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A STUDY ON AUTOMOTIVE INDUSTRY GROWTH IN GUJARAT : A CASE STUDY OF SELECTED CITIES

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ABSTRACT

The automotive industry consists of four major components - two wheelers, three wheelers, passenger vehicles and commercial vehicles. In the present study we are only considering passenger vehicles of Ford, Toyota, Tata Motors, Suzuki and Volkswagen. The sedans and hatch back of the top 5 brands are compared with each other in Ahmedabad. A total sample of 100 Directors, managers and supervisors were interviewed and filled up questionnaire. From the study it was found that is the top selling brand is Ahmedabad followed by Toyota, Ford, Tata and Volkswagen. The results show customers switch over due to car quality, high maintenance cost and other car offers more features. The supply of cars is affected by presence of segments and availability of finance. Increasing purchasing power, availability of public transport, status symbol, literacy rate, high population, and easy availability of loans are the factors impact sale of passenger cars. The sale of passenger car is affected by GST, fuel price, car price, opening up of rural market, advertisement, income of buyers, availability of loans, brand, model and test drive. Manufacturing of car preference is given to luxury and comfort, engine performance, resale value, technology, eco-friendliness, value for money, cost of production and design of the car. As demand changes in market, the product renovation is essential.

KEYWORDS: Automotive Industry, Gujarat, Cars, Vehicles

1. INTRODUCTION:

My curiosity came from the historical facts of Automobile industry set up in Gujarat over a period of time ; since 1942 , none of the companies could continue in a sustainable growth path so far. Hindusthan Motors in Port Okha only could continue for 6 years despite having technology from Morris Motors who were already selling cars in India. They had to shift the plant to Uttarpara, West Bengal in 1948. Which is also closed now. Halol Plant originally of HM for engine Production was taken over by GM in 1994 with 50:50 joint venture finally sold to GM in 1999 & finally closed. In Commercial vehicle sector AMW tried having the back up of Essar group started in 2002 now by 2017 its up for sale.

In India Context (Maruti Suzuki Case at Manesar) in 2012- Operatives Unrest. Maruti Suzuki India Limited (MSIL) has been established and incorporated since 1983. Now also came at Gujarat. Despite the market leader consistently for last so many years and being in business in India as a strong faced serious labor problem which made them to rethink to create & shift the plants gradually to Gujarat. At the moment its 100% stake with SUZUKI. Since last 8 years maximum investment has come to Automotive Industry in Gujarat to bring in economic growth by our PM ; companies like have invested heavily in Automobile sector which contributes to 7% to GDP.

Gujarat as a Hub for Electric Cars:

Gujarat is going to become a hub for electric cars. Gujarat government has taken the initiative to promote the electric or hybrid cars. These cars will be battery operated saving a large amount of petrol and diesel while also controlling the pollution at high level. To promote the manufacturing of electric cars, it has made agreement with different car manufacturing companies for launching electric cars in market in 2020.

Different companies are joining hand towards this mission. Suzuki is looking forward in introducing the electric cars. Tata Motors is looking to make its Nano car electrified to boost the sales of Nano and enter in the competition of electric cars. Ford Motor company is also ready to join hands with Mahindra and Mahindra to enter the electric car market. (Live mint)

Problems Faced ny Indian Companies:

