The Indian Automotive Supply Chain: Impact due to COVID-19 and Strategies to Re-Emerge

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Abstract: The Indian automotive industry has suffered heavily due to the COVID-19 pandemic. This paper dwells deep into the various impacts due to the COVID-19 lockdown and how the industries have responded to the crisis. Data on the impacts and responses of various automotive industries were collected by reading a lot of articles and news reports on the same and also through Google forms and telephonic interviews with industrialists. For the purpose of study, the timeline of COVID-19 in India has been split into four phases and each phase has been individually analysed. Strategies to re-emerge from this crisis has been formulated based on the lessons from the past combined with the lessons learnt from this Covid-19 pandemic. The various impacts and responses of companies during different phases of the lockdown has been consolidated in this paper. This pandemic has also opened the industry's eyes to various shortcomings in its supply chain. Strategies to re-emerge from the crisis has also been discussed in the paper.

I. INTRODUCTION

The automotive industry is a well established component of the Indian economy, employing around 37 million people it contributes about 7.5% to the Indian GDP. It had an annual production capacity of 31 million in FY 18. Ranked as the fourth largest in the world, the Indian Automotive industry has developed a very good supply chain to support a sustained growth for the next decade. The manufacturing infrastructure of the auto industry includes a spectrum of operations from single component manufacturing plants to full fledged assembly operations. The automotive supply chain is fairly well integrated to meet not only the country's needs, but to help meet the needs of the global automotive operations. While the road and other logistics infrastructure is still behind the global leaders, India has been moving well to fill the gap. It is under these conditions, the automotive industry had to face the consequences of the COVID-19 pandemic. This paper looks at the impact of the pandemic on the Indian automotive supply chain.

II. IMPACT AND RESPONSES

For the purpose of study, the timeline of COVID-19 in India has been broken down into 4 phases and each phase has been individually analysed.

A. PHASE 1: December 2019 - 24th March 2020 (Pre-Covid19 in India)

IMPACTS

During this period, the coronavirus first emerged in Wuhan, the capital city of central China's Hubei province and started spreading worldwide. Wuhan is a manufacturing hub and home to hundreds of part suppliers. 27% of India's auto part imports are from China.

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Travel restrictions and lockdowns made delayed the supplies to the Indian market. But Indian companies had stocks for about 6 weeks and had additional stock in hand owing to the Chinese new year holidays. Due to this designed inventory of stocks, Indian auto makers did not experience any acute shortage of parts. Though there was an impact, it could be managed. Sales being down in India pre Covid-19 was considered a blessing in disguise given the situation of a disruption in the supply chain. But the huge drop in sales was very concerning.

III. RESPONSE OF COMPANIES

- Work from home was introduced for employees in the non-business critical roles.
- Companies who had important supplies from China, started developing alternate sources locally and across the globe to keep the production lines going.
- Imports were sanitised thoroughly before using them as a preventive measure against the virus.
- Companies were offering vehicles at a very discounted rate owing to the poor demand.

B. PHASE 2: 25th March – 3rd May (Lockdown 1.0 & lockdown 2.0)

IMPACTS

India was under a total lockdown during this period. Nearly all services and factories were shut down. With total lockdown the automotive production and sales came to a grinding halt. Big OEMs like Maruti Suzuki, Mahindra reported zero sales during the month of April. The automotive industry was losing a revenue of around Rs 2300 Crore per day. This put all the companies in a liquidity crisis. With no money at their disposal, paying the employees, paying the building rents and all the fixed overhead costs, repaying the loans previously taken, all put them in a dire situation. As a result, they had to take loans or had to sell their assets. Unable to withstand the liquidity crunch, small industries were at the risk of going out of business. To cope up with the situation the companies resorted to pay cuts at different levels crippling the morale of the employees. During this period the stock market crashed and the shares were available at throw away prices and many foreign companies especially the Chinese, tried to buy the shares and stake claim for management control. Also the pipeline inventory of export goods was getting dried up and there was a pressure from some international customers who were functioning. Tier 1 Companies had to resort to expensive air freights of some goods to keep customer lines running.

IV. RESPONSE OF COMPANIES

- The dealers and the small tier industries were the most affected due to the liquidity crisis as they usually operate at very low surplus cash. So the OEMs and the government came up with a lot of policies and monetary packages to ensure liquidity.
- OEMs agreed to support interest costs of dealer stocks including vehicles in transit, payment deferrals, immediate settlement of dealer claims and many other measures. They made timely payments to their suppliers, also gave them other financial support like interest free/ lower interest rate loans.
- The government and the RBI came up with a lot of fiscal and monetary packages to helps the MSMEs. The RBI liquidity policies allow for the banks to lend at lower interest rates to push cash into the hands of the companies.
- FDI (Foreign direct investment) policies were amended to prevent opportunistic takeovers of Indian companies.
- **From the social front:** To help the country battle the increasing number of COVID-19 cases, companies announced pandemic relief funds. Many OEMs, tier 1 and tier 2 companies entered into agreements with medical equipment manufacturers, to make protective clothing, ventilators, PPEs, face shields and N95 masks

C. PHASE 3: 4th May – 31st May (Lockdown 3.0 & lockdown 4.0)

IMPACTS

During this phase, several restrictions were lifted. Automotive manufacturing was allowed to reopen and work with a maximum of 33% workforce. Work from home was encouraged, social distancing and staggered work hours were to be followed in offices. Customers started placing orders and the demand started increasing.

But the main focus during this period was the preparatory work in terms of facility creation to ensure social distancing, the safety of the employees, cleaning and sanitising. The protocols slowed down a lot of processes and created delays in production and therefore delayed output and increased costs. Long waiting hours in the state and zone borders delayed the transportation of goods. Movement of people were still restricted because of which companies were faced with a shortage of workers.

