Riding on Perceptions: Decoding Customer Choice Dynamics across the Two-Wheeler Industry Landscape

Subhadipto Pal [1]

[1] Faculty of Management Studies, Dr. B.C. Roy Engineering College, Durgapur, West Bengal, India.

Abstract

This research investigates the trends of customer perception in three of the leading two-wheeler brands—Yamaha, Bajaj, and TVS—that compete in the motorcycle market in India, specifically in Durgapur, West Bengal. This study examines customer perception using a two-way ANOVA without replication methodology across four essential purchase dimensions—mileage, price, variant availability, and colour. In the analysis of the customer experiences, the data indicated statistically significant perceptual differences across brands, with mileage demonstrating significant difference at the 0.10 level with respect to perceived fuel efficiency, with Yamaha (50.05 km/l) having significantly more mileage perception compared to Bajaj (43.72 km/l) and TVS (41.5 km/l). The analysis also indicated that there are no statistically significant differences in customer perception across price, variants, or colour; suggesting that price point, variants, and colour function in a market with little perceptual differences. These explore how customer migration will remain driven by mileage and that other traditional purchase dimensions will have significant parity across brands in the competitive two-wheeler market. The study develops a better understanding of how customer perception trends informs brand preference and competitive advantage, while providing manufacturers tangible options to develop stronger marketing strategies and product development in an increasingly competitive marketplace.

Keywords: Customer perception, Two-wheeler industry, Brand positioning, Purchase behavior, Consumer preferences, Brand differentiation, Competitive strategy.

Introduction

The bike industry has experienced significant growth and innovation over the years, with a wide range of options available to consumers today. As a result, understanding and studying the influence of customer perception has become crucial for companies operating in the bike industry. Customer perception refers to how individuals perceive and interpret the various attributes, features, and qualities associated with a particular product or brand.

In the context of the bike industry, customer perception plays a pivotal role in shaping consumer behaviour, purchase decisions, and brand loyalty. When consumers consider purchasing a bike, their perception of factors such as quality, design, performance, brand reputation, price, and overall value greatly influences their decision-making process. Therefore, it becomes imperative for companies within the bike industry to comprehend and analyse customer perceptions to align their marketing strategies, product development, and customer service efforts effectively. Studying customer perception in the bike industry entails investigating several key aspects. Firstly, it involves understanding how customers perceive different brands within the market. Brands often develop unique identities and associations that can evoke specific emotions and attitudes in consumers. By examining customer perceptions of different bike brands, companies can gain insights into the strengths, weaknesses, and distinct characteristics that shape customer preferences. Secondly, the study of customer perception involves exploring the impact of product attributes and features on consumer decision-making. Bikes come in various types, such as mountain bikes, road bikes, electric bikes, and more, each catering to different consumer needs and preferences. Analysing how customers perceive these attributes, including durability, performance, comfort, aesthetics, and technological advancements, can provide valuable information for bike manufacturers to enhance their product offerings and meet customer expectations more effectively.

Review of Literature

This literature review aims to examine the influence of customer perception on the bike industry. With the growing popularity of biking as a mode of transportation and recreational activity, understanding how customer perceptions shape their choices and preferences is crucial for businesses operating in the bike industry. This review synthesizes and analyses relevant studies to explore various aspects of customer perception, including brand image, product quality, pricing, and customer satisfaction. Muniganti Praveen (2015) reveals that transportation needs are becoming more and more acute. With the mounting pressure on the public transportation system, the best available solution is to have personal transportation for which two wheelers are ideal. Therefore, the two-wheeler manufacturers should manufacturer their products suited to the needs/preferences of the consumers. In simple terms the fortunes of many a producer will be decided by the emerging consumer preferences for vehicles offering high fuel economy and low maintenance.

Kotler (2016) in their seminal work on marketing management argued that customer perception represents an essential filter through which consumers engage with product attributes, brand communications, and value instruments. The authors argue that perception is not simply about receiving

stimuli, but engages the process of selecting, organizing, and interpreting the stimulus which affects the eventual purchase decision. Kotler's (2016) formulation, when applied to customers in the two-wheeler marketplace, would suggest that customers' perceptual processes create distance between brand preferences and their eventual buying behavior. Schiffman (2010) also enhanced the understanding of consumer behavior when they emphasized how perception is an intrinsically individual and subjective phenomenon, governed by prior experiences, personal needs, and expectations. Schiffman's research showed that two consumers exposed to the identical marketing stimulus may hold dramatically dissimilar perceptions, dependent on their psychological predispositions. This is particularly pertinent for the bike market where brand image and emotional connection have significant impact on purchase decisions.