- The Lack of Research and Development despite having N.I.D at Gujarat .
- Design which is more on conventional art and craft form of design education whereas global companies focus equally in design, styling and Technology together as requirement of the day.
- Infrastructure is another issue that influences development of industries in India. Though government is privatizing the projects and planning for smart cities, the current condition of infrastructure is still not up to the mark looking at the Population growth, Transportation needed , logistic movement for Industry are still not up to the mark for efficient and effective transportation.
- Lack of Automotive skill in terms of manpower and education system.
- The Speed of technological advances in digital world is far behind hence foreign companies are able to deliver cars and satisfy customers throughout the product life cycle.
- FDI policy with 100% stake of foreign companies take away the profit to the origin country.
- Innovation efforts are poor in all fields of science and technology. Government need to interfere to assess the existence of R&D organizations like DRDO etc.
- The enormous growth of car availability in the city has created mess as parking, driving and discipline is concerned.
- The Overall construction activity has gone up by 40% mostly unplanned manner even without proper facility of car parking.
- The City has very limited water resources also under ground water level is extremely poor in terms of Quality and quantity. This may lead to serious problem in near future.
- The expansion of the city and state drainage system is not in planned manner that causes water logging in little rain causing serious damages to car and construction.
- The pollution control board needs to be stricter to ensure the cars and transport systems pollution level.
- India has many experienced and skilled engineers, but all the employees are not fully trained on aspect of integration. Automotive industry has a lengthy process that requires proper integration. Use of computerized system and well-managed observation is lacking in Indian companies. This also increases the cost of manufacturing.
- Economy and tax structure of any country plays a wide role in development of any country. Indian economy faces many difficulties resulting in downgrade of different industries. After the introduction to GST structure, there are possibilities of Indian industries getting rid of multiple taxes and their profits will increase.
- One major issue considered by experts for last many years is purchasing power of customers. Customers cannot afford premium priced vehicles because of their low average income. However, increasing craze for owning vehicles and increase in affordability is reducing the negative impact of this issue.
- Attitude towards Quality is one of the biggest weakness of Indian companies which result in customer dissatisfaction with Indian Products.
- Lack of Innovation and development of new and customer centric products and services.

- Not realizing the global technological developments which keeps Indian Auto companies to lag behind to great extent.
- Compromising Product development Process. Not being disciplined on the process of Empathy, Idea Generation , Product development, Testing and validation all these steps must be having clear targets and needs to be adhered. Cutting short of any process to just make the the time line adherence may create blunder.
- Lagging in Technology development, Design Development, and Integrating Management process which are human centric and Indian cars compared to Foreign cars are not that exciting.
- Human issues at Gujarat may also be a factor looking at the socio economic and cultural trend against labor intensive work like automotive assembly. Climate also play a major role.
- Peoples low interest and skill set on technology area rather than business orientation to accumulate wealth. Very specific to Gujarat State as data says.

2. LITERATURE REVIEW:

Knight & Collier, (2009). Management accounting has sets of non-directive techniques that is accepted, applied and disposed of by the companies. Management accounting is implanted in practices which fulfil the meaning of "dynamic capabilities". These practices help companies to accomplish new resource configurations. Management accounting techniques leverage company's resources through dynamic capabilities. With the introduction of "target costing" for purchased materials, non-Japanese car assembler faced extensive cost burdens. Firstly, the application of dynamic capabilities in management accounting displays the techniques to provide valuable information for the betterment of practical capabilities and resources. Secondly, an updated model of dynamic capabilities considers the progressive and inter-related form of resources and abilities. The role of managers is emphasised through access of external knowledge, utilizing the new knowledge to modify organizational practices and develop new functional capabilities to leverage the use of internal resources. Dynamic capabilities are implanted within organizational practices. These practices include management accounting. Thirdly, the capacity lifecycles extended to replicate the causes of decline of "dynamic managerial capabilities". Dependency on route, physical inactivity, and mental responsibility are recognized as hindrances to embracing new dynamic capabilities. The current case-study includes external pressures, and corporate politics. A lack of understanding of epistemic issues, cultural differences, organizational issues and strategic problems have also added to the futile operation.

Sturgeon & Biesebroeck, (2010). The writers gave special consideration on the impacts of economic downturn on the industries in developing nations. The key findings suggest that the downturn has quickened "pre-crisis trends" toward significant industry in the South. Fast ownership of automobile is the motivation; however, the close location and communication of suppliers and leading businesses is the vital impetus. Developing countries have chances to rise in the value chain of the suppliers and become stronger. The close location of assemblage and components factories in national as well also Cal production has halted sales drops during the downturn. The development tactics adopted by countries like Mexico, China, and India are merging as their business increase in size and autonomy.

Jensen & Cobbs, (2014). The return-on-investment (ROI) of corporate advertisement on occasions, groups, and alliances keeps changing. The results confirm that there is a strong connection between advertised team functioning and brand publicity and cost paid, impacted by advertisement level and analogical features. Surplus ROI is mainly for advertisers of high performance teams, that partner at a higher level outside the automotive industry.

