

CONSUMER SATISFACTION AND BRAND PERCEPTION IN AUTOMOTIVE AIR CONDITIONING SYSTEMS: A STUDY OF WONJIN AUTOPARTS, CHENNAI

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ABSTRACT

This study focuses on analyzing consumer satisfaction and brand perception of automotive air conditioning systems with reference to Wonjin Autoparts in Chennai. The research examines how factors such as cooling performance, reliability, pricing, and brand image influence customer satisfaction. Primary data was collected from 114 respondents using a structured questionnaire. Statistical tools including percentage analysis, chi-square test, and one-way ANOVA were applied to evaluate relationships between variables. The results indicate that most consumers are satisfied with the performance of automotive AC systems, particularly in terms of cooling efficiency and comfort. Brand reputation plays an important role in shaping customer perception, while awareness about OEM suppliers remains relatively low. The study also reveals that price perception significantly affects satisfaction levels, highlighting the importance of value for money. The study concludes that improving product durability, strengthening brand visibility, and adopting competitive pricing strategies are essential for enhancing customer satisfaction and brand perception in the automotive components sector.

Index Terms— Consumer satisfaction, brand perception, automotive air conditioning, OEM suppliers, price perception, Wonjin Autoparts.

I. INTRODUCTION

The automobile industry has undergone significant transformation due to technological advancements and changing consumer expectations. Modern consumers no longer focus only on vehicle performance but also expect comfort and convenience during travel. Among various features, automotive air conditioning systems have become an essential component, particularly in countries with hot climatic conditions like India.

Consumer satisfaction is a key factor influencing the success of any product. In the automotive sector, satisfaction is determined by multiple factors such as performance, reliability, pricing, and brand perception. A well-performing AC system enhances passenger comfort and improves the overall driving experience, whereas poor performance leads to dissatisfaction.

Brand perception also plays a crucial role in shaping customer decisions. Customers tend to prefer brands that are perceived as reliable and trustworthy. Wonjin Autoparts, as an OEM supplier of automotive AC components, focuses on maintaining product quality and meeting customer expectations.

This study aims to analyze consumer satisfaction and brand perception of automotive AC systems and identify the major factors influencing customer satisfaction.

II. REVIEW OF LITERATURE

The concept of consumer satisfaction and brand perception has been widely studied in the field of marketing and consumer behavior. According to Kotler (2016), consumer satisfaction is

determined by the extent to which a product's performance meets or exceeds customer expectations. In the context of the automotive industry, satisfaction is strongly influenced by product quality, performance, and reliability.

Parasuraman, Zeithaml, and Berry (1988) emphasized that service quality and perceived performance are key determinants of customer satisfaction. Their SERVQUAL model highlights that reliability and performance consistency play a major role in shaping customer perceptions. In automotive components such as air conditioning systems, consistent cooling performance and durability are essential for achieving customer satisfaction.

Aaker (1991) explained that brand perception is a crucial factor influencing customer decision-making. A strong brand image builds trust and reduces perceived risk among consumers. In the automotive sector, customers often rely on brand reputation when evaluating components such as AC systems, as they associate established brands with higher quality and reliability.

Keller (1993) further stated that brand equity is developed through customer awareness and positive associations. Higher brand awareness leads to increased customer confidence and preference. This is particularly relevant for OEM suppliers like Wonjin Autoparts, where low brand visibility may limit customer recognition despite product quality.

Studies by Oliver (1997) indicate that customer satisfaction is not only influenced by performance but also by perceived value. Customers evaluate whether the benefits received justify the price

paid. This suggests that pricing strategies play a critical role in shaping satisfaction levels in the automotive components market.

In the automotive context, several researchers have examined the relationship between product performance and satisfaction. A study by Suresh and Kumar (2018) found that cooling efficiency, noise level, and reliability significantly influence customer satisfaction in automotive air conditioning systems. The study concluded that performance-related attributes are the primary drivers of satisfaction.

Another study by Ramesh and Prakash (2020) highlighted that brand trust and reputation strongly impact customer perception in the automobile industry. Customers tend to prefer brands that are widely recognized and perceived as reliable, even when alternative products offer similar features.

Research by Gupta and Sharma (2021) analyzed the role of price perception in consumer decision-making. The study found that customers are highly price-sensitive and expect value for money. Even when product performance is satisfactory, higher prices may lead to lower satisfaction if perceived value is not justified.

