

Changing Scenario of Manufacturing Industries Due to Covid 19

Ruchira Srivastava¹ | Vijay Kumar Srivastava²

¹Department of Mechanical Engineering, Amity University Greater Noida,

²Department of Electronics & Communication Engineering, Amity University Greater Noida

To Cite this Article

Ruchira Srivastava and Vijay Kumar Srivastava, "Changing Scenario of Manufacturing Industries Due to Covid 19", *International Journal for Modern Trends in Science and Technology*, 6(10): 143-146, 2020.

Article Info

Received on 02-October-2020, Revised on 16-October-2020, Accepted on 18-October-2020, Published on 27-October-2020.

ABSTRACT

The introduction of Industry 4.0 were already generating various changes in operations of manufacturing sector before the pandemic situation and now after the pandemic conditions things have become more tough and challenging. Since March 23rd 2019 the home quarantine and lockdown situation has completely shut down the whole country after this pandemic condition started trending across the globe. The main objective of this paper is to study about these challenges which are being faced by the manufacturing industries. & how these situations are tackled in Covid 19.

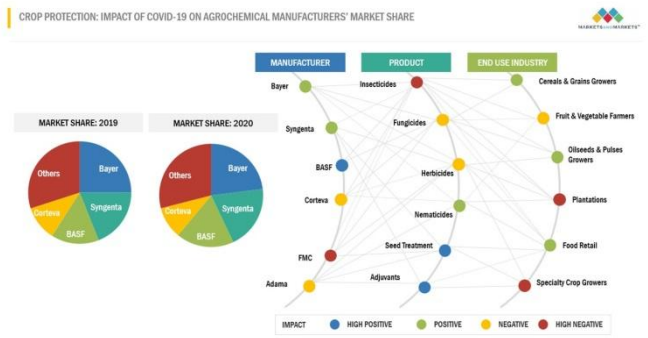
KEYWORDS: Industry 4.0, Manufacturing Industry, Covid 19

INTRODUCTION

Covid 19 pandemic situation has proven to be global crises not only in terms of health issues but also on humanitarian ground. If the economic fronts are considered business aspects are rapidly adjusting itself with the situation. It's observed that normal situations are not available anymore and so the business which are even less nowadays. The new real world which is at trench is full of uncertainty & complexity but with new opportunities. To adapt & flourish industries must expedite adaptable and agile. The lockdown has put a lot of stress on the manufacturing industry which is about 20 % of the GDP, in which 50% is contributed by auto industry. If the unorganized industries are taken into account the scenario is nasty from before only and this impact has now has created more adverse situation as they have low retentive power due to lower profitability. This resembles a lot to 'Root beer Game' which is based on simulation of team portraying four links of

supply chain i.e retailer, wholesalers, distributor and factory.

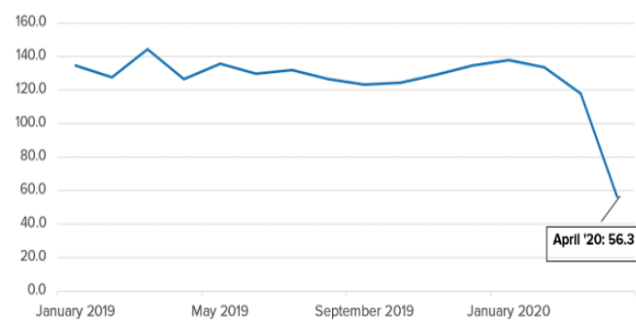
Manufacturing industries are facing a major setback in this corona times starting with low offtake due to low production. This takes little more time to demonstrate itself as some of the distributors who are looking forward for an opportunity to make profit in situation of shortage which has started developing tend to carry forward with sales with extended time period of suspended payments. Prolonged credit days are provided by the manufacturer, who is interested on proceeding with operations, before a complete shutdown. Numbers of employees are restricted on coming to work, due to government directions, resulting in reducing the reading of manufacturing operations, with resulting effect on production volumes, quality and cost. Over a time period, this skeptically affects the turnover, which decelerates to a trickle.



The unpredictability in the logistics tends to a cascading consequence or result, transporters scuffle to not only put vehicles for loading, but also are under great pressure to modify their catalogues or quotes for carrying products, as they are facing low attendance, with their manufacturing risks increasing steeply.

Index of Industrial Production

Data showed a sharp contraction in industrial output in April as most of the industrial sector remained shut due to the national lockdown



Source: National Statistics Office, Government of India



IMPACT ON INDUSTRIES

The module of manufacturing sector is adversely affected by the smash of the Covid 19 virus, as it sealed the production and industry manufacturing operations in the electronics, automotive and aerospace etc. It all generated and migrated from China, which is the nucleus for the dispersion of raw materials to the companies across the globe, and then it affected the whole of the supply chain for the manufacturing industries while following lockdown, social distancing, and measures for the prevention of coronavirus spread directed by the government.