Aaker (1991) was the first to introduce the notion of brand equity and showed that brand associations create value in the customer's mind. Aaker's brand equity dimensions—brand awareness, perceived quality, brand associations, and brand loyalty—provide a meaningful framework for examining customer perceptions in the motorcycle industry. Other research has noted that strong brand equity has a direct association with being able to charge premium pricing and overall market share. Rajput et al. (2012) conducted primary research on the two-wheeler market in India and noted that brand image influences purchase intentions, influenced by aspects such as reliability and fuel efficiency perceptions and social status or fashion icons. Their research noted that customers often develop brands preferences without taking into account the actual technical specifications as a means of managing perception. Jain (2013) also completed primary research comparing customer perceptions among major motorcycle brands in India. The research noted significant differences in perceptions based on whether the brand was domestically or foreign owned or the price positioning and demographic segments. Their study note those perceptual advantages in certain attributes (for example, Hero was stronger than others in the perception of fuel efficiency or Royal Enfield in perception of style) create sustainable competitive advantages.

Mangold (2009) looked at the influence of social media on brand perceptions and found that user-generated content and peer reviews materiality to perception formation, sometimes even more than traditional advertising. In today's bike market, online reviews, YouTube comparison videos, and conversations on social media influence perceptions to ever-greater extents. Hajli (2014) studied social commerce and clarified how social media interaction builds trust and impacts purchase intentions. For bike manufacturers, managing online perception, through digital interactions, social media influencer collaborations and customer service, is fast becoming a key action point for perception management.

Research Objectives

- To identify the factors influencing customer buying perception towards Yamaha, Bajaj, and TVS bikes.

- To analyze the preferences of customers regarding Mileage, Price, Variant and Colour.

- To determine the overall customer satisfaction and loyalty towards the respective bike brands.

- To provide recommendations for the improvement of the marketing strategies of these bike manufacturers.

Research Gap

Over the last few decades, the two-wheeler industry has undergone an exceptional transformation, with the competition between manufacturers becoming extremely intense as they seek to stake their claim for market share through technological innovation, brand positioning and enhancement of the overall customer experience. While previous literature has looked at consumer behavior in purchasing automobiles, brand loyalty mechanisms, and quality perceptions separately, much less has been published specifically examining how customer perceptions comparatively shape preferences across bike manufacturers in the same competitive environment. Instead, most studies have looked at one-of-a-kind brand or have considered generic consumer behavior studies where perceptual differences to purchase one bike brand from another has not been investigated, especially within context of an increasingly crowded marketplace.

Research Methodology

This study seeks to explore customer buying perception of bikes made by Yamaha, Bajaj, and TVS in Durgapur. The research is aimed at understanding the elements that contribute to a customer's purchasing decision, preference, and perception of the brands. To conduct the research, qualitative research methodology will be utilized to collect data and develop meaningful insights. Secondary data will be collected from various sources, including but not limited to industry reports, bulletins, newspapers, journals, company websites, and former studies.

Data Analysis

This research investigates customers' purchasing perception among three major motorcycle brands - Yamaha, Bajaj, and TVS - based on four key factors: Mileage; Price; Variant; and Colour. Two-way ANOVA without replication was used as a statistical tool to assess the perceptions of customers with respect to brands and motorcycle models at a significance level of 10%.

Mileage Analysis

Table 1: Data Summary

Motorcycles	TVS	YAMAHA	BAJAJ
A	45	48	46
B	39	56.87	47
C	40	50.33	41
D	42	45	40.87

Table 2: ANOVA Results of Mileage.

