RESEARCH PROJECT ON
(To study the impact of coronavirus pandemic on manufacturing sector in India)

FOR THE PARTIAL FULFILMENT OF THE REQUIREMENT FOR THE AWARD OF BACHELOR OF BUSINESS ADMINISTRATION

UNDER THE GUIDANCE OF: Dr. WASEEM KHAN

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Bachelor of Business Administration
(3rd Year)

GALGOTIAS UNIVERSITY
(Established under Galgotias University Uttar Pradesh Act No. 14 of 2011)

School of Business, Galgotias University

Certificate from Faculty Guide

This is to certify that the project report (***To study the impact of coronavirus pandemic on manufacturing sector in India)*** has been prepared by Mr Prateek Singh under my supervision and guidance.The project report is submitted towards the partial fulfillment of 3 year, full time Bachelor of Business Administration

Name and Signature of Faculty :-

Date:

Declaration

I, Prateek Singh, Roll No:- 18GSOB101010, student of BBA of School of Business, Galgotias University, Greater Noida, hereby declare that the project report on ***To study the impact of coronavirus pandemic on manufacturing sector in India*** at "GALGOTIAS UNIVERSITY" is an original and authenticated work done by me.

I further declare that it has not been submitted elsewhere by other person in any of the institutes for the award of any degree or diploma.

Introduction:

The lockdown has put a lot of strain on the manufacturing industry, which contributes almost 20% of the GDP. Of this, 50% is contributed by the auto industry. Even prior to the lockdown, the auto industry was not in a great shape, with sales down by more than 15% and production cuts of the order of 5 to 10% or more. In the unorganised industry, the situation was much worse, as the uncertainty would impact smaller organisations with lesser retentive power, due to their lower profitability. This is somewhat similar to the 'root beer game' effect in Operations Management parlance, where an event in the market can lead to highly amplified response from the suppliers, leading to short term overproduction and medium term discount sales. Choking of distribution channels due to this effect are not unknown and goods tend to get offloaded at lower prices, providing volume support, but hitting the profit and profitability.

Manufacturing industry has been hit in many ways due to the Corona effect. To begin with, lower production, due to lower offtake. This takes a little longer to manifest itself, as, some distributors, sensing an opportunity to earn profits in a developing shortage situation, tend to carry on with the sales, but with an extended schedule of deferred payments. Longer credit days are given by the producer, who is keen on continuing with operations, before a complete shutdown. More and more employees stop coming in to work, due to government directives, thereby reducing the scale of operations, with consequent effect on quality, cost and production volumes. Over a period, this adversely affects the turnover, which slows down to a trickle. The uncertainties in the logistics leads to a cascading effect, transporters struggle to not only place vehicles for loading, they also are under pressure to adjust their quotes for carrying goods, as they also face lower attendance, with their operational risks increasing steeply. The slower rate of banking operations, shorter working hours, jammed and overloaded communications lines lead to delayed money transactions, thereby elevating monetary risks. The suppliers to large producers start feeling the pinch, and start to disengage, and play safe, in order to protect their interests, because their capacity to bear risks is much lower than their big customers. Finally, due to all these interruptions, the end user also starts postponing non-essential purchases, and disengages from the consuming processes, by postponing their demands.

Abstract:

The Indian economy is undergoing significant field of growth in manufacturing with diverse businesses, including machinery and equipment production, metal and electrical goods, cement, materials for building and development, rubber and plastic items and automation technology. In 2018, the production sector accounted for about 16% of world GDP. The paper studies the impact of coronavirus pandemic on manufacturing sector in India and the impact on employment in India. The paper found that the manufacturing sector is highly affected by coronavirus pandemic and contractual employment is affected in India as labourers have moved to their native place due to coronavirus pandemic. The companies' responses to this issue include the introduction of protection procedures, sanitation and sanitization methods, a updated sourcing policy, the incorporation of new vendors, the streamlining of their product portfolio, a more responsive evaluation of supply chain resilience, an analysis of disaster or emergency management plans. In this way manufacturing sector can cope with the coronavirus pandemic.