3. RESEARCH METHODOLOGY:

Research Objectives:

There are few objectives of this research.

1. To study the automotive industry growth impact in India.
2. To study the problems faced by Indian Automotive industry
3. To analyze the future prospect for the industry in India and Gujarat
4. To anticipate and prove the related problems across the state and cities.
5. To improve on statistical testing skills with population data
6. To establish relationship between different variables
7. Understanding the continuous substantial business growth of Suzuki than Indian companies despite both invested nearly 7000 crs of investment including vendor parks.
8. Impact of Digital technologies on foreign companies and Indian companies.
9. Effect of Digital Disruption in Indian and foreign Automobile (Suzuki)
10. Prospects and problems to stake holders as overall issues.

Sources of Data:

Primary Data Research: This has been done through making a questionnaire and giving it to different stake holders from top management to dealership, service stations, mechanics, users of different demographic profile from age 20 to 60 years of age . Sex ratio was 60:40., Married and un married from all strata of the villages across the plants to get social , human centric , sustainable understanding. Also awareness of the people about effect of industrialization and their life

Secondary Data: This datas are collected through different magazines, newspapers, peoples experience, my personal observation, literature review, National library, Harvard Business Review, MIT USA library, Indian Auto magazines, visiting Auto shows, visiting people who are in any way stake holders and their feedback.

4. DATA ANALYSIS:

In below table, the summery of both research conclusions have been compiled to reflect upon Primary and secondary data separately:

Sr. No.	Primary research based on questionnaire, interaction, telephonic interviews, group discussion, and individual stake holders as explained previously the process adopted.	Mean of Likert Scale	Derived opinion based on Likert scale
1	Increasing purchasing power of the customer reflects states Prosperity.	4.75	Strongly Agree
2	Per capita income of the stake holders including industry Zones have increased	4.75	Strongly Agree
3	Better Availability of Private transportation(Ola, Uber), Private taxis show growth	4.50	Strongly Agree
4	Personal car has become the need of a status among the people.	4.46	Strongly Agree
5	Literacy rate has gone up and it has a relationship with industry and sales	3.94	Somewhat Agree
6	Aspiration of lower middlie class is increasing despite rich public transport	4.75	Strongly Agree
7	High population factor has increased sales, production and opportunities	4.24	Strongly Agree
8	Availability of easy finance for buying vehicles in market has impact on sales in Gujarat a huge growth	4.36	Strongly Agree
9	GST (Goods and Service Tax) Impact has helped to increase sales	3.40	Somewhat Agree
10	GST (Goods and Service Tax) Impact has helped to keep pricing low initially.	3.40	Somewhat Agree
11	Lower Car price of entry segment and mid segment has high impact on sales	4.25	Somewhat Agree
12	Fuel price as such petrol, diesel, CNG has moderate impact on car sales	4.25	Somewhat Agree
13	Opening up Rural Market as industry growth used sales strategy	4.38	Somewhat Agree
14	Advertising and Marketing (Direct B to C) at Rural & Urban increased sales	4.30	Somewhat Agree
15	Telemarketing and advertising at rural and Urban sector increased sales.	4.30	Somewhat Agree
16	Income of Buyers ; as such disposable income at Gujarat is higher hence growth of sales of car within last 9 years have 30% increase	4.30	Somewhat Agree
17	Easy availability of car loans from financial institution to enhance their growth.	4.42	Somewhat Agree

