

A study on challenges faced by Indian auto component-parts manufacturers

Madhup Gandhi¹; Rishi Yadav²; Rohit Mann³; Praveen Verma⁴

Abstract

With Indian manufacturing industry taking a push from the ruling government and automotive player are looking to make here rather than exporting and paying high duty. The fresh auto policy aided to endorse the auto sector worldwide. The low-cost labor and assets in India has charmed the consideration of developed countries from long years back. Only on the globalization the trade paybacks arose into clear image and also India understood the caliber of the world market. In spite of free trade agreement, the privileged and regional trade agreements gotten the higher potential market places nearer to India to mature the international trade and display the Indian manifestation. Nowadays the international markets are so flooded and the cut throat race is spread entirely over the sphere as the entire world has converted to a single market. The law of 'survival of the fittest' is realistic at every phase and in all the segments. This empowered Indian auto sector to mature at certain magnitude. The intimidation of other competitive countries and the in-house country policies moving the sector directly or indirectly, the knick knacks are extending the branches behind and retreating its roots of growth. On one end the automobile sector is booming while on the other end the Indian auto component/ parts which is a vertebral column of Indian automobile industry is dwindling. The authors have tried to throw some light on actual problem faced by Indian auto component sector and the challenges to meet ahead.

Keywords – Auto component industry, Trade Agreement

¹ Faculty at Pune Institute of Business Management;

² MBA Student at Symbiosis Institute of management Studies

³ MBA Student a Symbiosis Institute of management Studies

⁴ MBA Student a Symbiosis Institute of management Studies

Introduction

Statement by Automotive Mission Plan 2006-2016 said “India to emerge as the destination of choice in the world for the design and production of auto components and automobiles with output reaching a level of \$ 145 billion accounting for more than 10% of the GDP and providing additional employment to 25 million people by 2016.”

The growth story for Indian automobile industry in 2014 was rely on the two-wheeler segment and not on passenger cars or commercial vehicles, due to high interest rates and a stammering manufacturing industry kept a check on demand. The two-wheeler segment is the only one that has made positive growth at 12.9% year-on-year (YoY) to reach sales of nearly 13.5 million units by October 2014. This has been attributed to the low cost of two wheelers.

So to have such enormous growth in two wheeler manufacturing segment industries have faced many challenges to meet the demand of the customer. Some the main challenges are manufacturing process, the prime need is to have proper infrastructure to facilitate growth of the firm. Apart from this there is continuous upgrading of production, induction of technology, labour law reforms and employment issues , research and development issues and needs, change of fiscal and policy parameters, human resource development, growth of domestic demands, exports and environmental safety are few others issues and challenges which are normally faced by the manufacturing firm.

Objectives

1. To determine the challenges faced by automotive component manufacturers.
2. To determine major constituents of those challenges faced by automotive manufacturers.

Methodology

The data was collected from 19 respondents across Pune; we have targeted primarily those areas which are automobile hub in the city to get an accurate data for our study. All respondents have agreed that the cost of production is major challenge for them. Further we have broken down and identified challenges with in challenge. We have focused on prime component adding up to the production cost and listed out the inferences of the respondents for each of the challenges.

Apart from this we also took response of respondent for some of the auxiliary challenges which indirectly contributes to the cost of production. The challenges are numerous in numbers and to keep up the pace in the market auto component manufacturer is doing all it can to overcome these challenges, let it be manpower related, machine related or materials related.

