

**Conference Paper No: MF-03**

**Perceived value analysis of motorcycles in Sri Lanka**

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**Abstract**

The motorcycle is the vehicle with highest demand in Sri Lanka. Motorcycle usage in Sri Lanka is expanding rapidly over the years primarily due to its affordable price range. Customer perception refers to the customer's opinion of the service/product and evaluates through perceived value analysis. It is important to know the relationship between the price of motorcycles and customer perceived value of motorcycles for decision-makers in the automotive industry. The objectives of this study are to identify the attributes which are most important in formulating the customer perception towards motorcycle prices, identify the relationship between the price and customer perception of the motorcycles and calculate the perceived value for each motorcycle model under consideration. A total of 1117 customers were used to generate data with respect to 21 motorcycle models. Non-probability sampling techniques were applied in the market survey, that gathered data on customer opinion on attributes such as brand, appearance, features, fuel efficiency, resale value, after-sale services, and suitability for road. were identified as the important attributes in formulating the customer perception towards motorcycle prices. Perceived value for each Commuter Standard, Commuter Deluxe, Sports Classic and Sports Premium motorcycle models were calculated by using the weightage of each attribute and rank of motorcycles. According to the Pearson correlation coefficient, there is a positive relationship between the actual price and the perceived value of motorcycles. Therefore, this analysis helps to understand purchasing decisions of customers and industry players can use this information for adjusting their pricing strategies against the market competition.

**Keywords**

Customer perception, Perceived value analysis, Prices of motorcycles

**Introduction**

The motorcycle is the best-selling vehicle in Sri Lanka according to the data of the Ministry of Transport, Sri Lanka. (Ministry of Transport) Sri Lankan automobile companies import a diverse range of motorcycles from different countries. Competition between motorcycle companies would be beneficial to customers themselves on one hand. In the automobile industry of Sri Lanka, customers have access to a wide variety of product choices at different prices and qualities. Therefore, the knowledge of customer's opinions on motorcycles is important in attracting new customers, retaining existing customers as well as maintaining the survival of the automobile companies.

Customer perception refers to the customer's opinion of the service/products. This explains the customer's feeling about the service/product including direct and indirect experiences of the customer. Companies can recognize common user-specific problems and attract customers by analyzing consumer perceptions. Customers' total appraisal of the product is based on impressions of what is received and what is given, and this is known as perceived value (Zeithmal, 1988). Customer value can be defined as a

customer's perception and evaluation of product attributes, attribute performances, and use consequences that help the customer to achieve their objectives (Woodruff, 1997). According to Jansri, 2018 scholars should focus further on consumer behavior when studying on perceived value. Perceived value is a vital aspect of marketing and it can be used for the long-term success of businesses. Simply, the perceived value shows the interaction between the customer and the product.

Sri Lankan consumers pay their attention to some of the attributes before buying a motorcycle. Especially the Motorcycle brand, style and also accessories of the motorcycle are affected to the customer perception (Weerasiri & Mendis, 2015). The manufacturing country of the motorcycle is another main factor according to the views of subject expertise in automotive industries.

The main objectives of this study are to identify the attributes which are most important in formulating the customer perception towards motorcycle prices, identify the relationship between the price and customer perception of the motorcycles and calculate the perceived value for each motorcycle model. Calculating the perceived value for each motorcycle brand and analyzing perceived value will be most important because it is useful for the decision-makers of the automotive industry in Sri Lanka.

Many researchers have studied customer perception. Weerasiri & Mendis, (2015) examined the factors which affect the purchasing decision for Indian two-wheelers in the Sri Lankan market. The researcher employed six variables namely price, technology, and design, product awareness, spare parts availability, after-sales services, and economic conditions. According to the correlation analysis of this study, it was revealed that there is a significant relationship between each independent variable namely price, technology, and design, economic condition, product-related awareness, after-sales services, spare parts, and consumer buying intention towards the Indian two-wheelers. According to the results of this research, there was a strong, positive, linear relationship between those variables and the consumer preference towards the Indian two-wheelers.