The lockdown focused on bringing the component of manufacturing industries to a stop and crash the overall supply chain of the manufacturing sector. It is evaluated that above 75% of the total manufacturing in the world are directly or indirectly correspond for the acquisition of raw materials from companies located in China

and about 950 Fortune 1000 companies have tier 2 suppliers in China. However, as per the United Nations Conference on Trade and Development (UNCTAD) prognosis the global foreign direct investment (FDI) will take the edge off by 5% to 15% due to drop down in the operational working of manufacturing sectors in terms of factory lockdown.

COVID 19 Impacts

a. Pharma Manufacturing Industry

The pandemic situation created a derange effect in the pharma industry and additionally escort an abundant pressure on the pharma companies to regulate a positive supply of medical equipment and products, creating a problem of scarcity. The countries are relied on the collaborated countries for raw materials in the pharma industry which are adversely affected by the coronavirus spread, as it created turbulence in the dispersion of all products amongst the countries. For example, the United States are largely relying on the Asian pharma companies for the raw materials connected to medical and pharmaceutical devices and today they are facing high risks in supply scarcity.

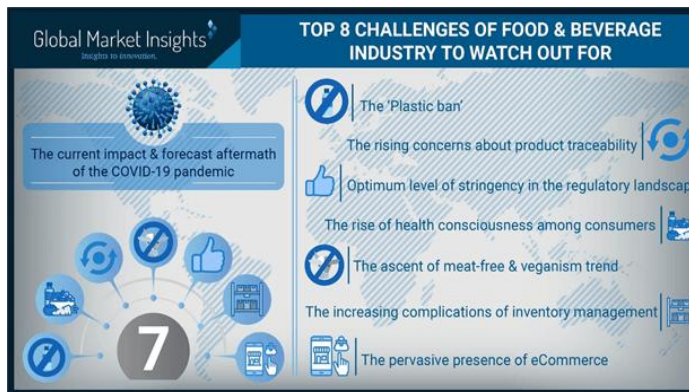
At Present, China is the major supplier and producer of active pharmaceutical ingredients (API) across the global market. Around 80% of Indian Active Pharmaceutical Ingredients are exported from the Chinese pharma companies, while the United States' 13% of the medical supplies are produced by China.

Thus, these enumerations states that the pharma manufacturing industries in these countries have suffered adversely after the eruption of the pandemic. In the pharma industry, the coronavirus imposed many pharma manufacturing to stretch its production capabilities to produce sanitizers, ventilators, masks, and other pharma disinfect products to lower the effects of the pandemic to some point.

b. Food & Beverage Industry

Looking at the present scenario of the market, the coronavirus is very quickly affecting the utilization and supply chain for the industries in the market. There is a diverge enhancement in the alcohol-based cleansing sanitizers and necessary daily needs food beverages and products, which makes customers worried in the market resulting in grocery shelves to face shortness. This muddles the supply chain and instantaneously generates the call for a

greater quantity of raw materials and elements to the F&B companies; this obstructed the fabrication and enabling them to shut operations due to restricted manpower availability. It is believed that the F&B companies are suffering a revenue drop of around 22% worldwide, as followed by the French trade group ANIA study.



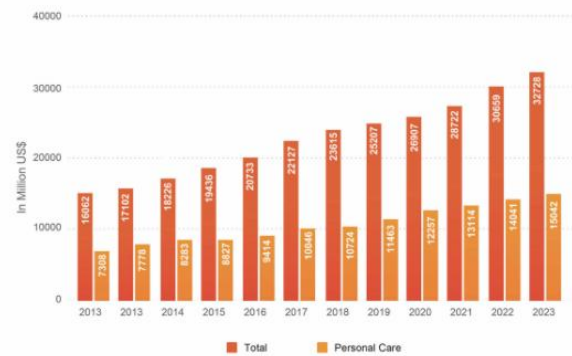
a. Personal Care & Cosmetics Manufacturing Industry

The industry initially constituted products related to skin care, perfumes, deodorants, haircare, makeup etc. All these products observed a extensive downfall in the demand and utilization owing to stop in working across the online and offline dispensation channels across the globe.

Taking into account of different countries working in the pandemic conditions still there is a lockdown and halt in the supply of any type of non-essential products. This downfall in requirement from the end-users and restricted manpower commitment in the production areas are emerged in the sealing of production operation of the manufacturing sectors and restrict the trade of personal care and cosmetics products in the market. The sector specially affected owing to the pause of distribution of non-essential products as far as e-commerce companies are concerned are Amazon, Flipkart, and Alibaba. Moreover, hypermarket and supermarket companies also stopped the diffusion of non-essential products in various countries.