1. **Selection of Sample:** The sample is taken from automotive component manufacturer.
2. **Pilot Study:** To test the feasibility of the tool of research, a pilot study was conducted. This was done by taking a draft questionnaire and administering it to 2 respondents. From the results obtained, a few modifications were made in the draft questionnaire and the final questionnaire was prepared.
3. **Primary Data Collection:** The primary data would be collected through automotive component manufacturer in Pune and their suppliers & distributors. It was interview i.e one to one interaction with the management & workers, as well as based on questionnaire prepared by us.
4. **Secondary Data Collection:** Apart from the primary data we are we are gathering secondary information from journals, research papers by various authors who have published the reports on manufacturing challenges.
5. **Hypothesis:** Based on the pilot study results, the hypothesis formulated was

Ho: Reducing production cost is a prime challenge in manufacturing

H1: Reducing production cost is not a prime challenge in manufacturing

- ❖ For collection of data we have collected data from some of the major auto component manufacturer hub like Akrudi, MIDC Chinchwad and Pimpri.
- ❖ The 60% of company surveyed is in the Akrudi region followed by 25% of company in MIDC Chinchwad region and only 15 % company from Pimpri region of Pune.
- ❖ The number of skilled workers are more than 71% in the organisation which we surveyed.
- ❖ There are around 82% of total numbers of unskilled worker in the organization which are in range of 0 to 25.

Findings:

1. Out of 19 respondents all were of the opinion that reducing cost is prime challenge. Hence hypothesis **H₀ is proved.**

The major contributors of cost given are following

- High procurement cost – 27 %
 - High operating cost of machine – 15 %
 - High ordering cost - 6 %
 - Low efficient machine / process – 11 %
 - High transportation cost – 10 %
 - Non-utilisation of 100% manpower – 15 %
 - High labour cost – 16 %
2. It was found that out of 4 M's (Man, Machine, Material, Minutes) Man (37 %) and material (33%) are major challenges which is 68% in total.
 - The reason for this are following
 - Non availability of right or skilled employee
 - Most of them work on weekly basis
 - Firm not very interested in holding the talent due to financial condition
 - If they get better offer they switch the work
 - No employee benefits
 - Availability of raw material on timely basis
 - Irregular supply of raw material
 - High cost of quality raw material
 - Inadequate storage facility for raw material
 - Machine issue account for 17 % whereas time account for 15 %

3. The findings on operational challenges included challenges related to High operating cost of Machine, Inefficient process, Raw material procurement, Material handling, Packaging and logistic, Inventory management, Quality and Transportation
 - The top three operational challenges faced by firm are Raw material procurement, material handling and high cost operating cost of machine with 17%, 16% and 15% respectively.

 - This challenges arise due to
 - Problem in getting right quality raw material at right time in right amount.
 - These firm are financial sound low so can't afford word class material handling equipment for saving cost on production
 - High operating cost of machine due to requirement of skilled workers, high maintenance and running cost

4. **Training challenges** had 3 components – language barrier, availability of time, machine and other resources and availability of trainer. The finding shows that language is main issue during training which is 43% because most of the labours are from U.P and Bihar and they use Hindi as communication language where the people of Maharashtra prefers Marathi. 37% face availability of trainer because the people are involved in production process so that they don't have enough time to train the new worker and 20% face availability of machine and time

5. **Machine related challenges** included problems of old machines, High maintenance cost, Frequent breakdown, Less automation/ no automation, Low productivity, High work force to operate it
 - Major machine challenges are high maintenance cost, old machines and low productivity of machine which accounts for 26%, 20% and 17% respectively
 - Some other issue faced by the organisation is frequent breakdown (15%), high workforce to operate (12%) and low automation or no automation (10%)

6. **Procurement challenges** included challenges due to High cost price, Scarcity of RM, Limited quality suppliers, Transportation
- Finding show that 38% firm face the availability of quality suppliers/ vendors because to have better quality the firms need better technology and good skilled workers which is prime concern in India manufacturing industry and if the supplier is from other countries the import charges and custom taxes which will make the procurement cost high making it unfeasible
 - 25% firm face high cost for procurement of raw material because the demand is high and supply is inefficient.
 - 19% is scarcity of raw material and 18 % account for transportation
7. **Technical challenges** included challenges due to Not fully equipped Research and development laboratory, Improper testing tool, Lack of handling equipment Lack of air pollution control equipment, Power related issue
- Finding show that the most prominent technical challenge in industry is lack of R&D department (38%) as it will cost a lot for this financially non stable small firms and reduce the net profit
 - 25% faces the issue of material handling this is because lack of handling equipment in industry as it is supporting activity to production, so industry don't invest much on this thing.18% account for improper testing tool which results in return of bad goods to customer
 - 15% account for power related issue as the machine and tools work on electricity if small fluctuation results in stopping or damage to machines as they operate on certain level
 - 10% account for lack of air pollution equipment installed in plant
8. **Supply Chain challenges** included challenges due to Inventory management, Material handling, Customer demand and Transportations
- The finding shows that 34% issue is account for customer demand which means not able to fulfil customer demand on time because of problem faced for procurement of raw material on time in right quantity and small percentage of bad goods