18	Brand Impact on sales which is clearly visible between Suzuki & rest	4.55	Highly Positive
19	Test Drive and Driving Experience impact sales growth if its impressive	4.36	Highly Positive
20	Reduce car prices for continuous growth in nos of entry segment	4.50	Highly Positive
21	Better infrastructure for fast supply chain	4.60	Strongly Agree
22	Increase in Capacity Utilization (Efficient and Effective)	4.40	Strongly Agree
23	Increasing Overall capacity	4.20	Somewhat Agree
24	Proper Investment in Research & Development of Quality in true sense.	4.40	Strongly Agree
25	Decrease in cost of financing helps customer	4.20	Somewhat Agree
26	Reduction in Tax Structure impacts positively to growth.	4.40	Somewhat Agree
27	Positive Customer feed back on Vehicle performance & sales impacts positively	4.40	Somewhat Agree
28	Luxury and Comfort at lower price (Suzuki is preferred by most stake holders)	4.50	Strongly Agree
29	Safety in built. Better safety in builds positively impacts.	4.62	Strongly Agree
30	Better Engine Performance Is highly desired	4.38	Strongly Agree
31	Resale Value of the Car matters to the consumer Higher is better.	4.17	Strongly Agree
32	Technology available including Digitization even in entry segment is expected	4.17	Strongly Agree
33	Eco- friendliness means better Euro norms which is an imp. Aspect on environment	4.38	Strongly Agree
34	Value For Money ie consumers perception on the product & purchase price.	4.21	Strongly Agree
35	Cost of Production has impact on Pricing to be competitive. Lower is better	4.08	Somewhat Agree
36	Design Of the car where ist preference is Look and Styling as multiple choice is available. Even in entry segment life cycle has reduced to 3 to 4 years	4.18	Somewhat Agree
37	Customer Switch Over - No nearby service center or poor service response.	3.96	Somewhat Agree
38	Car Quality which includes reliability factor during entire Life cycle of the prod.	4.21	Strongly Agree
39	Huge Maintenance Cost on life cycle of the car impacts negatively.	4.00	Somewhat Agree
40	Other cars are offering more features impacts positively	3.62	Strongly Agree
41	Supply of Cars - Presence of Segments. Multiple choices to Offer has positive Impact on sales, customers' satisfaction.	3.64	Strongly Agree
42	Operational Efficiency means best mileage impacts on Operating cost to owner, hence highly preferred. Also it has positive impact on Environment.	4.23	Strongly Agree
43	Strong Dealer network Availability because of industry came in a big way and created lot of dealership business growth.	4.37	Strongly Agree
44	Government taxes and policies have impact on vehicle sales and production	4.38	Strongly Agree

HYPOTHESIS TESTING:

1. t -test for impact of sales on passenger vehicles and other factors:

H0: There is no significant relationship between impact on sales of passenger vehicles, switch over, customer preference, buying of cars.

H1: There is significant relationship between impact on sales of passenger vehicles, switch over, customer preference, buying of cars.

Table 1 : T -Test for Impact of Sales on Passenger Vehicles and Other Factors

Factors	t-test values	P value	Significance Level
Sales figure	0.59	0.56	Insignificant
Switch over	2.35	0.04	Significant
Customer Preference	0.79	0.44	Insignificant
Buying ofcars	0.78	0.22	Insignificant

Interpretation: There is no significant relation between impact of sales on passenger vehicles and sales figure of passenger vehicles. The null hypothesis is accepted.

There is significant relation between impact of sales on passenger vehicles and switch over. The null hypothesis is accepted.. The highest cars are sold on customer satisfaction and feedbacks. If the satisfaction level is low the car loses market and sales which leads to switch over to other companies. The satisfaction is often related to car performance, servicing centers, dealers' behavior and car features. If any of the criteria is missing customers switch over. There is no significant relation between impact of sales on passenger vehicles and customer preference. The null hypothesis is accepted. There is no significant relation between impact of sales on passenger vehicles and buying of cars. The null hypothesis is accepted.

2. t -test for factors affect sales of passenger vehicles and other factors

H0: There is no significant relationship between customer preferences, switch over, buying of cars and factors affect sales of passenger vehicles

H1: There is significant relationship between customer preference, switch over, buying of cars and factors affect sales of passenger vehicles

Table 2 : T -Test for Factors Affect Sales of Passenger Vehicles

Factors	t-test values	P value	Significance Level
Customer preference	-0.72	0.47	Insignificant
Switch over	0.31	0.76	Insignificant
Buying of cars	-0.48	0.63	Insignificant

Interpretation: There is no significant relationship between customer preference and factors affect sales of passenger vehicles. The null hypothesis is accepted.

There is no significant relationship between switch over and factors affect sales of passenger vehicles. The null hypothesis is accepted.

There is no significant relationship between buying of cars and factors affect sales of passenger vehicles. The null hypothesis is accepted.