The machines which were idle for more than a month and could not be restarted as like any other day. They required attention and a lot of maintenance work. Despite these efforts there were cases of equipment malfunctioning. This suddenly increased the load on the maintenance staff.

With the production levels still low, the financial crisis only deepened due to time factor.

RESPONSE OF COMPANIES

- Safety procedures were standardised and the employees were asked to follow them diligently and make it their routine in order to save a lot of time.
- The companies took permission from the government and sent buses to bring back employees who were struck at their native places as public transportation was not available.
- With the increase in online communications and transactions, the companies aligned their IT systems to support the evolving work requirements.
- Cross functional teams were formed to address the problems of machinery malfunctioning. This reduced the pressure on the maintenance staff and made the process more effective.
- Companies resorted to starving their R&D funding to sustain core operations.
- Some chose to exit unprofitable markets and vehicle segments.
- To boost the sales, companies were offering incentives like “Buy now, pay later” and ”free services”. The warranty period for vehicles was extended.

D. PHASE 4: 1st June – 31st June (Unlock 1.0)

IMPACTS

This was the period of reopening and unlock down. Restrictions were imposed only in the containment zones. Demand started picking up, especially due to the onset of the monsoons the demand for tractors and other commercial vehicles rose. But the major problem was the labour force. Covid-19 cases had risen at an alarming rate and the workers were now reluctant to go out to work. Many suppliers and logistic service providers depended on contract labour who are often migrant labourers who had either gone to their native places or were reluctant to return to work. Moreover, this period saw strict lockdowns being imposed at different cities at various points of time. Prime industrial cities like Chennai, Mumbai and Pune went under a total lockdown. Many OEMs and auto components suppliers are based in Chennai. Though the companies got clearance to function during the lockdown, with strict lockdowns in place the workers were unable to commute to the industries. Because the industries were not able to cater to their customers, they started losing their business share. Same was the case with the companies in Mumbai. The effects were sporadic. These differences created chaos and a lot of disruptions in the supply chain.

RESPONSE OF COMPANIES

The products that were manufactured in the companies, which were in the areas where stricter and longer periods of lockdown were imposed, were shifted to their partner companies in rural area/areas not under lockdown, by shifting the tools, fixture and gauges and other related facilities.To get the workers to come to work, their salaries were raised and other incentives were given.

V. POTENTIAL STRATEGIES FOR EMERGING STRONGER

Though short term survival strategies are important, the path to revival is multi-phased (respond, recover and re-invent) and it is important to device long term plans for better positioning in the industry.

The leaders that emerged out of the 1930 Great Depression and the 2009 economic recession had a future vision post the crisis, acted faster, made smarter and decisive decisions and moved with more agility. Listed below are a few factors that are important for the industries to emerge stronger than before:

- **Thorough understanding of the new realities and devising plans to adjust and react quickly.**
- **Investing in manufacturing flexibility, given the demand uncertainities,** to help meet customer demands and future growths despite lower margins during the crisis.
- **Rationalizing portfolios and optimizing the business spend** to focus on profitable products and eliminate complexity.
- **Working closely with struggling suppliers** especially sub-tier ones to avert bottlenecks.
- **Focusing on building a resilient system**

In a race to provide better quality at lower prices, manufacturers picked very narrow, optimized supply chains. They compromised on resilience for lower costs. The ripple effect of the impact at one location could be felt across various locations. In the future, shrinking of supply chain footprint will increase as companies seek to localize production and diversify their production base.

- **Improving the visibility and transparency in the supply chain**

Post a crisis all the players in the supply chain tend to hoard stocks. This amplifies the demand at the manufacturer and supplier levels. This puts the companies under tremendous pressure. During such times it is important to have a transparency and a good visibility of the supply chain to be able to resist such shocks. End to end visibility needs to be improved which will help the manufacturers optimize their production and handle the panic hoarding of stocks in a better manner.

- **Increasing the investments in digital technology on all fronts**

Leveraging advanced technologies such as the Internet of Things, artificial intelligence, robotics, and 5G, DSNs are designed to anticipate and meet future challenges.

VI. CONCLUSION

COVID-19 pandemic has hit hard those industries that rely on a highly complex and a globally connected supply chain, among them the automobile industry has suffered heavily. Especially for the Indian automotive industry this comes at a time when it was seeking to better its global positioning. Poor sales pushing companies into a liquidity crisis, lack of key supplies from COVID affected areas, poor workforce owing to total lockdowns at different parts of the world at various points of time, delayed production due to the various social distancing and safety protocols are a few of the many factors that affected the supply chain. Companies have responded proactively to the crisis they have been faced with. Companies responded by deploying cross functional teams to better manage the situation, updating their IT infrastructure to cope up with the new online work culture, coming up with lot of schemes to help the dealers, tier 1 and tier 2 companies who were facing a lot of liquidity crunch. They also helped the country battle Covid by announcing a lot of pandemic relief funds and by manufacturing medical equipments needed at that point of time. To combat the issue of sporadic lockdowns at different places at different points of time, they shifted their equipments, tools and fixture to their partner companies in rural areas and in areas not under lockdown, to keep the production lines running. Though short terms immediate actions are much essential, long term survival strategies are equally important evident from the past crises. On the long run, companies are seeking to build a resilient supply chain by improving the visibility and transparency in the supply chain, investing in technology and integrating it with the current systems, localizing production and improving flexibility in the production lines. The Indian automotive industry is said to have responded in a very mature and a smart way. With all the new learnings in hand, the industry seeks to bounce back and emerge much stronger than before.

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