Source of Variation	SS	df	MS	F	P-value	F crit
Rows (Motorcycles)	47.319	3	15.773	1.162	0.399	4.757
Columns (Brands)	157.494	2	78.747	5.801	0.040	5.143
Error	81.455	6	13.576	-	-	-
Total	286.267	11	-	-	-	-

The Two-way ANOVA of Table 1 & 2 provides meaningful evidence concerning mileage perception. The p-value for rows (motorcycles) is 0.399 which is greater than the 10% significance level, indicating no significant difference in mileage perception among the four motorcycle models within each brand. The p-value for columns (brands) is 0.040 which is less than the 10% significance level and indicates that there is significant variation in the mileage perception among the three brands. The overall average mileage for Yamaha is 50.05 km/l, Bajaj is 43.72 km/l, and TVS is 41.5 km/l which demonstrates that a variance in mileage perception remains a differentiating factor for brands in customer perceptions of motorcycles, with Yamaha reflecting a favorable differentiation when considering fuel efficiency.

Price Analysis

Table 3: Data Summary

Motorcycles	TVS (Price)	YAMAHA (Price)	BAJAJ (Price)
A	1.23	1.37	1.23
B	1.42	1.36	1.05
C	1.49	1.54	1.25
D	1.31	1.21	1.40

Table 4: ANOVA Results of Price Analysis

Source of Variation	SS	df	MS	F	P-value	F crit
Rows (Motorcycles)	0.046	3	0.015	0.833	0.523	4.757
Columns (Brands)	0.048	2	0.024	1.301	0.339	5.143
Error	0.110	6	0.018	-	-	-
Total	0.204	11	-	-	-	-

The price analysis in Table 3 & 4 is consistent across both dimensions. We fail to reject the null hypothesis for motorcycles, with a p-value of 0.523, and brands, with a p-value of 0.339 - both statically above the 10% significance level. This indicates relative uniformity in price perception among the three brands: average prices of ₹1.36 lakh for TVS, ₹1.37 lakh for Yamaha, and ₹1.23 lakh for Bajaj. The low variation of prices (ranging from 0.009 to 0.039), suggest that all three companies produce products creating relatively similar price perception, rendering price a non-factor in use perception between the company brand in the category.

Variant Analysis

Table 5: Data Summary (Variant in Numbers)

Motorcycles	TVS	YAMAHA	BAJAJ
A	5	2	2
B	2	2	2
C	3	1	2
D	2	2	2

Table 6: ANOVA Results of Variant

Source of Variation	SS	df	MS	F	P-value	F crit
Rows (Motorcycles)	2.25	3	0.75	1.00	0.455	4.757
Columns (Brands)	3.50	2	1.75	2.333	0.178	5.143
Error	4.50	6	0.75	-	-	-
Total	10.25	11	-	-	-	-

In Table 6, the variance analysis produced p-values of 0.455 and 0.178 for motorcycles and brands, respectively, which are both above the 10% alpha-level, which will result in the null hypothesis being accepted. TVS has the greatest number of variants on offer at an average of 3 per model, while Yamaha and Bajaj average 1.75 and 2 variants, respectively. The results of the statistical analysis show that while TVS has a slightly larger offering of variants, the statistic outlined that the availability of variants, will not contribute to consumers 'perceptual attitude' differences towards the brands. The conclusion suggests that the consumers in this study, amongst the company and motorcycle models, did not see validated meaningful differences in product diversity as a factor of tension in the consumer decision making process.

Colour Analysis

Table 7: Data Summary in Numbers

Motorcycles	TVS	YAMAHA	BAJAJ
A	6	4	4
B	2	6	6

Motorcycles	TVS	YAMAHA	BAJAJ
C	6	2	6
D	7	8	6

Table 8: ANOVA Results of Colour

Source of Variation	SS	df	MS	F	P-value	F crit
Rows (Motorcycles)	12.25	3	4.083	0.961	0.470	4.757
Columns (Brands)	0.50	2	0.25	0.059	0.943	5.143
Error	25.50	6	4.25	-	-	-
Total	38.25	11	-	-	-	-

Among the tested factors, colour analysis exhibits the highest p-values: 0.470 for motorcycles and 0.943 for brands, both of which are well above the 10% significance threshold. The null hypothesis is accepted, reflecting no substantial perceptual difference when assessing colour options. The average colour options were nearly the same for each of the three brands: 5.25 for TVS, 5.0 for Yamaha, and 5.5 for Bajaj. The p-value for brands (0.943) suggests that colour variety is one of the purchasing aspects that is comparably homogenous in decision-making for each of the three potential manufacturers—that is, it was the least differentiating among the four variables assessed in the research.