In addition, a study by Karthik and Devi (2022) focused on consumer awareness of automotive components and found that awareness about OEM suppliers is generally low among customers. This lack of awareness affects brand perception and limits the recognition of component manufacturers.

From a statistical perspective, previous studies have commonly used tools such as chi-square tests and ANOVA to analyze relationships between variables like satisfaction, brand perception, and price. These methods help in identifying significant factors influencing consumer behavior.

Overall, the existing literature indicates that consumer satisfaction in automotive air conditioning systems is influenced by a combination of performance, brand perception, price, and awareness. While performance ensures functional satisfaction, brand perception builds trust, and price perception determines value for money. These studies provide a strong foundation for analyzing consumer satisfaction and brand perception with reference to Wonjin Autoparts.

III. OBJECTIVES OF THE STUDY

Primary Objective

- To study consumer satisfaction and brand perception of automotive air conditioning systems with reference to Wonjin Autoparts in Chennai.

Secondary Objectives

- To evaluate consumer satisfaction regarding product performance and reliability of automotive AC systems.
- To analyze the influence of brand trust and reputation on consumer perception.
- To examine the effect of price perception on customer satisfaction.
- To assess the level of consumer awareness about Wonjin Autoparts as an Original Equipment (OE) supplier.

HYPOTHESIS

Hypothesis of the Study

H₀: There is no significant relationship between brand perception and customer satisfaction.

H₁: There is a significant relationship between brand perception and customer satisfaction.

H₀: Price perception has no significant effect on customer satisfaction.

H₁: Price perception has a significant effect on customer satisfaction.

IV. RESEARCH METHODOLOGY

The present study adopts a descriptive research design to examine consumer satisfaction and brand perception of automotive air conditioning systems with reference to Wonjin Autoparts in Chennai. The objective of the study is to understand customer opinions, preferences, and perceptions regarding AC system performance, brand trust, and pricing.

The research is based on primary data collected through a structured questionnaire. The questionnaire was designed using a Likert scale to capture respondents' level of agreement on various aspects such as cooling performance, comfort, reliability, brand perception, and price sensitivity. The questions were carefully framed to ensure clarity and relevance to the research objectives.

The questionnaire was tested for reliability and consistency before final data collection. The questions were structured clearly to ensure content validity and to accurately measure the variables such as performance, brand perception, and price perception.

A total of 114 respondents were selected for the study. The respondents included individuals who regularly use four-wheelers equipped with air conditioning systems. Convenience sampling technique was adopted due to ease of access and time limitations. Although this method has certain limitations, it is widely used in exploratory and descriptive studies.

The data collection process involved distributing the questionnaire both online and offline to ensure a diverse set of responses. The collected data was carefully screened and organized for analysis. Responses were coded and entered into statistical tools for further examination.

The study utilizes both descriptive and inferential statistical techniques. Percentage analysis was used to summarize demographic characteristics and general response patterns. Chi-square test was applied to identify the relationship between categorical variables such as brand perception and satisfaction levels. One-way ANOVA was used to examine the impact of price perception on customer satisfaction.

The use of these statistical tools helps in providing a systematic and scientific approach to analyzing the data. The methodology ensures that the results are reliable and relevant to the objectives of the study, thereby enabling meaningful conclusions and recommendations.

V. DATA ANALYSIS AND DISCUSSION

A. PERFORMANCE ANALYSIS

The analysis of consumer responses indicates that a majority of respondents are satisfied with the performance of automotive air conditioning systems. Most participants reported that the AC systems provide sufficient cooling even during extreme weather conditions. The comfort level during long drives is also perceived to be satisfactory, which highlights the importance of AC systems in enhancing the overall driving experience.

Further analysis reveals that respondents consider AC performance as a key factor influencing their overall satisfaction with the vehicle. Features such as cooling efficiency, noise levels, and consistent performance are critical in shaping customer opinions. However, a small percentage of respondents expressed concerns regarding long-term reliability and maintenance, indicating areas for improvement.

B. BRAND PERCEPTION

Brand perception plays a significant role in determining customer satisfaction and purchase decisions. The study findings indicate that consumers tend to associate well-known brands with higher quality and reliability. Respondents who have trust in automotive component brands are more likely to report higher satisfaction levels.

It is also observed that brand reputation influences how customers evaluate product performance. Even when technical features are similar, a strong brand image can positively affect perception and preference. In the case of Wonjin Autoparts, awareness among consumers is relatively moderate, which suggests the need for increased brand visibility and communication strategies.