- 26% account for material handling issue
- 25% accounts for inventory management and 15% account for transportation issue

9. **Inventory challenges** included challenges related to Demand variability, Extended response time, Lack of visibility of supply chain, Lack of collaboration between partners, Quality level and reliability of service from suppliers.

- The finding shows that 25% of issue arise due to quality level of product/raw material and reliability of service from supplier, sometimes raw material is not delivered on time so the process which depend on the is waiting state , this piled up unfinished inventory
- 23% issues come because of lack of visibility of Supply chain. 20 % come because of demand variability from customer means forecasted demand doesn't match with actual demand which result in pilling of inventory
- 17 % accounts for lack of collaboration between partners and 15% account for extended response time

10. **Challenges from competitors included challenges due to Better quality product, Low price product, Better logistics, Better inventory management**

- The prime challenge from customer side is in the area of logistics where efficient transportation played a vital role and it takes the majority of share of 33%.
- The price war is one more challenge for each of the competitors as market so big and there is too many option for customer, so they try to play on the price war and that this challenge to second in the list to around 29%
- Being in top in quality is the utmost hour of need in the automotive of sector, no customer is ready to sacrifice with quality and that is where competitors in this industry are banking on with this share around 21%.

11. **Supplier related challenges included challenges related to delayed delivery, improper Quality raw material, Non Availability, High price of product**

- The prime challenges faced from supplier end are procuring the quality material as per requirement.
- The second giant problem faced by organization is related to on time delivery of the goods ordered.
- On time delivery problem also forces manufacturer to maintain higher inventory.

Limitations

1. The study is limited to Pune area of auto component manufacturer.
2. Within Pune study was focused on 3 prime areas where manufacturing of auto component is more intensive.
3. The result of this study can diminutive deviate from what actual it is since most of our respondent were from top management and not the lower working staff which is actually involved with day to day job of production.
4. Inside challenges the major variables we have focused upon are man, machine and material.
5. We have done a primary study and identified the major factors which can lead to the challenges of cost of production.

Conclusion and Recommendation

- The major challenge which concern manufacturer across all of the parameters is quality.
- Industry is growing at a pace and no customer wants to sacrifice with quality.
- The quality can be really hindered if your upstream i.e. supplier is lacking in it. And this has been worrisome for major of the respondent and they find it really difficult to spot the right one.
- The distress of situation also lies in availability of the labors, due to market dynamics and lack of fixed contract labour keep on switching which leaves manufacturer in worry.
- If the labor is available manufacturer is not sure of the quality principle and its importance he know. So training them is again uphill task for manufacturer.
- Material handling and logistics are another big area of challenge where manufacturer is continuously struggling to keep the stride up.

- Up keeping with maintenance of machine is also of concern for manufacturer since it is costly and secondly with regular upgrade in industry its challenging to keep up the stride.
- The practice of JIT concept and assistance of technology can help them to come over these problem and give a competitive edge in the market.
- Transportation is another challenge as cost of transportation is directly proportional to the availability to the customer. If we say in another term On Time Delivery in Full (OTIF). No upcoming manufacturer is ready to compromise with their OTIF component.
- So the study concludes that the major challenges still lies in basic crux that is M part of manufacturing i.e. Man, Machine and Materials.

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