Dr.Khoso, Dr.Kazi, Dr.Ahamedai, & Memon, (2016) have examined the factors which affect customer preference/purchase decision for motorcycle brands in Hyderabad. They have used a survey method and a questionnaire was used to collect the primary data about the customer preference for motorcycle brands. They have employed quantitative methods for collecting data on factors that influence an individual's decision to purchase a particular brand of motorcycle. The researchers identified the internal factors such as family, personal consciousness of brand (brand perception), friends and peer advice, word of mouth, occupation and previous experience, and external factors such as price affordability, quality, mileage, maintenance cost, style are affected to the customer preference for motorcycle brands.

Ramana & Dr. Subbaiah, (2013) conducted a study on consumer's perception towards the purchase decision of two-wheeler motorcycles in Nellore District, Andhra Pradesh. They have examined the factors which affect customer perception. The main objectives of the research were identifying the relationship between the current brand of the motorcycle being used by respondents and demographic characteristics of consumers and analyzing the factors/attributes influencing the purchase decision of motorcycle users while making the purchase decision. The researchers analyzed the data by using percentages, factor analysis, and ANOVA. The conclusion of this research is producers and marketers should pay more attention to those factors which connect to the buyer and influence their

purchase decision, consumers give importance to the style, promotional offers, price, capacity of engine, maneuverability, fuel economy, service availability, maintenance cost, brand ambassador.

Although several studies have conducted perceived value analysis on motorcycles an updated analysis of the area is important in the Sri Lankan context.

## Methodology

One thousand one hundred and seventeen samples were used for this research representing 21 motorcycle models. Through a market survey, Brand, Appearance, Features, Fuel Efficiency, Resale Value, After-Sale Services, and Suitability for Road of motorcycles were identified as the important attributes in perceived value analysis, and ranks of each factor were obtained (as 1 being the most important) 21 number of motorcycles which are most demanded models in Sri Lankan automotive market were chosen, which were divided into four categories namely commuter standard, commuter deluxe, sports classic, and sports premium after discussing with a subject matter specialist. For each motorcycle category, the variable weights were revealed using customer perception data. Commonly factor analysis is used to reduce a large number of variables into fewer numbers of factors. In this study, factor analysis was used to extrapolate the weightage of each variable. The principal component technique was used for the factor analysis as the extraction method. The perceived value for each motorcycle was calculated by using the weightage and percentage of rating across the competition. The following equation was used to calculate the perceived values.

$$\sum_{i=1}^n \text{Weightage}_i (\text{Motorcycles Rating as a Percentage}_i)$$

Where,  $i = 1, \dots, n$

$n$  is the number of attributes/features we used. The rating across competition of motorcycles for each variable is defined by the subject expertise of the automotive industry in Sri Lanka. The Person correlation was used to determine the relationship between actual motorcycle prices and perceived values.

## Results and Discussion

The results of factor analysis were shown in Table 1.

**Table 1.** Weightage of variables.

Variables	Weightage			
	Commuter Standard	Commuter Deluxe	Sports Classic	Sports Premium
Appearance	2%	2%	11%	4%
Features	6%	13%	1%	3%
Fuel Efficiency	10%	11%	11%	13%
Resale Value	11%	16%	15%	13%
Engine Power	37%	9%	17%	42%
After Sales Service	18%	18%	20%	20%
Suitability for Roads	16%	31%	25%	5%