Managerial Implications

The results of this study provide a few strategic implications for two wheeled OEMs fighting for market share in highly competitive categories. First, the perceptual difference in mileage efficiency is significant and highlights the importance of fuel economy as a key consumer value proposition. Yamaha's position on this attribute is a prime example of how technical performance attributes can offer unique, sustainable competitive advantages through a cost structuring lens. It would be prudent for OEMs to consider engineering value innovations that lead to improved fuel efficiencies and equally consider how to effectively communicate those advantages in value propositions with notable cost sensitive consumers. Second, given the high end perceived price differences across CPO brands this study supports that pricing strategies alone cannot suffice in firm differentiation in the two wheeled market. Businesses must stop just focusing on competing on price, and instead offer distinctive value

propositions in terms of exceptional after-sales service, brand-related experiences, and emotional connections with customers. Third, the differentiation in variant and colour availability is a sign that the market has likely reached product diversity saturation, therefore simply expanding product lines will not likely significantly shape customer preferences. Manufacturers should instead prioritize meaningful innovation - whether in electric mobility solutions, connected vehicle technologies, and/or expanding safety features - that meets evolving customer expectations. Finally and in consideration of the influence of digital social media and social commerce tools noted in the review of the literature in Chapter 2, brands need to make more strategic investments in curating and managing perceptions online, partnering with credible influencers, and creating authentic opportunities for customer engagement that build trust and generate positive experiences related to the brand beyond attributes of traditional product marketing.

Limitations of Research

While this research provides meaningful insights into the dynamics of customer perception, there are a few limitations that should be acknowledged. First, the scope of the study is limited to a specific geographic area (i.e., Durgapur of West Bengal), which may potentially restrict the generalizability of the study's findings to other regions of distinct socio-economic, cultural preferences and market maturity. Note that customers from metropolitan cities and rural markets may demonstrate different customer perceptions. Second, the study considers only three brands (i.e., Yamaha, Bajaj and TVS), implying that other major Indian two-wheeler brands, such as Hero, Honda and Royal Enfield, will not be analyzed in addition to the competitors of the limited scope of the study is regional. Third, the study estimates the outcome of four product attributes (i.e., mileage, price, variant and colour), limiting its ability to estimate the outcomes of extraneous factors that may have impacted customer perception. The extraneous attributes that may impact perception includes brand equity, quality of service after purchase, technological elements, aesthetics and aftermarket brand associations. Fourth, the method uses secondary data as its main source, potentially failing to capture current customer sentiments, changing preferences, or subjective experiential factors that can be captured through primary surveys or interviews. Fifth, the study uses a 10% significance level which is more liberal than the normal 5% cutoff and thus potentially increases the likelihood of Type I errors. Finally, this research is cross-sectional in nature and does not capture the change in customer perceptions, shifts in the market, or competitor's actions that can all pivotally alter brand positioning over time.

Conclusion

The research provides empirical evidence that mileage efficiency is still the most important factor in influencing customer perceptions and purchase decisions in the highly competitive two-wheeler market, while price, variants and colours of motorcycles has achieved comparable perceptual quality among leading brands. The regression analysis indicates that Yamaha has created a notable perception advantage in fuel mileage efficiency which acts as a differentiated competitive advantage in a market where operational costs impact consumer decisions with higher considerations. The finding that brand price perceptions do not vary significantly even when prices differ suggests that consumers evaluate value as a whole rather than just price alone, implying that perceived quality and brand equity are important factors in purchase decisions. The consistency in customers' perceptions of variants and colours across brands indicates that these aspects have also reached maturity, and manufacturers have largely standardized products to satisfy basic consumer needs, rendering them ineffectual means of competition. These findings place a challenge on manufacturers to extend their thinking beyond normative product differentiation and innovate in areas that matter to customers, namely, fuel efficiency, technology and value in experience. The two-wheeler industry is likely to continue to evolve within the parameters of emerging trends within the two-wheeler industry and, more broadly, urban transportation such as electric mobility, connectivity and changed user patterns. Understanding the means for managing customer perceptions seriously will only become more critical for product and competitive advantage.

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