5. CONCLUSION:

Gujarat being a well-known state for its huge market and infrastructure, the manufacturers are very much attracted towards it. Many players already entering into this market have expected of many benefits from Gujarat government and the infrastructure available there On the other hand, the employees of these companies will have complete knowledge about their operational data, competitors' data and the behavior of consumers while buying the automotive products. Hence, the survey of such employees brings meaningful analysis. Many factors affect the sales of cars. Automotive industry is quite large hence, the researcher has not only focused on single region but also considered car segment for the study. The simple reason behind this is different type of products are affected by different factors and two products cannot be compared with different factors together.

This research can surely provide a base for further research that can be larger and more accurate because of larger sample size.

It is apparent from all data that the best-selling brand in Indian market is . No other competitor can touch that level in near future, as there is a huge response to the brands of . There are various reasons considered for growth of car. Being a large capacity utilize, comes with large range of products at affordable prizes. Suzuki . is offering reliable, technologically advanced product to market at affordable price which helps them to capture more than 50% of the market share.

The highest selling cars Alto and Dezire are the favourite among people of Ahmedabad because of their low price, enough internal sitting capacity for a family of 4 or 5 and a right size for facing traffic and parking problems. One of the major reasons behind purchase of small sedans is price competitiveness for middle level families. Because of this, there is high competition in small sedan market and manufacturers with cost effectiveness and option availability take up the market. Tata is a home brand and always associated with luxury. Having low operations, the cost of manufacturing will remain high for these cars. The low-cost car program of Tata was failed, as they were not able to deliver the quality. This also concludes that providing low quality cars at lower prices with cheap car status will also have no market in India. The features of cars were not bad according to the price offered but market had no interest in having a cheap rated product in the list. Other cars of Tata have limited sales, as there is a premium price for these cars. The rich interior of this car makes it choice of upper and upper middle class, but other classes may not wish to spend a big premium for excellent interior when they can afford a good quality car at much lower prices. Why would one buy a low-quality car at high price when there are better options available?

In Gujarat, the highest plant capacity lies with and Tata. Out of which, uses the highest capacity with 40% utilization. It means still has the opportunity to utilize the capacity and reduce the price of its cars in future if required. All the companies have idle capacities lying to start anything new. If any idea comes up or any benefits roll out, these companies are in capacity of grabbing them immediately. Tata uses only 20% of its capacity and remaining portion is idle. Other companies use only 10-20% of capacity. This means, Gujarat automotive industry has lots of unutilized capacity, which also contributes to a slow industry growth. However, the positive thing is these companies can come up with new products whenever they are good on research and development and find a new product that serves all purposes.

6. SUGGESTIONS:

1. The marketers should focus on affordability factor and try to provide the best product in a range that satisfies customers. With increasing competition, all players have to manage their price competitiveness and quality to sustain in the market.

2. Automotive industry is late, so marketers have large scope for their growth. They can take advantage of unique parts manufacturing where they can bring variation to reach all segments.

3. Cars in India are considered as a comfort requirement and status symbol. Marketers should focus on both quality of design, Engineering, reliability and the advertisement. With help of image building, marketing can associate their brand image.

3. Marketers should start collaborating with international learning taking advantage of international relations and upgrade the quality. Employees of India are skilled now and they have good knowledge of what is called technical skills.

4. Gujarat has a well-developed infrastructure, which is good for automotive industry. Manufacturers should take advantage of this location and find their space in this area. The availability of fine infrastructure also reduces cost to considerable extent. Right utilization of this place can make a company cost efficient. Export and import is also easy from Gujarat, so manufacturers can increase production and export parts to other countries to gain advantage of low cost manufacturing.

5. Manufacturers should focus on increasing literacy level of people in their target market so the overall market increases.

6. They should tie up with finance companies and take advantage of discounted financial services for their own customers.

7. Manufacturers should be ready for any changes in tax rates. The use of stable GST will bring uniformity in their price, so they should now take plans to take advantage of this stable taxation system.

8. Test drive is an effective method. Test drive should be promoted not only for the visitors of car buyers but also for target buyers who are capable of buying but not showing interest. One may find different promotional offers to attract them for a test drive.

9. Manufacturers should do analysis of market competition and affordability of people to ascertain the right price. There should be equilibrium of quality and performance in each product to attract consumers.

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