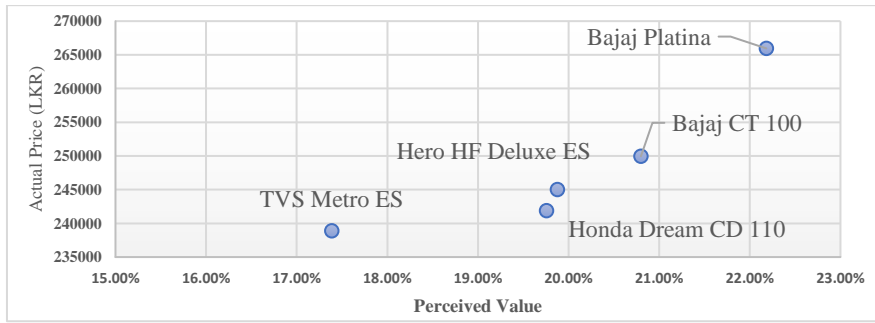
Table 1 shows that the weightage of the factors for each Motorcycle Category. The highest weight percentage belongs to the Engine Power than the other factors for Commuter Standard and Sports Premium motorcycle categories (37% and 42%). Commuter Deluxe and Sports Classic motorcycles have the highest weight percentage for Suitability for Roads (31% and 25%). According to Table 1, 2% of the minimum weight percentage belongs to the Appearance for Commuter Standard and Commuter Deluxe motorcycles. Sports Classic motorcycles and Sports Premium motorcycles have the minimum weightage for Features.

The perceived value for each motorcycle was calculated according to each motorcycle category.

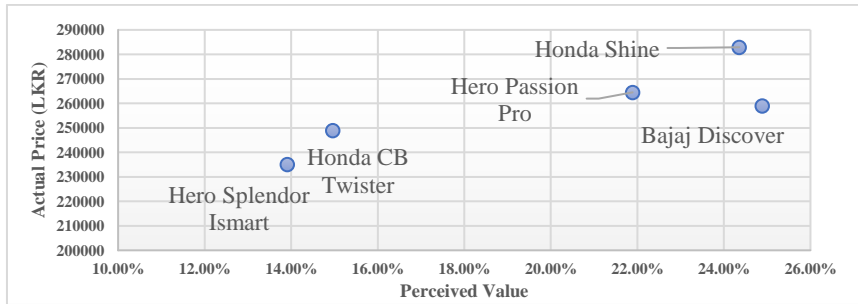
**Table 2.** Perceived Values and Actual Prices of Motorcycles.

	<b>Model</b>	<b>Perceived Value</b>	<b>Actual Price (LKR)</b>
Commuter Standard	Honda Dream CD 110	19.76%	241900
	Bajaj CT 100	20.80%	265950
	Hero HF Deluxe ES	19.88%	245000
	TVS Metro ES	17.39%	238900
	Bajaj Platina	22.18%	249950
Commuter Deluxe	Bajaj Discover 110	24.89%	258950
	Hero Splendor I smart	13.91%	235000
	Hero Passion Pro	21.89%	264500
	Honda Shine	24.36%	282900
	Honda CB Twister	14.96%	248900
Sports Classic	TVS Apache 150	18.46%	358900
	TVS Apache 180	19.67%	413500
	Bajaj Pulsar 135	15.73%	307950
	Bajaj Pulsar 150	31.54%	371950
	Bajaj Pulsar 180	37.32%	410950
Sport Premium	Bajaj Avenger	15.65%	429950
	Yamaha FZ S-V2	21.86%	452900
	Suzuki Gixxer	15.47%	443900
	Honda CB Hornet	14.10%	399900
	Hero Hunk	12.15%	385000
	Bajaj Pulsar 200	20.77%	488950

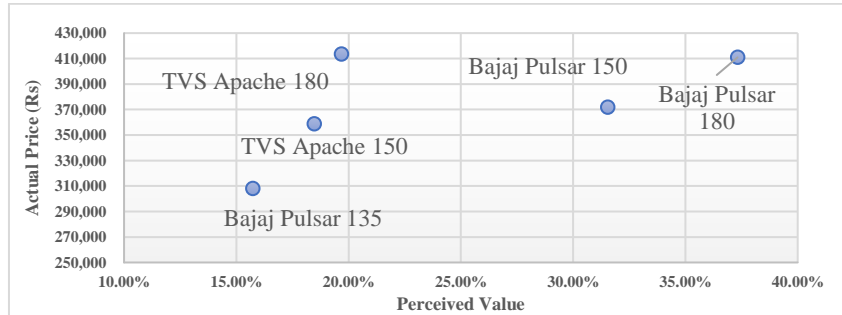
Table 2 illustrates that the calculated perceived value of motorcycles and their actual prices. The motorcycles are categorized into four categories and the highest perceived value belongs to Bajaj Discover 110 motorcycle.