Introduction

The Indian economy is undergoing significant field of growth in manufacturing with diverse businesses, including machinery and equipment production, metal and electrical goods, cement, materials for building and development, rubber and plastic items and automation technology. In 2018, the production sector accounted for about 16% of world GDP. As a consequence, the key priority of the government is to promote the automotive industry in all countries. Make in India and Made in China (MIC) 2025 are some of the projects in the developing economies to boost the manufacturing sector. MIC 2025 is the first step towards transforming China into a leading manufacturing force through a three-phase approach. The project aims to improve the value chain of China through the usage of advanced manufacturing or smart processing technology.

Moreover, Make in India is an initiative to promote good and services production in India was launched in 2015. This aims to decrease India 's reliance on exports from its own countries by producing goods. The FDI has pursued an optimum pattern since the launch of

Create in India. During the duration from April 2014 to March 2019, FDI inflows in India amounted to 286 billion dollars, almost 46.9 percent of the country 's total FDI since April 2000 (592 billion dollars). This was attributed to the investment-friendly initiatives and the expansion of FDI opportunities in a variety of industries.

The Indian government has imposed a national lock-down on 24 March 2020 to try and prevent a spread of the COVID-19. The UN Industrial Development Organization (UNIDO) has approached 85 companies and questioned them about their problems and the aspirations they have and strategies for their industries to rebound since the lockout has been imposed to determine their effect on micro- and small and medium enterprises. During the duration 9-13 April, the survey was conducted by telephone to include companies operating in the fields of vehicles, motorcycles, cloth, textiles, ceramics, foundry, tea and rice milling, in clusters throughout the region. The COVID-19 outbreak may, according to forecasts from the United Nations Trade and Development Conference (UNCTAD) contribute to a 5% -15% decline in global FDI due to a slowdown in the retail sector combined with a slowdown in the plant. The negative effects in the electricity, car and airlines sectors of COVID-19 on FDI investment are expected to be high. Given the COVID-19 epidemics worldwide, automotive, pharmaceutical, electronics and aircraft manufacturers are facing worry over raw material availability. In the electronics market, a decline in manufacturing activities has been started and new models coupled with COVID-19 outbreak have been delayed, which in turn affected distribution of components. Many sectors like FMCG, online retailing are affected due to coronavirus pandemic (Mahajan, 2020). Also due to this banking sector will be affected and NPA's may rise due to this pandemic (Mahajan, 2019).

Review of Literature

Self-isolation, social distance and travel constraints also contributed to a decline in the number of employees in all economic fields and have destroyed several jobs. Schools have been closed, and food and demands have diminished. In comparison, it has raised considerably the demand for medical supplies. The panic-buying and stockpiling of food goods often puts an growing appetite in the food industry. We review the socio economic influence of COVID-19 on the different facets of the world economy in reaction to this global outbreak (Nicola, 2020).

Abdul and his co-authors summarizes the ADB study of COVID-19 outbreak national, federal, economic and sector-specific impacts. It points out the different mechanisms that influence economies and quantifies the possible degree of impacts in a number of scenarios. The situation principles and approaches used for estimating the effect are specifically mentioned. Importantly, the short offers not only forecasts of global and international effects, but also granular information of how various markets — and industries inside economies — would be impacted in an exceptional worst-case scenario with a developing economy. (Abdul, 2020). Wie studies the impact of the economic crisis on Indonesia's manufacturing sector (Wie,2010)

Mahajan describes the factors that drive Indian millennials to a particular online retailer in India and perceptions of millennials towards these online retailers. The paper studies the same in the Indian context. It is found that millennials are more or less satisfied with the services of selected online retailers. It was also found that four factors where statistically significant for millennials for selecting a particular online retailer (Mahajan, 2017; Mahajan,2011).

