

Quantitative Assessment Of Consumer Satisfaction Determinants In The Automobile Sector: A Regional Analysis Of Gujarat, India



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Abstract

The researcher has taken a broad approach to identifying the general characteristics influencing customer happiness for the automotive industry, taking into account the Gujarat state and consumer contentment with the automotive sector. In order to ascertain these factors and determine whether there are notable differences in opinion among them, the researcher conducted a primary survey among respondents in the automobile sector, gathering 120 market responses and adding both closed-ended and open-ended questions to the analysis. In order to determine the study's goal, the researcher used the frequency distribution to determine the respondent profile and the chi-square test to see whether the respondent's opinions differed significantly from those of the market. When considering graduation as a qualification and business class individuals, it has been discovered that the majority of responders are male. In addition, they disagree on a number of issues that have an impact on features and categories, economic pricing, after-sales support, and brand loyalty.

Key Words: Brand Loyalty, Economic Efficiency, Post Sales Services and Features and Segments and Automobile sector.

1. Introduction

The Indian Automobile industry encompasses several types of vehicles such as two-wheelers, trucks, automobiles, buses, and three-wheelers, all of which have a significant impact on the development of the Indian economy. India has become the fourth biggest vehicle exporter in Asia, ranking after Japan, South Korea, and Thailand. By 2050, it is projected that the country would have the highest number of cars in the world, with an estimated 611 million automobiles on the roads. The economic advancement of this business is measured by the quantity of products and services produced, which enhances the ability to transport and stimulates the need for automobiles. The automotive manufacturing has seen a substantial surge, resulting in a catalytic effect that indirectly boosts the demand for various raw materials such as steel, rubber, plastics, glass, paint, electronics, and services.

The testing infrastructure in the nation is being renovated to accommodate the simultaneous testing and certification operations associated with stricter safety and emission standards. There are plans to provide significant financial support from the government to improve the testing infrastructure, including involvement from the sector. The quest for alternative fuels has been prompted by environmental contamination and the need to preserve the current reserves of fossil fuels. Furthermore, with the funding for innovative research in this sector, a comprehensive and progressive program is being implemented to enhance the quality of carbon-based fuels in line with

stricter emission standards. The regulations governing foreign direct investment have already been significantly eased. The unrestricted import of autos, including both new and used vehicles, has also been authorized. The relaxation or removal of most nontariff barriers has also occurred. The Government has implemented measures to reduce and adjust taxes and tariffs on autos, including customs duty. The implementation of Value Added Tax (VAT) is planned to commence nationwide on 1 April 2001. The government has also permitted private sector involvement in the insurance industry. The regulations governing external commercial borrowings (ECBs) have been relaxed, and domestic loan rates have also been lowered, therefore enhancing the investment climate. The Government is implementing an ambitious initiative to enhance the network of roads in the nation. As part of this program, an eight-lane expressway is being constructed to connect all major cities and key capital towns. This would facilitate the transportation of larger haulage trucks.

2. Literature Review

James, S., et.al. (2022) demonstrated that determining client expectations is essential to improving customer satisfaction and service. Automobile companies needed to determine the essential elements that would better meet customer needs. In the current work, factorial analysis was used to identify important factors of cyber-physical systems. The data collected from the survey was analyzed using descriptive analysis. Following an

analysis of the relationships between the main factors, a model that takes into account the features of the cyber and physical systems that affect customer satisfaction in the automotive industry was proposed. The five essential components of the cyber physical systems component were safety, energy efficiency, electronic receipts, and included Smart and multifaceted human-machine interaction systems. Redesigning, recycling, and manufacturing were all crucial aspects of customer service.

Pandya, K., & Jani, H. J. (2011) outlined how consumers in India view two-wheelers as a necessary necessity, which may differ from the viewpoint of consumers in Western countries. The purpose of this study was to improve knowledge of the cognitive processing skills of two-wheeler users in the Indian state of Gujarat. A sample of 450 motorbike riders from five major cities in Gujarat, India's wealthy western state, was questioned. The data was collected using the convenience sampling approach. A standardized questionnaire was administered in order to gather primary data. According to the study, the participants were rather pleased with every feature of the motorcycle. The study has improved understanding of Indian two-wheeler consumers' attitudes and help two-wheeler manufacturers create effective communication strategies.