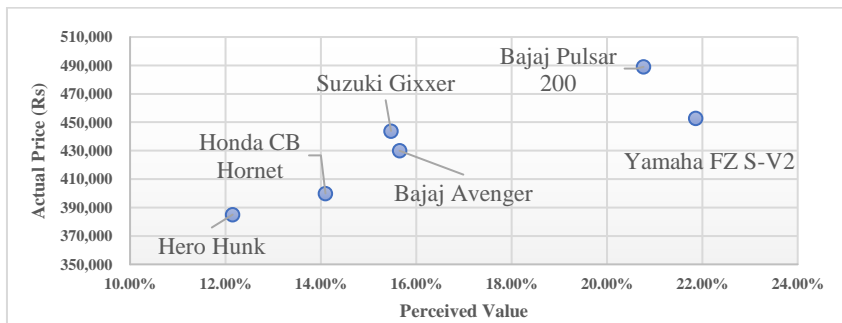
**Figure 1.** Graph of Perceived Value Vs Actual Price for Commuter Standard Motorcycles.



**Figure 2.** Graph of Perceived Value Vs Actual Price for Commuter Deluxe Motorcycles.



**Figure 3.** Graph of Perceived Value Vs Actual Price for Sports Classic Motorcycles.



**Figure 4.** Graph of Perceived Value Vs Actual Price for Sports Premium Motorcycles.

Figure 1, Figure 2, Figure 3, and Figure 4 shows that the motorcycle's perceived value increasing, then the actual price also generally increasing for all motorcycle categories.

**Table 3.** Pearson correlation coefficient between perceived value and the actual price for each motorcycle category.

Motorcycle Category	Pearson Correlation Coefficient
Commuter Standard	0.6
Commuter Deluxe	0.8
Sports Classic	0.6
Sports Premium	0.9

According to the Pearson correlation coefficient Commuter, Standard, and Sport Classic motorcycle's actual prices have a moderate positive relationship with the perceived value. Commuter Deluxe and Sports Premium motorcycle's actual price have a fairly positive relationship with the perceived value of each motorcycle.

### Conclusion

The relationship between the price of motorcycles and customer perceived value of motorcycles is important for decision-makers in the automotive industry. The objectives of this study are to identify the attributes which are most important in formulating the customer perception towards motorcycle prices, identify the relationship between the price and customer perception of the motorcycles and calculate the perceived value for each motorcycle model in the study. Through a market survey, Brand, Appearance, Features, Fuel Efficiency, Resale Value, After-Sale Services, and Suitability for Road were identified as the important attributes in formulating the customer perception towards motorcycle prices. Factor Analysis was used to assign a weight for each attribute of each motorcycle category and the Principal Component analysis was used to obtain the weight using the Extraction sums of squared loadings for each attribute. The highest weights for the Commuter standard and Sports premium categories were assigned for the attribute of 'Engine power' which were 37% and 42% respectively. It is for Commuter deluxe and Sports classic were 31% and 25% respectively by recording the attribute 'Suitability for roads'. Perceived value for each Commuter Standard, Commuter Deluxe, Sports Classic and Sports Premium motorcycle models were calculated by using the weightage of each attribute and rank of motorcycles. The Pearson correlation coefficient is calculated between the actual price and perceived value for each motorcycle category. The correlation coefficients were 0.6, 0.8, 0.6, and 0.9 for Commuter Standard, Commuter Deluxe, Sports Classic, and Sports Premium categories respectively. There is a moderate positive relationship between the actual price and perceived value of the Commuter standard and Sports classic motorcycles and a fairly strong positive relationship between the Commuter deluxe and Sports premium motorcycles.

All the objectives of the study are accomplished and this analysis helps to make purchasing decisions of customers and industry players can use the results of this study to adjust their pricing strategies against the market competition. Further, the authors strongly believe that this study will provide a guide for further studies on perceived values analysis of motorcycles.

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