

# Analyzing Consumer Trends and Preference in Heavy Commercial Vehicle Purchase

Jayanth kumar R<sup>1</sup>, Dr.R Abirami<sup>2</sup>

<sup>1</sup>MBA Student, School of Arts, Humanities and Management, Jeppiaar University, Chennai, India.

<sup>2</sup>Associate Professor, School of Arts, Humanities and Management, Jeppiaar University, Chennai, India.

## ABSTACT

The main objective of this study is to determine consumer preferences while buying Heavy Commercial Vehicles, considering different attributes like Mileage, Performance, Serviceability, Resale Value, Availability of Spare Parts, Comfort, Technology, Discounts, and Down Payment. The study also aims to determine which of these attributes play the most important role in increasing the sales of the company. The study was carried out for a duration from feb to march 2025 using primary data collected from the participants based on a properly structured questionnaire. The research focused on Heavy Commercial Vehicle buyers in Madurai. Simple Random Sampling was used, and hence the sample size came out to be 343 respondents. The data were processed by percentage analysis, correlation analysis, and regression analysis through the SPSS software. The results showed that consumer trends and preferences have a positive effect on the factors that create confidence in increasing company sales. In particular, the factors of loading capacity, performance, safety, resale value, serviceability, and warranty were shown to have an important effect on the preference for Heavy Commercial Vehicles.

## INTRODUCTION

Consumer preferences are the personal tastes and subjective judgments of various combinations of goods, evaluated using the utility concept. Preferences make consumers rank these combinations according to the amount of satisfaction generated by their consumption. Note that preferences do not depend on income level or price; the purchasing power of an individual does not determine what they like or dislike. Consumer tastes are the foundation of consumer demand. Pricing, consumer response to price, willingness to pay, and general profitability all depend on an ultimate understanding of consumer behavior.

For heavy commercial vehicle preferences, the consumers make choices based on an array of variables that suit their needs. Among the considerations involved in the purchase of a heavy commercial vehicle could be service quality, delivery schedules, customizing features, effective relationship building, ease of accessibility, comfort, availability of the vehicle, implementation of the newest technology, and resale value. These factors greatly affect consumer preference in the heavy vehicle segment.

## LITERATURE REVIEW

**Arjun Chowdhri (2006)** described that commitment to brand influences purchasing decisions by the consumers. **Ali Nasr Esfahair (2012)** researched on the psychological forces which have an influence on consumers' buying behaviors. **Timothy J. Ross (2010)** put forth fuzzification and defuzzification processes for better determination of significant problems through suitable balancing of multiple

parameters. **Zeenat Ismail et al. (2012)** carried out a comparative analysis of global brand and local brand consumer preferences, with the intent to reveal purchasing behavior patterns. Their research stated that the first factors influencing the final decision of a consumer are the price and quality of a product. **Mandeep Kaur and Sandhu (2006)** researched the identification of the most crucial features that the consumers look at while buying a new car.

The poll showed that comfort and safety were considered the most important qualities, after luxury. **Satya Sundaram (2008)** analyzed how competition forces auto makers to launch at least one new model or variant every year. The research also reflected on the increasing demand for diesel cars in India, citing government cuts in excise duties as factors to the increased demand. **Clement Sudhakar and Venkatapathy (2009)** examined the role of peer groups in car buying in Coimbatore District and found that friends play a more significant role in the purchase of small and mid-sized vehicles. **Schiffman and Kanuk (1997)** have conceptualized consumer behavior as the investigation of the process when people choose, buy, use, or dispose of products, services, ideas, or experiences to satisfy their needs and desires. **Anuj Kumar Kanojia (2011)** analyzed the impact of consumer preference on two-wheeler sales in Indian urban regions, indicating clear differences in vehicle model preference between urban and rural areas. **Kerav Pandya and H. J. Jani (2011)** discussed the issue of Two wheeler.

#### **OBJECTIVES OF THE STUDY:**

The objectives of this research are as follows:

- To analyze consumer trends and preferences for Heavy Commercial Vehicles.
- To determine the most desirable characteristics that drive the Heavy Commercial Vehicles purchase.
- To analyze the determinants of the consumer decision-making process.
- To examine the correlation between demographic variables and a range of Heavy Commercial Vehicle attributes.
- To identify areas where suggestions and improvement is possible in Heavy Commercial Vehicles.