Chen, L. L., et.al. (2017) said that the purpose of this study was to examine, within the framework of the Malaysian national automobile industry, how consumer perceived value affects customer happiness. A sample size of 200 respondents who are national drivers in Kuala Lumpur and the Klang Valley of Malaysia was chosen using an appropriate sampling technique. The provided text is insufficient and lacks sufficient details to be rewritten in an understandable and accurate way. A 5-point rating system was used to structure the questionnaire. Data was collected using the Likert scale in order to examine how customer happiness is impacted by perceived value. The validity and dependability of the information gathered from the participants will be evaluated using the normality and reliability tests. After social value and epistemic value, the functional value has the second-highest mean. Customer satisfaction is positively and significantly impacted by both functional value and conditional value, according to the regression analysis. Additionally, the results of the regression show that the conditional value has the highest beta coefficient value. However, our research showed that social, emotional, and epistemological values had no discernible impact on customer satisfaction. The impact of CPV on consumer satisfaction among Malaysian domestic vehicle brands was effectively ascertained by this research study. To ensure the validity and trustworthiness of the results, future researchers are

encouraged to increase the sample size by incorporating a variety of parameters.

3. Research Methodology

3.1. Research Problem

With the help of the robust literature study, the researcher has taken into account the earlier research that has been conducted. The key finding from the thorough examination of the literature review was that, up until now, the researcher had only attempted to determine a small number of customer satisfaction metrics for the automotive industry, not all of them, and that only at a very macro level, i.e., a few Gujarat State cities.

3.2. Objectives of the Study

With reference to defining the satisfaction of automobile consumers from the selected cities of Gujarat State, the researcher had made very careful observations and reached at the below mentioned observations as a part of the objectives of the study.

- To analyse the automobile sector consumers socio-demographic profile from the selected cities of Gujarat state.
- To define out the factors which are responsible for maintaining the satisfaction among the automobile consumers.
- To notice whether there is any significant difference of opinion that are prevailing among the consumers towards the factors which are responsible for maintaining the satisfaction among them.

3.3. Hypothesis of the Study

- **H0₁:** There is no significant difference that have been noticed in the opinion of the automobile consumers based on their gender towards the factors responsible for their loyalty to buy.
- **H0₂:** There is no significant difference that have been noticed in the opinion of the automobile consumers based on their age towards the factors responsible for their loyalty to buy.
- **H0₃:** There is no significant difference that have been noticed in the opinion of the automobile consumers based on their educational qualification towards the factors responsible for their loyalty to buy.
- **H0₄:** There is no significant difference that have been noticed in the opinion of the automobile consumers based on their occupation towards the factors responsible for their loyalty to buy.

3.4. Societal Importance of the Study

Because it creates jobs, generates income, and adds to the state's GDP, the car sector plays a vital role in the economy. Customer satisfaction guarantees a favorable business climate, drawing in investments and promoting economic expansion. Increased demand for cars results from a happy customer base, which helps the auto sector expand. The local

populace benefits from the increased work possibilities brought forth by this boom, which also raises Gujarat's total employment levels.

3.5. Sample Size

For this study on consumer satisfaction in the automobile sector, specifically within Gujarat State, a sample of 120 respondents was collected to ensure a representative and diverse dataset. The sample size was chosen to capture a variety of consumer perspectives across demographic factors such as age,

gender, educational qualification, and occupation. Data was collected through structured questionnaires, focusing on factors affecting satisfaction, including brand loyalty, economic efficiency, post-sales services, and amenities & dimensions. This sample enables a statistically relevant analysis, helping to uncover satisfaction trends and preferences in the regional automobile sector, aiding businesses in strategic decision-making.