Indian manufacturers have invested significantly in technological upgradation since the opening up of Indian economy to foreign trade and technology in the mid-1980s. In this paper, authors examine the impact of technology on employment and skill demand within Indian manufacturing sector. Estimating a dynamic labour demand equation, we find that despite reducing the required labour per unit of output, technology has not reduced the aggregate employment in Indian manufacturing sector (Vashisht,2018).

Objectives of the study

1) To study the impact of coronavirus on manufacturing sector in India

2) To study the impact of coronavirus pandemic on employment in manufacturing sector in India

3) To suggest measures to improve the present situation in India

Research Methodology

The paper studies the present impact of coronavirus on FMCG sector in India. The study is descriptive in nature. The study secondary data for the analysis of the manufacturing sector.

The secondary data is collected from websites, blogs, magazines and newspapers in India. The study critically analyses the present situation of manufacturing industry in India and its impact on employment. The geographical scope of the study is India. The paper first studies impact of coronavirus on global manufacturing industry. Then the impact of coronavirus pandemic is studied on Indian manufacturing industry and employment in this sector.

Manufacturing Sector Analysis

The prolonged lockout has put a lot of pressure on the production industry, which represents nearly 20 % of GDP. The automobile sector contributes 50% to it. The car sector was not in great shape right before the lock-down, with more than 15% fall in revenue and 5 % to 10% or more production cuts. In the unorganized sector, the problem was much worse, because of their low profitability, the instability will influence smaller companies with less staying capacity. There is somewhat comparable in Operations Management's 'root beer game' impact where an occurrence on the market will contribute to a strongly accelerated reaction from vendors contributing to short-term demand and medium-term discount sales. There is no uncertain shift in the sales network, and commodities are starting to be discharged at lower rates, offering volume help and gain.

The corona effect has influenced the automotive sector in several respects. At first, output is lower because of reduced availability. Which takes some time to manifest, provided that some distributors prefer to deliver, albeit with an prolonged timetable of overdue payments, as they feel the chance to make money in a increasing scarcity. Longer credit days are issued until a full closure by the manufacturer, who wishes to resume activities. As public orders reduce the size of the activities and increase in efficiency, expense, and output volume, an growing amount of workers quit being hired. Over a period, this adversely affects the turnover, which slows down to a trickle.

The logistics challenges have a cascading impact, carriers have trouble not only positioning vehicles for loading; they are under strain to change their quota for the transportation of items, while their operating costs are steeply growing, too. A slower pace of banking, reduced working hours, disrupted and overloaded transmissions lead to delayed cash transactions which increase currency danger. The vendors of major producers tend to feel the pressure, disengage themselves and be healthy to preserve their interests, provided that they are far less likely to withstand risks than large consumers. Finally, due to all these interruptions, the end user also starts postponing non-essential purchases, and disengages from the consuming processes, by postponing their demands.

As major manufacturing sectors have a strong single or low two-digit PAT-to-Sales ratio, we can understand the effects of the Corona virus on the monetary role of manufacturing firms in the consolidated market. For e.g. let us think about a business that earns a PAT over 12% annually, that is 1% a month. This means, of course, a constant flow of benefit – unlike in seasonal sectors, such as cars and umbrella, which make a substantial contribution to their income during prime seasons.

Of that 1%, if we conclude that the business continues to lose money due to the Corona effect, and that for a two-month span of 15 days, the gross loss which be 2% or more on each side of lockout time over one month. This is 3%, let's just claim. It can take two months, say, to heal and return to work. The Corona impact has therefore changed to around 30 per cent of its annual profit the company's profitability. In stating 30 percent, two factors are taken into consideration-one is the profit-making numerator, and two is the revenue turnover.

The consequence of 'profits recovery' will take place shortly after the lock-down has been imposed, which ensures that postponed revenue will compensate, meaning that the profits total for the year could be the same or even smaller than in the previous year – this inflation is notable. A business can then carefully intend to preserve its profits at least and in the end produce revenues. What about benefit, after all. This is where each company's past will vary. And the real rub resides in here.