#### **SCOPE OF THE STUDY:**

There are different ways in which the heavy commercial vehicle (HCV) consumer trends and preference can be analyzed, including market trends, determinants of the preferences, and its future growth possibilities.

#### **RESEARCH METHODOLOGY:**

Research methodology is a systematic strategy for solving the research problem. Survey research methodology is used in the present study, basing it on existing literature in the subject area. A questionnaire was crafted to investigate consumer choice towards Heavy Commercial Vehicles of Ashok Leyland. The questionnaire was pilot-tested before being administered to 343 respondents who own heavy commercial vehicles with a minimum age of 19 years. Data collection was carried out with a standardized questionnaire and the Simple Random Sampling technique used. Percentage, correlation, and regression analysis were used to analyze the data, and charts and tables were generated using Excel.

#### **RESULTS AND ANALYSIS:**

In the present scenario, consumers trends and preferences for selecting a Heavy Commercial Vehicle differ from person to person. To understand the varied preferences of consumers, this research considers

various factors, such as performance, fuel efficiency, technology, down payment, and spare part availability.

**TABLE 1 PERCENTAGES ANALYSIS OF DEMOGRAPHIC VARIABLES**

VARIABLES	CATEGORY	PERCENTAGE
Education	10 <sup>th</sup>	15.5
	12 <sup>th</sup>	19.5
	Diploma	13.7
	UG	19.8
	PG	29.8
Age	20-30 years	32.7
	40-50 years	29.2
	>50 years	39.7
Gender	Male	95.9
	Female	4.1
Place of Residence	Rural	15.7
	Urban	84.3
Income	2-5 lakhs	48.7
	8-10 lakhs	51.0
	>10 lakhs	0.3

The information contained in Table 1 shows that out of the 343 respondents, most of them have achieved a postgraduate level of education, representing 29.8%. Moreover, a considerable number of the respondents who own Heavy Commercial Vehicles are older than 50 years, constituting 39.7%. In addition, 95.9% of the respondents who own the vehicles are male, compared to the number of females in the city. Most of the respondents are from urban regions, which make up 84.3% in comparison to rural areas. Finally, the income level of most consumers is mostly between 8 to 10 lakhs per year, which accounts for 51%, and the rest falls between 2 to 5 lakhs per year.

**TABLE 2 Correlation Between Respondents' Educational Attainment and Income**

Correlation	Education Qualification	Income per annum
Education qualification	1	0.897

The evidence from Table 2 shows a high correlation between the educational qualifications of consumers and their respective income levels, as supported by the p-value of less than 0.05. This is also evidenced by the Pearson Correlation coefficient of 0.897, showing a highly positive relationship between education level and yearly income. Thus, we reject the null hypothesis to support that there is a significant relationship between education level and income.

**TABLE 3 Correlation Between Educational Attainment and Vehicle Brand**

Correlation	Educational qualification	Brand of the vehicle
Brand of vehicle	1	0.937

The information given in Table 3 suggests a strong relationship between the educational qualifications of consumers and their brand choices, as supported by a p-value less than 0.05. The Pearson Correlation

coefficient of 0.937 also proves a high association between educational qualifications and brand choices. Thus, we reject the null hypothesis, establishing that there is indeed a significant relationship between educational qualifications and brand choices.

**TABLE 4 Correlation Between Type of Residence and Vehicle Brand.**

Correlation	Nature of residence	Vehicle Brand
Vehicle brand	1	0.378

The statistics given in Table 4 reveal a significant relationship between consumers' level of education and their preferred brand, as supported by a p-value of below 0.05. Also, the Pearson Correlation value of 0.378 shows that there is a weak association between the nature of residence and brand preference. Hence, we reject the null hypothesis and establish that there is indeed a significant relationship between the nature of residence and brand preference.