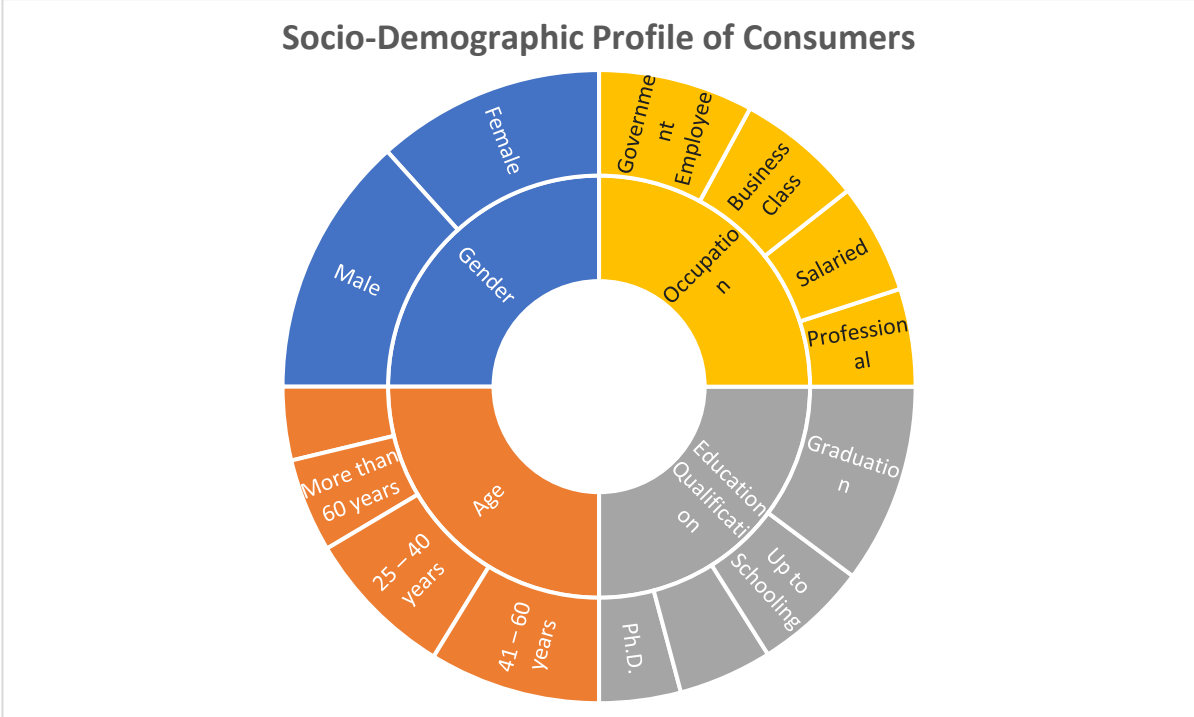
4. Data Analysis and Interpretation

Table 1: Socio Demographic Profile of the Automobile Customers of Gujarat State

Socio-Demographic Profile	Frequency	Socio-Demographic Profile	Frequency
Gender		Education Qualification	
Male	64	Up to Schooling	28
Female	56	Graduation	49
		Post - Graduation	23
		Ph.D.	20
Age		Occupation	
Less than 25 years	18	Salaried	27
25 – 40 years	37	Business Class	31
41 – 60 years	42	Professional	24
More than 60 years	23	Government Employee	38

(Sources: Research Output)

Figure 1: Socio Demographic Profile of the Automobile Customers of Gujarat State



(Sources: Research Output)

From the above table for the demographic profile of the consumers for the satisfaction towards the automobile sector at Gujarat State, it has been noted that the highest number of customers for the

automobile segment in this particular study are from the male category followed by the female category. For the Educational Qualification profile, the highest number of respondents are falling into the category

of Graduation followed by the Post – Graduation. With the consideration of the Age of consumers, the highest number of respondents are falling into the category of 41 – 60 years followed by the 25 – 40 years and for the consideration of the occupation

profile of the consumers of the automobile sector of the Gujarat state, the highest number of respondents are falling into the category of Government Employees followed by the Business Class.