Many businesses with outstanding operating metrics, such as efficiency, strong productivity, well-trained staff, well-managed machinery, etc., are expected to dissolve more rapidly than others. Thus, the time of lockout might be an advantage for well-managed businesses, although it could be a tough battle for others. Good businesses may have to establish turnaround strategies throughout the lock-down phase, whilst not so good companies may create survival strategies.

Manufacturing in India is found to have ceased, with the exception of rice milling, which has reportedly halved production. Owing to the rising economic and consumer demand as well as the instability of the foreign supply chains owing to the lockdown in China, Manufacturing have already undergone a pre-lock down in industry in different industries, including automotive parts. Any correspondence, financial, logistical and other support operations, although on a very small scale, are carried out at home. Migrant workers have returned to their hometowns in great numbers, particularly semi-and unqualified employees. One maker of bicycle parts has actively innovated and engaged in the development of fans, but just a limited portion of its workers is now in business.

The flow of objects, fuel and human beings is usually suddenly stopped. Input Manufacturing almost entirely supply other sectors that, with the exception of critical industries, have already halted operations and result in a decline in production and cancelation of orders around the board.

However, their specifications for necessary inputs from non-essential industries cannot be fulfilled. For example, for medicinal, food and hygiene purposes, paper industry cannot fulfill current demands for paper of high quality. The food sector is also facing increased demand due to panic-buying and stockpiling of food products. The loss of goods and services has a detrimental effect on other industries, in particular the sudden termination of incoming cash flows and the transfer of employees through all layers of competence.

Given the fact that the major manufacturing industries have a PAT to Sales turn over ratios (profitability ratio) in the high single or the low double digits, let us examine the effect of the Corona virus on the monetary situation of manufacturing companies in the organised sector. For example, let us consider a company earning a PAT over Sales of 12% per annum, which is 1% per month. Of course this assumes a regular profit flow, unlike in the case of seasonal industries, like automobiles to umbrellas, which earn a large percentage of their profits during the prime seasons. Of the 1%, if we assume that, due to the Corona effect, the company starts losing money, and that, during a two-month period covering 15 days on either side of the lockdown period of one month, the overall loss could be 2%+. Lets say, this is 3%. To recover and comeback to normal, it may take, say, two months. Thus, the Corona effect has adversely affected the profitability of the company to the extent of 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 happen soon after the lockdown is lifted, which means deferred sales are now catered to, and hence, the overall sales for the year could be the same or a little less than the previous year – point to note, growth is ZERO. Hence, a company should strategically plan to at least save its sales, and, at the last resort, grow revenues. Having said that, what about the profit. Here is where the story of each company could differ. And herein lies the proverbial rub.

Those companies which have been operating with excellent operational parameters, like, high quality, high productivity, well trained workmen, well maintained machines, etc., will take off faster than the others. Thus, for well managed companies, the period after lockdown could be an opportunity, while, for others, it could be an uphill struggle. During the lockdown period, good companies must develop recovery plans, while the not so good ones will develop survival plans.

Coming back to the profitability picture, companies will have to work to recover about 3 to 4 % of their PAT/ Sales. Which could be done by three types of strategies.

Cost reduction strategy: if a company's labour cost is about 20 % of its sales, then, if employees take a paycut 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 paycut 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.

Higher revenue strategy: Increase in revenues is possible in cases where pent up sales will materialise, provided, companies are able to supply goods. Clearly, those companies which have kept their supply chain pipelines active, will benefit, and they can recover some of their sales. This will also be affected by how the competition is gearing up, and, hence, excellent companies can use this opportunity. This could contribute to another 0.5% to 1% of the PAT/ Sales ratio.

