranking sequence of relative importance on a decreasing basis.

In Table 2, the mean and S.D. values of the respondents' opinions about perceptions of quality are shown, the mean values vary between 3.63 and 4.58 and the mean of these values (overall mean) is 4.02.

Table 2: The distribution of the respondents' opinions about perceptions of quality

	Items	Mean	S.D.
V1	Performance	4.11	0.9
V2	Reliability	3.81	1.1
V3	Durability	3.72	1.0
V4	Conformance To Specification	4.58	1.0
V5	Perceived Quality	3.77	1.0
V6	Serviceability	4.38	1.0
V7	Aesthetics	4.13	0.9
V8	Special Features	3.63	1.0
	Total	4.02	0.9

Based on the result, respondents have ranked the Conformance to Specification (V4) as the highest with a mean score of 4.58. This is followed by the second ranking, Serviceability (V6) with mean score of 4.38. The third ranking is the perception towards Aesthetics (V7) with mean score of 4.13. The fourth ranking is Performance (V1) with mean score of 4.11. The fifth

choice of the respondents is Reliability (V2) with mean score of 3.81. The sixth and seventh rankings are the perception towards Perceived Quality (V5) and Durability (V3) with mean score of 3.77 and 3.72 respectively. Special Features (V8) towards national motorcycle/scooter brand product is in the last position with mean score of 3.63.

#### 4. Conclusions

From the findings, it can be concluded that the product quality ranking preferred by the national motorcycle/scooter brand customers are as follow:

1. Conformance to Specification
2. Serviceability
3. Aesthetics
4. Performance
5. Reliability
6. Perceived quality
7. Durability
8. Special features

Generally, the interpretation that can be made from the result is Conformance to specification dimension in product quality is the most important factor that the customers are concerned about in choosing the national motorcycle/scooter brand product. Furthermore, Serviceability and Aesthetics are the second and third priorities to the customers. Performance is in the fourth, Reliability is in the fifth, Perceived quality is in the sixth and Durability is in the seventh ranking. However, Special features is the last choice by the customers as compared to the rest of the product quality dimensions indicating that the customers place the least importance on on this criterion in deciding to purchase the national motorcycle/scooter brand product.

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