Personal Care Contributing Major Revenue In Total Beauty & Care Market In India

Personal care market value crossed US\$11.5 Bn in 2019 in India



MEASURES ADOPTED

Taking into account about company which is earning a PAT over Sales of about 12% per annum, that is about 1% per month. However this predicts a regular profit flow, which is not in the case of seasonal industries, for example automobiles to umbrellas, which receives a greater percentage of their profits in the course of the prime seasons. Of the 1%, if we assume that, due to the Corona effect, the manufacturing industries begin dropping money, and, during a two-months of time period which is covering 15 days on either side of the lockdown period of one month, the total loss could be around 2%+. Its assumed that, this is 3%. To retrieve and upturn to normal stage, it might take, say about, two months. Thus its evident that the Corona effect has very badly affected the profitability ratio of the industries to such an extent that it is about 30% of its annual profit. When we say 30%, we take into account two effects – one, the numerator, which is the profit, and two, the denominator, the sales turnover. The 'sales compensation' effect can occur soon after the lockdown is removed, which actually means delayed sales are now provisioned to, and hence, the total sales for whole of the year could be exactly same or a little low than the last year – an important point to be noted is about the growth which is ZERO. Hence, the industry should planned and calculated plan to at least save the sales, and grow the revenues. Having said that, what about the profit. The story could differ as per the industry scenario.

Those industries which have been working with superb operational parameters, like, high productivity, high quality, skilled workmen, well maintained and latest machines, etc., will take off

quicker than the others. Thus, for well operated companies, the period after lockdown could be an occasion, while, for others, it could be an up sloping encounter. During the lockdown period, good industries must grow reclamation plans, while the not good ones will generate survival plans. Talking about the profitability scenario, companies will have to thrive upon the recovery of about 3 to 4 % of their PAT/ Sales. This can be done by following three strategies:

Strategy of Cost Reduction: if a company's labor cost is about 20 % of its sales, then, if employees take a pay cut for the rest of the year, of say, 10% on an average with senior employees taking a higher percentage, then the cost reduction on this account alone will increase the profitability by 0.2% per annum. However, if they take a payout of an average 30%, then the 0.2% will go upto 0.6% per annum. This is no doubt, a major sacrifice, but the option could be job losses.

Strategy of Generating Higher Revenue: Increasing revenues are only possible in cases where pent up sales will transpire, provided, industries are able to furnish goods. It is distinct that, those industries which have restored their supply chain pipelines functioning will be in gain, and they can recover some of their sales. This will also be affected by how the competition is gearing up, and, hence, excellent industries can utilize this occasion. This could accord to another 0.5% to 1% of the PAT/ Sales ratio.

Strategy for New Products: This is a direct result of the Corona effect, which will end for at least one or more year. Certain products, especially which are related to health issues, are more likely to produce high demand, and this could make a pavement to a cascading effect, through the generation of sudden demand in related products, and a psychological effect which leads to a general demand pick-up. It can lead to medium and long term prudent changes in the product mingled together, and, in the one year term, could assist the industry recover about 0.5%.

Overall, the balance period of the financial year, of 2020 – 2021, is likely to be tough, but manufacturing industries can rescue their positions and assemble for the future.

CONCLUSION

Considering the impact of COVID-19 to the manufacturing industries are expected to result in reduced demand and disrupted supply chain flow. In addition to this, the Coronavirus is also producing opportunities for the industries to rethink and renovate with changing time to remain relevant and ahead. The operation can be redesigned and restarted with key development in the operation sites –

- Repeatedly measuring workers safety with the obligatory use of sanitization and hygiene products at works field.
- Repeatedly introducing sourcing supplies to rationalize their product variations or ranges.
- Repeatedly evaluating the supply chain problems and make it acrobatic and strong
- Repeatedly introducing the extremity feedback plans by bringing optimization in the distribution channel, i.e. online and offline channels
- Changing the pricing and advertising strategies through reviewing customer etiquette

According to the industry experts, the merging of software and automated technologies for the industry working and workers safety is anticipate to intensify the production capacities of the companies, along with the product quality with the limited spread of COVID-19 in the manufacturing facilities in the post-pandemic conditions to obtain employee and consumer confidence.

REFERENCES

- [1] NSSO data 2019
- [2] *times of india*.indiatimes.com
- [3] *Daily hunt*
- [4] *Corona*.mygov.in
- [5] *Webmd.com*
- [6] <https://www.weforum.org>