C. PRICE PERCEPTION

Price perception is identified as a critical factor influencing customer satisfaction. The ANOVA results show that there is a significant relationship between price perception and satisfaction levels. Consumers expect products to offer good value for money, and pricing plays a crucial role in shaping their overall experience.

The study indicates that while customers appreciate good performance, they are not willing to pay significantly higher prices without clear benefits. This highlights the importance of balancing quality and affordability. Competitive pricing strategies can help companies attract and retain customers in a highly competitive market.

D. AWARENESS ANALYSIS

The study also examines the level of consumer awareness regarding OEM suppliers such as Wonjin Autoparts. The results reveal that a considerable number of respondents are not fully aware of OEM manufacturers and their role in vehicle performance.

This lack of awareness affects brand recognition and limits the influence of component manufacturers on customer perception. Increasing awareness through marketing and educational initiatives can help improve brand visibility and enhance customer trust.

Overall, the analysis clearly demonstrates that performance, brand perception, price, and awareness are interrelated factors that

collectively influence consumer satisfaction in automotive AC systems.

VI. FINDINGS AND SUGGESTIONS

The findings of the study indicate that automotive air conditioning systems play a crucial role in enhancing passenger comfort and overall driving experience. A majority of respondents expressed satisfaction with AC performance, particularly in terms of cooling efficiency and comfort during usage. However, certain concerns related to reliability and maintenance were also identified.

Brand perception is found to have a significant influence on customer satisfaction. Consumers tend to trust brands that are well-established and reputed in the market. A positive brand image enhances customer confidence and influences their purchasing decisions. However, the study reveals that awareness about OEM suppliers such as Wonjin Autoparts is relatively limited, which affects brand recognition.

Price perception is another important factor influencing satisfaction levels. The study shows that customers are highly sensitive to pricing and expect value for money. Even when performance is satisfactory, higher pricing without additional benefits may reduce overall satisfaction.

It was observed that more than half of the respondents expressed satisfaction with AC performance, particularly in terms of cooling efficiency. The statistical analysis indicates that the p-value obtained in chi-square test is less than 0.05, confirming a significant relationship between brand perception and customer satisfaction.

Based on these findings, several suggestions are proposed. Companies should focus on improving product reliability and durability to enhance long-term customer satisfaction. Increasing brand awareness through advertising, digital marketing, and collaborations with automobile manufacturers can help strengthen brand perception.

In addition, companies should adopt competitive pricing strategies to meet customer expectations. Providing better after-sales support and educating consumers about the importance of OEM components can further improve satisfaction and brand trust.

The study also indicates that customer expectations are increasing with technological advancements, and consumers are becoming more quality-conscious. Reliability and long-term performance are emerging as important factors influencing satisfaction beyond initial product performance.

B. LIMITATIONS

The study is limited to a sample size of 114 respondents, which may not fully represent the entire population of automobile users. The research is confined to Chennai, which limits the generalization of the findings to other regions.

The data collected is based on individual perceptions and opinions, which may involve bias. Time constraints restricted the scope of the study and limited the inclusion of additional variables such as after-sales service and technological features.

Despite these limitations, the study provides valuable insights into consumer satisfaction and brand perception in the automotive AC systems segment.

VII. CONCLUSION AND FUTURE SCOPE

The study concludes that consumer satisfaction in automotive air conditioning systems is influenced by a combination of performance, brand perception, price, and awareness. Among these factors, performance and pricing play a dominant role in determining overall satisfaction levels.

The findings highlight that while customers are generally satisfied with cooling performance and comfort, they are highly sensitive to pricing and expect value for money. Brand perception also significantly influences customer decisions, emphasizing the importance of building a strong brand image.

For companies such as Wonjin Autoparts, it is essential to focus on enhancing product quality, increasing brand visibility, and adopting effective pricing strategies. Improving consumer awareness about OEM suppliers can also contribute to better recognition and trust.

Future research can be extended by including a larger sample size and covering multiple geographical areas. Additional variables such as after-sales service, technological innovation, and customer loyalty can be incorporated to provide deeper insights into consumer behavior and preferences.

The study provides practical implications for automotive component manufacturers by highlighting the importance of customer-centric strategies. Companies can use these insights to improve product development, pricing strategies, and marketing approaches to enhance customer satisfaction.

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