

Impact of Demand in an Automotive Industry

Aditya Singh Bhati¹, Aniruddh Kaulgi², Sumit Chandak³ and Amit Chandak⁴

¹Automobile Engg. S.V.I.T.S. Indore

²Automobile Engg. S.V.I.T.S. Indore

³Mechanical Engg. S.V.I.T.S. Indore

⁴Mechanical Engg. IES-I.P.S.A. Indore

Abstract—As we all know, the automotive industry is facing new and demanding challenges. Individualization, industrialization, Digitalization and ascending competition are changing the face of the industry. Also increasing safety requirements and willing environmental assurances by the automotive industry will also contribute to the fluctuations. The purpose of this article is to effectively change the present scenario in a positive way for a lucrative result. This research will support the existing and forthcoming car manufacturing companies in automotive world to find out the customer demand and their market offerings. Proper understanding of customer demands and their buying behavior will help the industry to succeed in the market. This paper ponders upon the points implemented by top automobile industries that have allowed them to become successful and perfect example.

Index Terms: Customer Demand, Buying Behavior, Customer Satisfaction,

1. INTRODUCTION

Automobile Industry- The automobile industry includes companies involved in the production, marketing and maintenance of automobiles. According to the U.S. Bureau of Labor Statistics, the automobile and parts manufacturing sector employed about 700,000 workers in October 2011. The labor dynamics in the automobile industry affects employment levels in support industries, such as steel and plastics manufacturing [1]. The Automotive Industry is the world's largest single manufacturing activity [2]. It uses 15% of the world's steel, 40% of the world's annual oil output. From 1951 to 1972, there was a very high production growth rate of approximately 5.9% annually for the Automotive Industry. But after 1973, the year of the first oil shock, the growth rate declined to about 1% per year until 2002, and came to a halt in 2003 [3].

There are various expectations of a customer form an automobile industry such as:

- It should provide good safety features and ergonomics.
- Emphasis should not be on Looks and style as compared to quality.

- Car Finance options should be made available from Financial Institutes at reasonable rate of interest.
- Availability of spare parts and service centers in near vicinity.

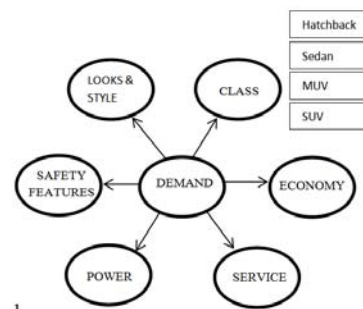


Fig: 1

Customer satisfaction is prior to every activity before launching. Firstly, our focus should be on that category of customers which covers the majority of population. Now a day's customer takes vehicles as a necessity not as a fashion so mileage is a matter of concern. This lead to constant reformations of Car Models and its features in terms of their size, capacity, tailoring etc. Market has become very competitive and has become very 'important place' to study the behavior of customers and also provide useful acumens what a customer requires in a product in a constant active environment. With better understanding of customer's perceptions/acuities, companies can make the arrangements required to meet the customer's need.

2. SURVEY OF CUSTOMER DEMAND

In a survey of 100 people we found that the most preferable class is Hatch-back. Where 52% are satisfied with Hatch-Back, 25% with Sedan class, 19% with SUV (Sports Utility Vehicle), and rest 4% goes with MUV(Multi Utility Vehicle).

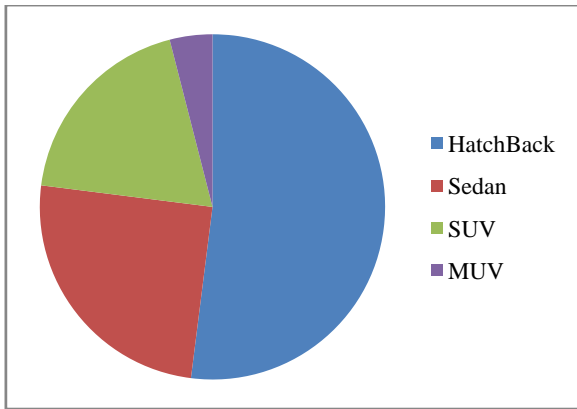


Fig. 2: Type of class mostly preferred by people.

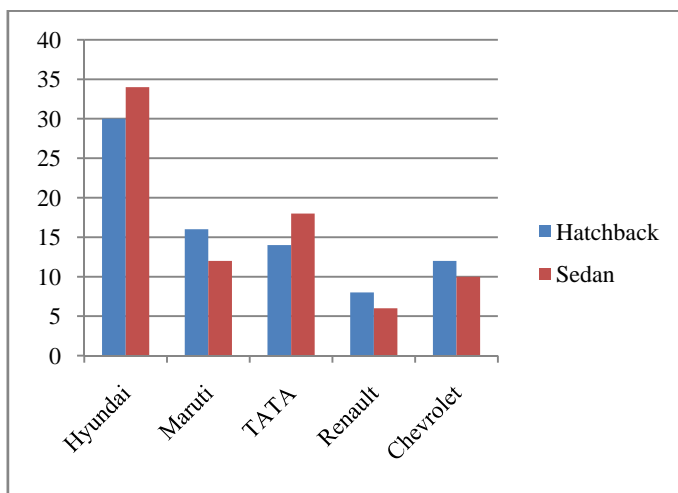


Fig. 3: company mostly preferred by people.