Table 2: Significant Difference of Opinion among the Socio-Demographic Profile of the respondent and factors which are affecting to their Satisfaction

Demographic Profile * factors affecting Consumer Satisfaction	Kruskal Wallis Z Test	P Values	Significant Difference or not
Gender * Brand Loyalty	18.887	0.000	Significant Difference
Gender * Economic Efficiency	12.665	0.000	Significant Difference
Gender * Post Sales Services	22.321	0.000	Significant Difference
Gender * Amenities & Dimensions	22.321	0.000	Significant Difference
Age * Brand Loyalty	14.156	0.000	Significant Difference
Age * Economic Efficiency	03.654	0.100	No Significant Difference
Age * Post Sales Services	13.256	0.000	Significant Difference
Age * Amenities & Dimensions	18.654	0.000	Significant Difference
Educational Qualification * Brand Loyalty	12.321	0.003	Significant Difference
Educational Qualification * Economic Efficiency	11.344	0.000	Significant Difference
Educational Qualification * Post Sales Services	22.324	0.000	Significant Difference
Educational Qualification * Amenities & Dimensions	21.354	0.000	Significant Difference
Occupation * Brand Loyalty	7.154	0.002	Significant Difference
Occupation * Economic Efficiency	1.656	0.254	No Significance Difference
Occupation * Post Sales Services	0.357	0.534	No Significance Difference
Occupation * Amenities & Dimensions	0.681	0.090	No Significance Difference

(Sources: Research Output)

The Kruskal-Wallis Z Test results reveal significant variations in consumer satisfaction based on socio-demographic profiles of gender, age, educational qualification, and occupation that are particularly in relation to brand loyalty, economic efficiency, post-sales services, and amenities & dimensions.

Gender shown significant differences across all factors, including brand loyalty, economic efficiency, post-sales services, and amenities & dimensions which have their p values less than 0.05 level of significance and hence they are providing the significant difference of opinion for these factors. This indicated that male and female respondents perceive and value these aspects differently, suggesting that satisfaction may be shaped by gender-specific expectations or preferences.

Age demonstrated significant differences in satisfaction for brand loyalty, post-sales services, and amenities & dimensions which have their p values less than 0.05 level of significance and hence they are providing the significant difference of opinion for these factors. However, no significant difference is observed for economic efficiency which has the P values 0.100 which is greater than 0.05 level of

significance, implied that views on pricing and cost-effectiveness are consistent across age groups, while other satisfaction factors vary by age.

Educational Qualification revealed significant differences across all factors: brand loyalty ($p=0.003$), economic efficiency, post-sales services, and amenities & dimensions ($p=0.000$) which have their p values less than 0.05 level of significance and hence they are providing the significant difference of opinion for these factors. This suggested that individuals with different educational backgrounds have distinct perspectives on these factors, influencing their overall satisfaction.

Occupation shown a significant difference only in brand loyalty, with no significant differences found for economic efficiency, post-sales services, or amenities & dimensions which have the P values 0.100 which is greater than 0.05 level of significance. This indicated that brand loyalty is more likely to vary by occupation, while satisfaction with other factors remains largely unaffected by occupational differences.

5. Findings, Conclusions and Suggestions of the Study

According to the aforementioned survey, which examined customer satisfaction with the automotive industry with particular reference to Gujarat state, the majority of buyers are male and range in age from young to mature. The majority of them are business class individuals who are primarily pursuing their education up to or beyond graduation. Given the substantial differences in opinion among the different demographic profiles of the car industry's customers with regard to the state of Gujarat, it has been observed that all four factors i.e. gender, age, and educational attainment that have a significant impact on the consumers' opinions. Regarding the consumers' occupation, the only factor for which they have differing opinions regarding their level of satisfaction is brand loyalty, whereas the factors known as Economic Pricing, After-Sales Services, and Features & Segments are those for which they do not have any disagreements.

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