New products strategy: This is a direct outcome of the Corona effect, which will last for at least one more year, if not more. Certain goods, especially related to healthcare, are likely to show high demand, and this could lead to a cascading effect, through stimulating demand in related products, and a psychological effect which leads to a general demand pick-up. This is a niche play, to begin with, it can lead to medium and long term strategic changes in the product mix, and, in the one year term, could help the companies recover about 0.5%.

Overall, the balance period of the financial year, of 2020 – 2021, is likely to be difficult, but manufacturing companies can salvage their positions and build for the future.

Challenges faced by Manufacturing Sector

COVID-19 can stay around to generate strong confusion in all market areas. In particular, more constraints and a likely return to a lock could come from the desire to prevent the further spread of COVID-19 on the workplace or from transferring people and materials. The economy is likely to remain very competitive and cash-restricted if sanctions are removed. This is primarily attributable to significant uncertainty surrounding demand for industrial goods (or the capacity to supply the market) and consequent poor or non-existent earnings, while spending on jobs, electricity, rent and other inputs would continue to occur. Manufacturing estimates that 30 to 70% of its pre-COVID-19 workers might have returned to their hometowns because of uncertainty and lack of income during lock-up. It is a struggle to encourage workers to retain or attract new hires and workforce attrition is projected to adversely affect morale and efficiency, raising to financial challenges. Machinery and raw material supplies may have depleted, construction ongoing and finished goods.

Manufacturing would need to conduct excellent repair and repairs until the waste stocks can be restored, at substantial expense and with possible write-offs. It is a matter of importance to ensure prompt supply of critical products without price changes. Manufacturers that rely critically on specialized parts in other countries and abroad are worried about their susceptibility to supply scarcity.

Future Planning after pandemic

While development has begun to think of solutions for various and complex rebuild issues, the preparation of the future also seems to be in its first stages. Many assume that their problem solving skills would allow them to cope with challenges one after the other, whilst others stress their systemic problem solving skills. Output has begun to take into account employee solutions through constant interactions with employees (including some back home countries), the development of buddy programs (possibly with unemployed workers or consumer technical staff), interaction with industrial trainers and the recruiting of temporary workers on walk-in basis. To encourage the economic downturn, Manufacturing has started exploring the options of reducing or delaying less-essential expenditures (including stock reduction, expenditure delays, etc), securing income (including exempt buyer dues, particularly government and public sector companies), accessing extra working capital (by low-interest loans and/or withheld earnings) and/or accessing additional working capital;

Keeping safe

Several organizations have already introduced pre lockdowns by methods, in particular by consciousness raising and contact (hygiene, physical distancing, etc.) and the availability of hand sanitizers, masks and gloves, with certain steps to deter and monitor contamination of COVID-19. This offers the foundation for more protective action after lockout, and the manufacturing sector searches for concrete guidelines from the government here. Popular practices include plant entry inspections, personal protection equipment supply (PPE), change pacing and disruption periods, holding job gap and the required usage of Aarogya Setu, the Governmental Touch trace program COVID-19.

Few production firms are suggesting additional steps such as the creation of sanitary corridors, the fumigation of premises prior to restarting or the rearrangement of workstations for conservation of physical space. Any factories predict that they may need to slash their worker numbers, or perhaps halve them, and that their guests will be shut away.

There is an overarching fear that the current standard for the future would be distinct from what it used to be. It may take a substantial period of time to reach normalcy, with initial projections ranging from six to six weeks. This would focus heavily on how the COVID 19 pandemic progresses and on policy reaction and stimulus packages in India and globally in the coming weeks. Cash flow and working capital are the key important issues in the world of production. Most fear that a significant financial or / or monetary aid program directly for production by the government is only feasible for sustainability. Some producers assume that there will be ample financial incentives, whilst others understand that the COVID 19 is an opportunity to alter and develop various facets of Production, the Manufacturing and Supply Chain environment. The decline in manufacturing activity will also have impact on impact on corporate social responsibility (Mahajan, 2018) of the companies in India

Strategies to overcome the problems in manufacturing Sector:

Returning to the profitability scenario, businesses would have to fight for increase in PAT revenues. What three styles of techniques may do. If the labor expenses of a business are around 20 percent of revenue, so the cost savings of this account would also improve the output by 0,2 percent a year if staff accept a wage cut for the remainder of the year, i.e. nine percent a year, on average, with senior employee’s salary of higher a cent. This is definitely a huge risk, but job cuts may be the alternative.