3. TATA NANO

Tata Nano is the best example as a push process in demand in Indian market. Keeping the Indian necessity in mind Ratan Tata launched low economy car to fulfill all the requirements of the customer.

HISTORY: The project to create a 1 lakh rupee car began in 2003, under the Chairman of Tata Motors, Ratan Tata. The strategy behind the project was the awareness of the number of Indian families who had two wheeled transport, but couldn't afford a four wheel car, and was based on the company's success in producing the low cost 4 wheeled Ace truck in May 2005.

Industry convention was that a reliable car couldn't be made at such a low price, so initial media speculation was that the car would be a simple four-wheeled auto rickshaw.

During development the company reinvented and minimized the manufacturing process, brought in innovative product

design, and asked component manufacturers to look at current work and design approaches in a different perspective to produce logical and simple solutions.

TATA MOTORS: Tata Motors formerly called Tata Engineering and Locomotives Ltd (TELCO) is established to manufacturing of Locomotive and engineering products. Tata Motors is the India's largest automobile company revenues of Rs 92,519 crores (\$20 billion) in 2009-10. Tata Motors has operations in the UK, South Korea, Thailand and Spain. It has plants at Jamshedpur, Pune, Lucknow, Pantnagar and a manufacturing unit in joint venture with Fiat near Pune.

OBJECTIVE AND MISSION: Mr. Ratan Tata, had a dream of a family car which can be purchased at affordable price by middle class people. It has given rise for the innovation of new and comfortable means of transportation. The objective of Tata Motors and Ratan Tata is to release the car to reach the standards of its customers.

SAFETY AND SECURITY: Passenger compartment, crumple zones, intrusion resistant doors, seat belts, strong seats and anchorage all these makes the car meets the standards and regulatory requirements. Booster Assisted Brakes, Remote Central Locking, Additional Body Reinforcements.

COMFORT: Air-Conditioning, Heater, Front Power Windows, Anti-Glare IRVM, Rear - Seat Folding, FrontSeat Headrest, Rear Seat Integral Headrest, Gear Shift Console, Cabin Lamp, Low Fuel Warning Lamp, Rear Seat Folding, Music System with CD, AUX & Bluetooth.

FACILITIES PROVIDED: 12V Power Socket, Glove Box, Map Pocket Integral with Driver & Co-driver Seat, Front Assist Grips, Driver Seat with Slider, Passenger Side Seat with Slider, Cup Holder in Front Console, Magazine & Coin Holder on All Doors, Sun Visor on Driver & Passenger Side, Vanity Mirror.

The Nano has received a tepid reception from Indian consumers. It is identified as the most affordable car, whereas a secondhand car that was more expensive when new has more social cachet. The fires and other safety issues have also been nominated.

Still, Tata Nano has managed to fulfill the customer's desires due to its economic affordability. Its remarkable design is as much a style statement as it's a result of intelligent engineering.

4. SUGGESTION AND FUTURE ASPECTS

As we know that, in today's world struggling for growth and lucrateness. There are many glitches that are to be resolved

for the betterment of an automobile industry. Hence, the automotive industry should try to find new practices to make the industry boom again. To increase the sale, we want that the vehicle that is being manufactured should be of the people and for the people. Taking a major part of the population, mainly from the developed cities and designing the vehicle as per their calls/requests will make the vehicle of their choice.

As far as the safety of a driver is concerned the seat belt should be designed such that it should get self-tighten when there are chances of an accident. Radar installed in a vehicle will detect the position and speed of the obstacle in between. This will make sure that the driver is safe. This will also overcome the problems faced because of the airbag. As airbag sometimes open unnecessarily and causes chances of accident as the view of driver is restricted.

Some of the future aspects as per the demands of customers are as follows –

- Gate should get locked automatically when left idle for 5 min. and its windows should also get closed.
- Driver's cellphone should be connected with the vehicle. Whenever if the key is left inside the car and car gets locked it can be used to unlock the car.
- Speed should get slower down automatically as soon as any obstacle is detected by the sensor. If in case the driver's vision is disturbed then the steering wheel should be controlled automatically to avoid any danger.
- For aged people provision should be made such that they experience no difficulty. Many a times they have problem in getting into the car so for them such system should be made in which the seat comes outside the vehicle and then they can get over it effortlessly.

If such demands of customer are fulfilled by the automobile industries then only in true ways the vehicle will be for the people and of the people. This will increase the sailing of the vehicle and will affect the growth of an automobile industry in a positive way. Thus the increase in fulfillment of customer demands will increase the profitability of an automobile industry.

5. CONCLUSIONS

The automobile industry is presently in an era of advancement. So it's necessary to draw the attention towards the department where it is lacking in various aspects. This paper assembles all the problems and suggestions & solutions to overcome those problems. The steps taken by TATA, as discussed in the section of TATA NANO will increase the customer's fulfillment and also will improve the economic growth of the industry at large scale. The main motto of an automobile industry should be to listen to the demands of customers and work accordingly.

REFERENCES

- [1] Chirantan Basu, Demand Media, Factors affect labour supply demand in an automobile industry, www.smallbusiness.chron.com
- [2] Encyclopedia of American History, retrieve from Answers.com/topic/automaker-1.
- [3] G.P. Maxton & J. Wormald, *Time for a model change* (Cambridge, University Press, 2004).