**TABLE 5 Percentage Analysis for Brand of the Vehicle**

Particulars	Frequency	Percentages	Cumulative frequency
Eicher	68	19.8	68.5
Tata	108	31.5	100.0
Ashok Leyland	167	48.7	48.7
Total	343	100.0	

The findings based on Table 5 show that out of the 343 participants, 48.7% purchased vehicles from Ashok Leyland, 19.8% selected Eicher Motors, and 31.5% selected Tata Motors in Madurai city. Interestingly, the majority of the respondents supported buying heavy commercial vehicles from Ashok Leyland compared to other companies.

**TABLE 6 Percentage Analysis for Technology**

Particulars	Frequency	Percentage	Cumulative %
Unimportant	116	33.8	33.8
Neither unimportant nor important	190	55.4	89.2
Important	18	5.2	94.5
Highly important	19	5.5	100.0
Total	343	100.0	

The information shown in Table 6 shows that out of the 343 respondents, 33.8% consider the attribute of Technology as not important. At the same time, 55.4% consider it as neither important nor not important, 5.2% consider it as important, and 5.5% consider it as very important. Most respondents consider Technology as a neutral attribute when choosing a heavy commercial vehicle.

**TABLE 7 Correlation Between Vehicle Attributes and Brand Preference.**

VARIABLES	SIGNIFICANCE	HYPOTHESIS
Mileage of the vehicle	.000	$H_0$ is rejected
Performance of vehicle	.000	$H_0$ is rejected
Serviceability of the vehicle	.012	$H_0$ is rejected

Resale value	.000	$H_0$ is rejected
Availability of spare parts	.000	$H_0$ is rejected
Technology of the vehicle	.000	$H_0$ is rejected
Down payment of the vehicle	.000	$H_0$ is rejected
Loading Ability	.000	$H_0$ is rejected
Safety of the vehicle	.083	$H_0$ is rejected

Table 7 depicts the results of the association between different factors like Mileage, Performance, Serviceability, Resale Value, Spare Parts, Technology, Loading Ability, and Down Payment, which are primary reasons for the demand for Heavy Commercial Vehicles. The dependent variable, the Brand of the car, is influenced by various independent variables such as Mileage, Performance, Serviceability, Resale Value, Spare Parts, Technology, Loading Ability, and Down Payment; but the attribute of Safety does not seem to have any effect on the Brand. From this analysis, it can be inferred that there is a significant relationship between these independent attributes and the dependent variable, the brand of the car.

**FINDINGS AND CONCLUSION:**

The research shows that a large number of the Madurai respondents who buy heavy commercial vehicles have education qualifications up to postgraduate level, which is 29.8%. The majority of vehicle owners are also more than 60 years old, which is 39.7% of the respondents. They are mostly male and have a very high 84.3% living in urban areas. Correlation analysis indicates a strong correlation between education qualifications, preferred vehicle brand, and income level of the respondents. In addition, regression analysis indicates that vehicle brand choice is determined by different factors such as mileage, performance, serviceability, loading capacity, resale value, spare part availability, and down payment, which are grouped as independent variables.

From the analysis and interpretation of the data, a number of recommendations can be derived. There is a requirement to upgrade the technological aspects of the vehicles, and it is important that sales staff emphasize the importance of these technologies to consumers in terms of functionality. The safety of driving should also be emphasized as an important consideration, making drivers feel more secure while carrying loads.

Ashok Leyland performs well in aspects like mileage, performance, comfort in riding, after-sales, and the wide availability of spares, all of which play a role in the sales development of the company. The majority of consumers have been found to be satisfied with the simplicity of communication with salesmen, the willingness of the salesmen to give information on the product, and the models available for purchase. All these factors together have an impact on the consumer trends and preference for heavy commercial vehicles, giving the company the insights it needs to improve its sales and widen its market base in India.

Ashok Leyland has been actively strengthening its presence in Madurai's commercial vehicle market through strategic dealership expansions ( like Balaji Trucks and SNS Automobiles) and a comprehensive product lineup. While specific data on Ashok Leyland's heavy commercial vehicle (HCV) market share in Madurai is not readily available, the company's overall strategy includes increasing its footprint in the intermediate, medium, and heavy truck segments. As of December 2024, Ashok Leyland aimed to capture a 35% market share in these categories, up from 32%, by expanding its network and product offerings

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