Revenues can be improved in situations in which orders stored up materialize, so that businesses may produce products. Obviously, some firms who retained their supply chain systems operational would profit and some of their profits would rebound. The manner in which the marketplace is planned would also impact this and so better firms will take advantage of this chance.

This is a direct consequence of the Corona effect that would continue, if not for another year at least. There may be demand for such items, specifically linked to healthcare, leading to cascade effects by increasing the market in similar items and an emotional impact contributing to rise in overall production. This is a specialized market, which will contribute eventually to short- to long-term competitive improvements in the product mix that will help businesses rebound about 0.5 percent over one year.

Conclusion

During the COVID-19 era all the main industries in the product manufacturing sector struggle. Their biggest problems have been declining demand and broken supply chain. Yet there is hope for the challenge. After the dust settles, manufacturers find it necessary, with time to stay competitive, to evolve and alter. The responses to this issue include the introduction of protection procedures, sanitation and sanitization methods, a updated sourcing policy, the incorporation of new vendors, the streamlining of their product portfolio, a more responsive evaluation of supply chain resilience, an analysis of disaster or emergency management plans. In this way manufacturing sector can cope with the coronavirus pandemic.

References

Abiad, A., Arao, M., Dagli, S., Ferrarini, B., Noy, I., Osewe, P., ... & Platitas, R. (2020). The economic impact of the COVID-19 outbreak on developing Asia.

Mahajan, Y. D. (2015). Optimization of MACD and RSI indicators: An Empirical Study of Indian Equity Market for Profitable Investment Decisions. Asian Journal of Research in Banking and Finance, 5(12), 13-25.

Mahajan, Y. D. (2017). A Study of E-retailing: Analysing the Factors and Perceptions of Indian Millennials for Online Retailers. Indira Management Review, 11(2), 59-66.

Mahajan, Y. D. (2018). Gap Analysis and Impact Analysis of CSR Initiative of Cybage Asha (Rural Upliftment), with Special Reference to Project Category- 'Drainage'. Indira Management Review, 12(2), 18-29.

Mahajan, Y. D. (2019). A study and review of pradhan mantri mudra yojana (pmmy) in the state of maharashtra. Advance and Innovative Research, 1.

Yogesh Mahajan;Meena Goyal. (2020). Review of buy orders and returns from Amazon . in in India : Implications for Amazon and its vendors. Journal of Xi'an University of Architecture & Technology, XII(Vi), 786–799. https://doi.org/10.37896/JXAT12.06/1976

Nicola, M., Alsafi, Z., Sohrabi, C., Kerwan, A., Al-Jabir, A., Iosifidis, C., ... & Agha, R. (2020). The socio-economic implications of the coronavirus pandemic (COVID-19): A review. International journal of surgery (London, England), 78, 185.

Wie, T. K. (2000). The impact of the economic crisis on Indonesia's manufacturing sector. The Developing Economies, 38(4), 420-453.

Vashisht, P. (2018). Destruction or polarization: Estimating the impact of technology on jobs in Indian manufacturing. The Indian Journal of Labour Economics, 61(2), 227-250.

https://www.manufacturingtodayindia.com/sectors/7361-the-covid-19-lockdown-and-theindian-manufacturing-industry-effects-and-recovery

https://www.manufacturingtomorrow.com/article/2020/06/impact-of-covid-19-on-theprocess-manufacturing-industry-2020/15487

www.google.co.in

https://www.idc.com/getdoc.jsp?containerId=AP46308220

https://www.unido.org/stories/indias-manufacturing-reels-impact-covid-19